Name: _____ TUid: _____ Date: _____

Introduction to Information Systems in Organizations

After completing this activity you will be able to:

- State a key fact about this course, its instructor, and its subject.
- List basic questions that can be applied to nearly any situation.

Step 1: Prepare three questions (individually)

1. A question about the course:

2. A question about the instructor:

3. A question about the Information Systems (IS):

Step 2: Instructor calls on students at random to ask questions

Step 3: Formulate more questions (in groups of 2-3)

Use each prompt to create a question[i] about the course, about the instructor, or about IS.

1. What_____ ?
2. Where_____ ?
3. When _____ ?
4. Why _____ ?
5. How _____ ?
6. How much _____ ?
7. What if _____ ?

Step 4: Instructor calls on students at random to ask questions

Step 5: Answer four short-answer questions (individually)

1. One thing I learned about this course is:

2. One thing I learned about the course instructor is:

3. One thing I learned about Information Systems is:

4. One thing I learned about asking questions is:

Step 6: Rate this activity (individually)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	Rating (1 to 5)
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be used again in future semesters.	

Anything else you want the instructor to know? Write it here:

Step 7: After you confirm your name, TUid and today's date are on pg. 1, hand in completed activity sheet to instructor.

[i] For more information on formulating questions see:

- Fadem, T. J. (2008). *The art of asking: Ask better questions, get better answers*. FT Press.
- Ross, J. (2009, May 6). How to Ask Better Questions. Retrieved January 12, 2015, from https://hbr.org/2009/05/real-leaders-ask.html

Name: _____ TUid: _____ Date: _____

Did You Know?

After completing this activity you will be able to:

- List facts about the digital world, the information technology (IT) evolution and changes in society.
- Develop strategies to ensure your success in this changing world.

Step 1: Prepare individually

Watch the video shown by your instructor. List five facts that got your attention because they could be a little disturbing:

1. _____
2. _____
3. _____
4. _____
5. _____

Step 2: Discuss in groups of 2-3

Compare your lists. As a group, identify the five facts that got the most attention and list why they got your attention. What concerns you about these facts?

1. _____
2. _____
3. _____
4. _____
5. _____

Step 3: Instructor calls on students at random to discuss their facts & concerns

Step 4: Discuss <u>in groups of 2-3</u>.

List five skills that you need to develop to be successful in this new world.

1. _____
2. _____
3. _____
4. _____
5. _____

Step 5: Instructor calls on students at random to discuss their answers

Step 6: Answer these questions (<u>individually</u>)

1. Why is it that your parents, your high school teachers, your guidance counselors and most college professors are not capable of giving you advice on the skills that you need to develop in order to be successful in the digital world?

2. What steps are you going to take to develop the skills needed for your success?

3. What did you learn from this activity?

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	Rating (1 to 5)
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	

Anything else you want the instructor to know? Write it here:

Step 7: After you confirm your name, TUid and today's date are on pg. 1, submit completed activity sheet

Name: _____ TUid: _____ Date: _____

Systems Analysis: Process Decomposition with Swim Lane Diagrams - 1

After completing this activity you will be able to:

- Interpret a swim-lane diagram
- Construct a simple swim-lane diagram

Step 1: Individually

Reference the swim lane diagram shown on screen. Prepare 3 questions that can be answered with the diagram: (e.g., what happens before/after X, who does Y)

1.

2.

3.

Step 2: In small groups of 2-3.

Ask other group members your questions. Reach a consensus on the correct answers.

Step 3: In small groups.

Review the following narrative & create a swim lane diagram that describes the hiring process:

Mike is the HR manager at Playwicki Financial Services. They need to hire a new systems analyst. The job has been posted on the company's web site and a few people have applied for the position. The hiring process starts when Mike reviews the applications and matches them up with the job requirements to identify the best candidate. Once the best candidate has been identified, their resume is sent to the hiring manager to review. If the hiring manager is not interested they ask Mike for another candidate and Mike starts looking for another candidate. If the hiring manager is interested in interviewing the candidate, they let Mike know and Mike schedules a phone interview with the hiring manager. The hiring manager conducts the phone interview with the candidate. If the hiring manager is not happy with the candidate, they ask Mike for another candidate and the process starts over again. If the hiring manger is happy with the candidate, then they let Mike know and Mike schedules a face-to-face interview for the candidate with the hiring manager. The hiring manager conducts the interview. If the hiring manager is not happy with the candidate, they let Mike know and the process starts over again. If the hiring manager is happy with the candidate, they notify Mike that they'd like to hire the candidate. Mike call the candidate to offer them the position over the phone. If the candidate is interested, Mike assembles the formal offer and mails it to the candidate. The candidate signs the offer, returns it to Mike and the new employee is officially hired.

Step 4: Draw diagram and discuss as a class

Step 5: Answer three short-answer questions (individually)

1. In which situations is it useful to draw a swim lane diagram?

2. Describes the main elements included in a swim lane diagram:

3. Do you think you could utilize swim land diagrams in some of your other classes? If so, what classes and how would you use them?

Step 6: Rate this activity (individually)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	Rating (1 to 5)
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Systems Analysis: Process Decomposition with Swim Lane Diagrams - 2

After completing this activity you will be able to:

- Construct a simple swim-lane diagram

Step 1: Individually – Read the Following Narrative

Chris is the cake decorator at Cold Stone Creamery. Chris works part-time and is responsible for decorating all of the cakes that Cold Stone sells including both stock cakes and custom orders. Chris can't do this alone. She needs the help of other people at the store to do this.

It all starts in the morning before the store opens when the store manager takes inventory of what cakes they have in stock. While taking the inventory the manager checks the expiration dates for all cakes that are in stock. If a cake has reached its expiration date, it is removed from stock and discarded. If a cake is within a week of reaching its expiration date, it is tagged as a "Manager's Special" and the price is reduced by 25%. The store manager compares what they have in inventory to the "par sheet" which lists how many of each type of cake the store would like to have in stock. Based on the difference between what they already have in stock and what the par sheet says they should have in stock, the manager creates a list of cakes that need to be made by the crew members. The manager also looks at orders for both stock cakes and custom cakes. If there are any orders then the manager adds these cakes to the list of cakes to be built.

Throughout the day the crew members build the cakes on this list. Building a cake does not include decorating a cake. Building a cake involves cutting out the right sized/shape piece of cake from a large sheet of cake (i.e. small round, large round, small rectangle, large rectangle in either chocolate or vanilla) which will form the bottom layer of the cake and mixing the ice cream (a combination of ice cream flavors and mix-ins) that will form the top layer of the cake and putting the cake and mixed ice cream into the appropriate pan which serves as a mold. The cake is then put into the blast freezer to deep freeze the cake overnight.

The next day Chris pulls the newly built cakes out of the blast freezer and decorates the cakes as needed to fill orders and replenish stock. As part of decorating the cakes, Chris packages the cakes into containers, labels each cake correctly with the type of cake and the expiration date for the cake. Chris puts the stock cakes out in the display freezer to be sold and the orders in the freezer in the back so they will be waiting for the customer when they come in to pick up their cake.

Step 2: In small groups (2-3) create a swimlane diagram to document this process.

Step 3: Draw diagram on board and discuss as a class

Step 4: Rate this activity (<u>individually</u>)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	Rating (1 to 5)
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Systems Analysis: Entity Relationship Diagrams - 1

After completing this activity you will be able to:

- Interpret an entity relationship diagram
- Construct a simple entity relationship diagram

Step 1: Individually

Reference the entity relationship diagram shown on screen. Prepare 3 questions that can be answered with the diagram:

1.

2.

3.

Step 2: In small groups (2-3 students).

Ask other group members your questions. Reach a consensus on the correct answers.

Step 3: In small groups, construct an ERD diagram by identifying the entities, attributes and relationships in the following scenario

Mike is the HR manager at Playwicki Financial Services. They need to hire a new systems analyst. The job has been posted on the company's web site and a few people have applied for the position. The hiring process starts when Mike reviews the applications and matches them up with the job requirements to identify the best candidate. Once the best candidate has been identified, their resume is sent to the hiring manager to review. If the hiring manager is not interested they ask Mike for another candidate and Mike starts looking for another candidate. If the hiring manager is interested in interviewing the candidate, they let Mike know and Mike schedules a phone interview with the hiring manager. The hiring manager conducts the phone interview with the candidate. If the hiring manager is not happy with the candidate, they ask Mike for another candidate and the process starts over again. If the hiring manger is happy with the candidate, then they let Mike know and Mike schedules a face-to-face interview for the candidate with the hiring manager. The hiring manager conducts the interview. If the hiring manager is not happy with the candidate, they let Mike know and the process starts over again. If the hiring manager is happy with the candidate, they notify Mike that they'd like to hire the candidate. Mike call the candidate to offer them the position over the phone. If the candidate is interested, Mike assembles the formal offer and mails it to the candidate. The candidate signs the offer, returns it to Mike and the new employee is officially hired.

Step 4: Draw your ERD here:

Step 5: Students called upon at random to help draw diagram on board and discuss

Step 6: Rate this activity (<u>individually</u>)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	Rating (1 to 5)
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Systems Analysis: Entity Relationship Diagrams - 2

After completing this activity you will be able to:

- Construct a simple entity relationship diagram

Step 1: In small groups (2-3) identify the entities, attributes and relationship and construct an ERD based on the following narrative

Chris is the cake decorator at Cold Stone Creamery. Chris works part-time and is responsible for decorating all of the cakes that Cold Stone sells including both stock cakes and custom orders. Chris can't do this alone. She needs the help of other people at the store to do this.

It all starts in the morning before the store opens when the store manager takes inventory of what cakes they have in stock. While taking the inventory the manager checks the expiration dates for all cakes that are in stock. If a cake has reached its expiration date, it is removed from stock and discarded. If a cake is within a week of reaching its expiration date, it is tagged as a "Manager's Special" and the price is reduced by 25%. The store manager compares what they have in inventory to the "par sheet" which lists how many of each type of cake the store would like to have in stock. Based on the difference between what they already have in stock and what the par sheet says they should have in stock, the manager creates a list of cakes that need to be made by the crew members. The manager also looks at orders for both stock cakes and custom cakes. If there are any orders, then the manager adds these cakes to the list of cakes to be built.

Throughout the day the crew members build the cakes on this list. Building a cake does not include decorating a cake. Building a cake involves cutting out the right sized/shape piece of cake from a large sheet of cake (i.e. small round, large round, small rectangle, large rectangle in either chocolate or vanilla) which will form the bottom layer of the cake and mixing the ice cream (a combination of ice cream flavors and mix-ins) that will form the top layer of the cake and putting the cake and mixed ice cream into the appropriate pan which serves as a mold. The cake is then put into the blast freezer to deep freeze the cake overnight.

The next day Chris pulls the newly built cakes out of the blast freezer and decorates the cakes as needed to fill orders and replenish stock. As part of decorating the cakes, Chris packages the cakes into containers, labels each cake correctly with the type of cake and the expiration date for the cake. Chris puts the stock cakes out in the display freezer to be sold and the orders in the freezer in the back so they will be waiting for the customer when they come in to pick up their cake.

Step 2: Draw your ERD here:

Step 3: Students called upon at random to help draw diagram on board and discuss

Step 4: Rate this activity (<u>individually</u>)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	Rating (1 to 5)
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Learn IT! #1 and Learn IT! #2 Kickoff

After completing this activity you will be able to:

- Complete Learn IT! #1 and be positioned to complete Learn IT! #2

Step 1 (individually): Read the following and answer the following question

"Personal branding is the practice of people marketing themselves and their careers as brands. While previous self-help management techniques were about self-*improvement*, the personal-branding concept suggests instead that success comes from self-*packaging*. The term is thought to have been first used and discussed in a 1997 article by Tom Peters.

Personal branding is essentially the ongoing process of establishing a prescribed image or impression in the mind of others about an individual, group, or organization. Personal branding often involves the application of one's name to various products. For example, the celebrity real-estate mogul turned President of the United States, Donald Trump uses his last name extensively on his buildings and on the products he endorses (e.g. Trump Tower). Marketers McNally and Speak define the personal brand in this way: "Your brand is a perception or emotion, maintained by somebody other than you, that describes the total experience of having a relationship with you."

The relationship between brands and consumers needs to be constantly made and remade, and this continuous process creates a demonstration of the ambivalence in brand cultures. This same logic follows for personal brands- there is a constant desire for a reinforcement of the self-brand." – Wikipedia

As a young business professional, list five prescribed images or impressions you want others to have about you:

1. _____
2. _____
3. _____
4. _____
5. _____

Step 2 (groups of 2-3):

Discuss your personal brands as a group.

Discuss what you should be doing to portray these images and impressions to others.

Step 3: Discuss as a class

Step 4: Individually

Take notes as your instructor walks through a presentation discussing Learn IT! #1 and Learn IT! #2.

Important Items:

1. _____
2. _____
3. _____
4. _____
5. _____

Step 5: Discuss as a class

Step 6: Answer two short questions individually

1. What new things have you learned about managing your Digital Identity?

2. As a young business professional, how important is it to actively manage your Digital Identity?

Step 7: Rate this activity (individually)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Systems Analysis: Conceptual Architecture Diagram

After completing this activity you will be able to:

- Construct a simple conceptual architecture diagram and ERD

Step 1: Individually – Review the following narrative

In part of MIS2501 – Enterprise IT Architecture, students are challenged to propose innovative products and services that can be delivered through a variety or digital ecosystems. In the spring of 2015 an MIS2501 student, Alex Savon, proposed a new application for the Apple Watch. After doing his research he determined that the accelerometer in the Apple Watch was sensitive enough to detect seizures in a person who has epilepsy and is wearing the watch.

Alex's proposal was for an application that would detect seizures and measure/report the duration and intensity of the seizure along with the person's heart rate throughout the event to the person's physician. In addition, information about this event would be sent via text messages to the loved ones of the person experiencing the seizure. With the detailed information provided by the application, the physician would be able to fine tune the treatment plan including adjusting medications. The end result is better health outcomes and an improved quality of life for the patient. Finally, as a result of the improved health outcomes, patients would need to see their physician less frequently which will result in a significant reduction in health care costs. Due to these financial benefits, the proposal was to provide this service to patients with their health insurance companies paying for the service.

With this use of technology, everybody wins. Patients experience better health outcomes and an improved quality of life and insurance companies reduce costs.

Step 2: In small groups (2-3 students) then discuss as a class.

Discuss the narrative and create a conceptual architecture diagram that describes this system.

Who are the users of this system and what are the interfaces used by each user?

What are the processes that this system needs to support?

What resources (data) needs to be collected and managed by this system?

Create a conceptual architecture diagram here:

Step 3: In small groups (2-3 students) then discuss as a class.

Create an ERD here that models the data requirements for this new application here:

Step 4: Rate this activity (<u>individually</u>)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Working in small teams (2-3) answer the following questions based on the narrative and diagrams which follow

1. For the box labeled "A", what would be the most appropriate description of this step in the process?
    a. Verify Production Plan Before Ordering
    b. Create & Send Purchase Requisition to Supplier and Accounting
    c. Create & Send Purchase Order to Supplier and Accounting
    d. Negotiate Terms/Conditions with Supplier
    e. None of the above
2. For the box labeled "B", what would be the most appropriate description of this step in the process?
    a. Post Goods Receipt and Send to Accounting
    b. Post Receipt of Materials in the General Ledger
    c. Use Raw Materials to Make Snack Bars
    d. Notify Plant Manager
    e. None of the above
3. What would be the best name for the actor labeled "C"?
    a. Ann
    b. Accounts Receivable
    c. Invoice
    d. Accounting
    e. None of the above
4. For the diamond labeled "D" what would be the most appropriate description of this step in the process?
    a. PO Created?
    b. Requisition Approved?
    c. Raw Materials Needed?
    d. Production Plan Scheduled?
    e. None of the above
5. For the diamond labeled "E" what would be the most appropriate description of this step in the process?
    a. Three Way Match?
    b. Goods Receipt Posted?
    c. General Ledger Updated?
    d. Invoice Paid?
    e. None of the above
6. For the box labeled "F", what would be the most appropriate description of this step in the process?
    a. Schedule Delivery
    b. Invoice Vendor
    c. Inform Plant Manager
    d. Create Invoice
    e. None of the above

7. For the box labeled "G", what would be the most appropriate description of this step in the process?
    a. Invoice Vendor
    b. Update General Ledger
    c. Pay Invoice
    d. Schedule Delivery
    e. None of the above
8. For the entity labeled "A", what would be the most appropriate name for this entity?
    a. Purchase Requisition
    b. Purchase Order
    c. Goods Receipt
    d. MSDS Sheet
    e. None of the above
9. For the entity labeled "B", what would be the most appropriate name for this entity?
    a. Purchase Requisition
    b. Purchase Order
    c. MSDS Sheet
    d. Goods Receipt
    e. None of the above
10. For the entity labeled "C", what would be the most appropriate name for this entity?
    a. Purchase Requisition
    b. Purchase Order
    c. MSDS Sheet
    d. Goods Receipt
    e. None of the above
11. What of the following attributes is missing from the Invoice entity?
    a. Requisitioner
    b. Supplier
    c. Received By
    d. Budget Line Item
    e. None of the above
12. What of the following attributes is missing from the entity labeled "B"?
    a. Lot number
    b. Lead Time
    c. Received By
    d. Agreed Price
    e. None of the above

Step 2: Rate this activity (<u>individually</u>) and submit completed activity sheet

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
This activity helped me learn more about today's topic.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Read the following narrative and review the following diagrams

You work for a company called FitterSnacker. Your company makes the best snack bars on the planet! There are lots of things that go into the snack bars like oats, sugar, raisins, etc. You started working for FitterSnacker a year ago and your job isn't very glamorous. You work on the receiving dock in the warehouse. Depending on what FitterSnacker is going to make and when they are going to make it, Paul, the plant manager, sends a purchase requisition to the procurement department and the raw materials show up on the receiving dock. You store the raw materials in the warehouse where they are used to make snack bars.

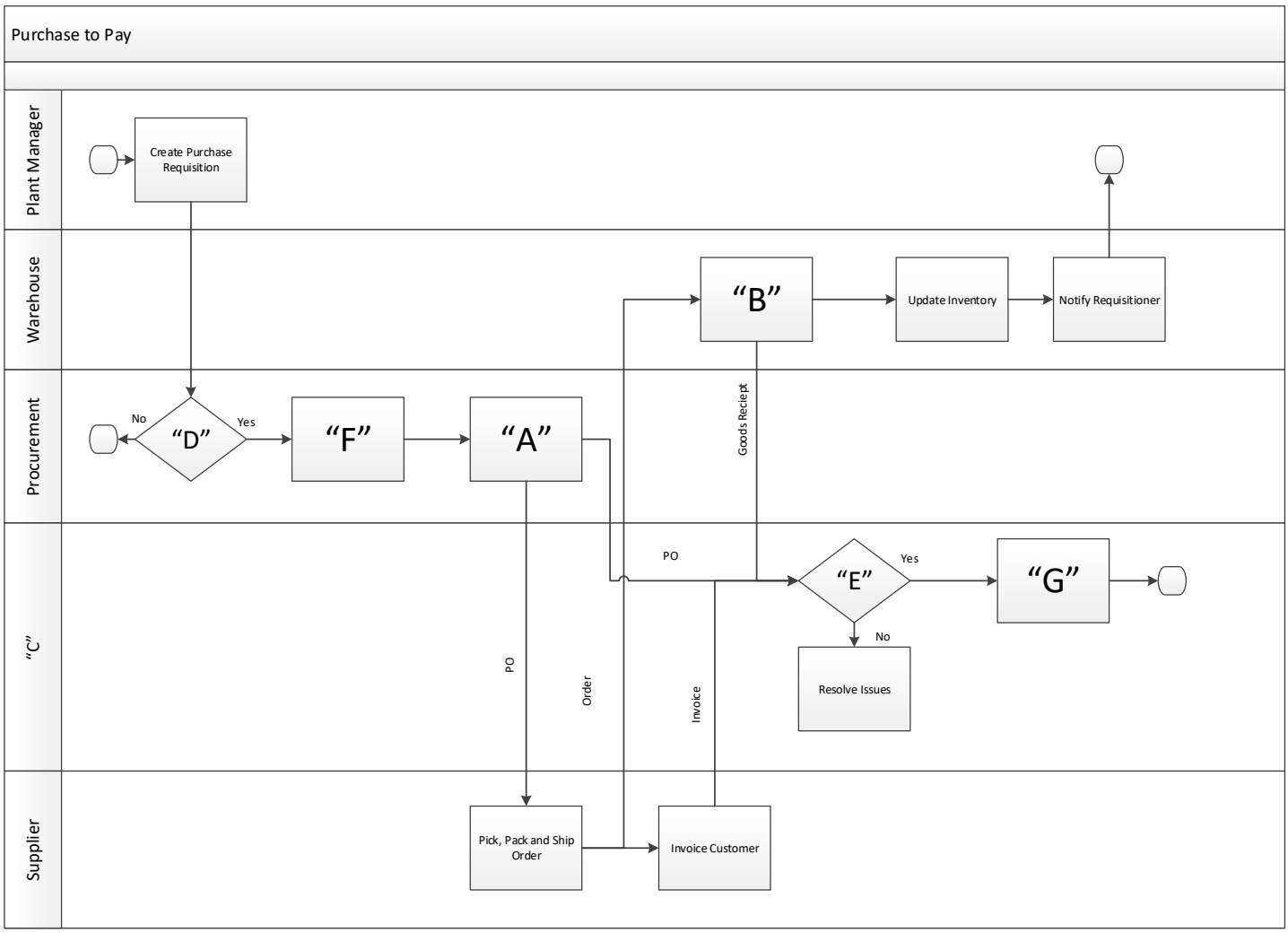
You don't want to spend your entire life working on the receiving dock so you've been talking with other people in the company trying to learn what they do so you will know more about how the business operates and can apply for a new position when one opens up. But for now you're stuck working on the receiving dock! As raw materials come in you create a goods receipt and send the good receipt to accounting to let them know exactly what raw materials have been received. You also update the inventory for raw materials and let the plant manager know when new raw materials have been received.

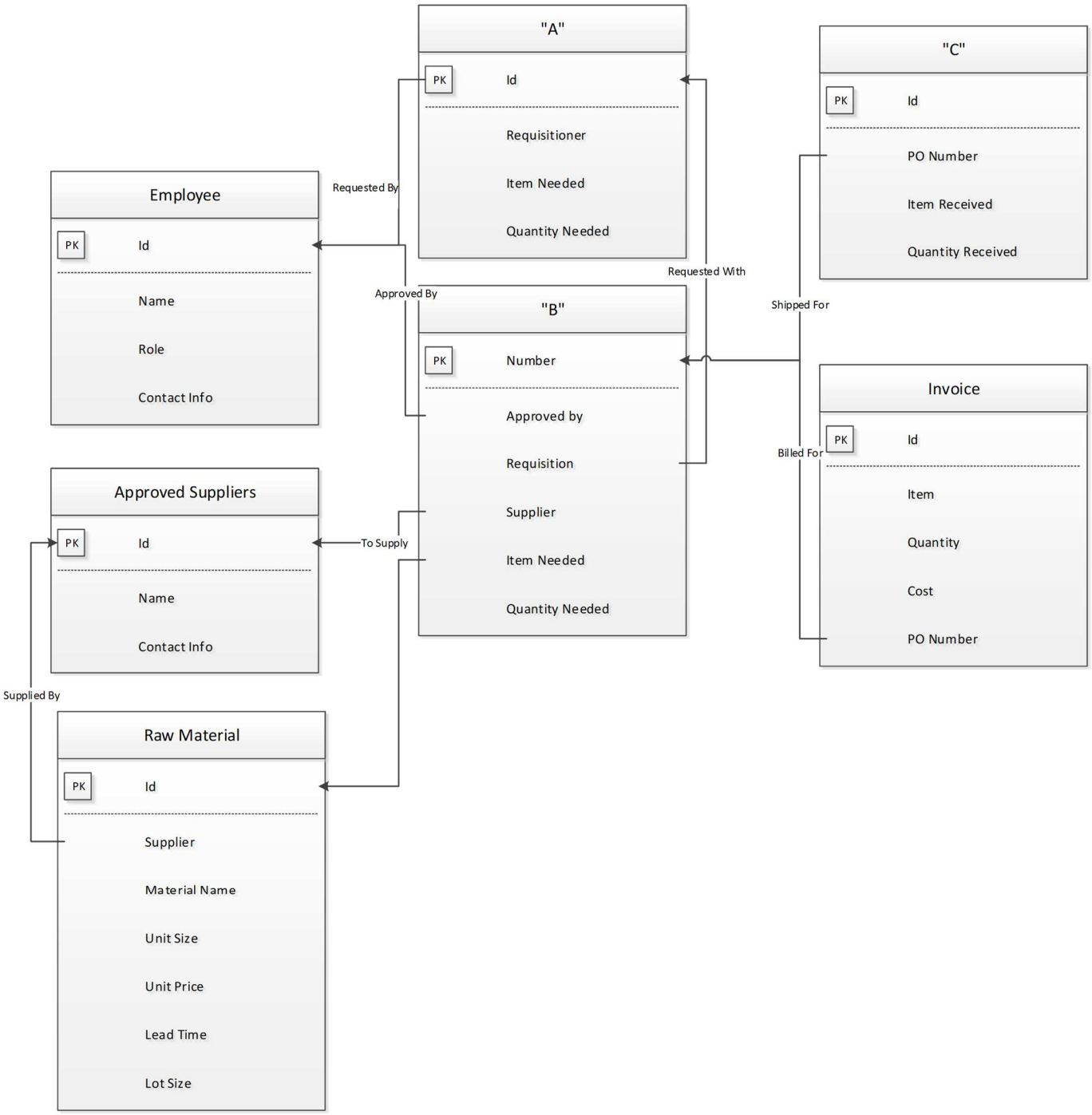
Your friend, Ann in accounting, has been telling you what she does with the goods receipt you send to accounting when you receive raw materials. When suppliers send you raw materials they also send the bill or what Ann calls an invoice to the accounting department. Before Ann pays the invoice she needs to do something called a 3-way match where she matches up the purchase order generated by the procurement department which lists everything that was ordered with the goods receipt you created listing what we received and the invoice that was sent to Ann from the supplier. If everything matches up then she pays the invoice. If things don't match up then she needs to resolve the issues.

You've also been talking to a friend, Patrice from procurement. Patrice actually buys all of the things that we need to make snack bars. She's not exactly sure what we need but she receives purchase requisitions from Paul the plant manager that lets her know what we need, how much of it we need and when we need it. Patrice needs to make sure that Paul has enough money in his raw materials budget before she orders the raw materials. If he doesn't have enough money in his budget then she will cancel the purchase requisition. If the money is in his budget then she will approve the purchase requisition. Patrice can buy things like oats and sugar from a number of different suppliers so the first thing she needs to do is select the best supplier based on what we need, when we need it and the pricing offered by the various suppliers. Once Patrice has selected the best vendor she creates a purchase order (PO) and sends it to the supplier. The PO is basically a contract that tells the supplier what we want to order from them, how much of it we want and the price we agreed to buy it from them. Patrice also sends a copy of the PO to Ann in accounting because she will eventually need it to pay the bills.

Once the supplier receives the PO they pick, pack and ship the materials to me in the warehouse and they send an invoice to the accounting department.

Review the following swim lane diagram and ERD. A number of pieces of information are missing. Based on the narrative provide the best answer to the questions above.


Purchase to Pay
Plant Manager
Warehouse
Procurement
"C"
Supplier
Create Purchase Requisition
"B"
Update Inventory
Notify Requisitioner
No
"D"
Yes
"F"
"A"
Goods Reciept
PO
"E"
Yes
"G"
No
Resolve Issues
PO
Order
Invoice
Pick, Pack and Ship Order
Invoice Customer


"A"
PK
Id
Requisitioner
Item Needed
Quantity Needed
"C"
PK
Id
PO Number
Item Received
Quantity Received
Employee
PK
Id
Name
Role
Contact Info
Requested By
Approved By
Requested With
Shipped For
"B"
PK
Number
Approved by
Requisition
Supplier
Item Needed
Quantity Needed
Invoice
PK
Id
Item
Quantity
Cost
PO Number
Billed For
Approved Suppliers
PK
Id
Name
Contact Info
To Supply
Supplied By
Raw Material
PK
Id
Supplier
Material Name
Unit Size
Unit Price
Lead Time
Lot Size

Name: _____ TUid: _____ Date: _____

Exam Prep

With the exception of the mini-case, the questions on the upcoming exam will come from:

- Assigned readings, assigned videos and class lectures/discussions

Step 1: Work in Team (2-3) and Share as a Class

Prepare three proposed exam questions from these readings:

Reading: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Reading: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Reading: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Step 2: Work in Team (2-3) and Share as a Class

Prepare three proposed exam questions from these videos:

Video: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Video: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Video: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Step 3: Work in Team (2-3) and Share as a Class

Prepare three proposed exam questions from these lectures/discussions:

Lecture/Discussion: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Lecture/Discussion: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Lecture/Discussion: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Step 4: Rate this activity (<u>individually</u>) and submit completed activity sheet

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
This activity helped me learn more about today's topic.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Business Processes: Procure to Pay

After completing this activity, you will be able to:

- Better understand one of the core businesses processes, purchase to pay (P2P or PtoP).
- Practice creating swim lane diagrams.
- Understand the impact of installing an ERP system

Step 1: Individually

Read the following narrative: P2P is the core business process that is used by organizations to acquire the products and services they need to fulfill their mission. In this scenario, you are the plant manager at FitterSnacker, a company that makes and sells snack bars. The plant manager is responsible for determining what they are going to make, when they are going to make it and acquiring the raw materials (oats, raisins, chocolate chips, etc.) that they need to make the snack bars. Once the plant manager determines what they need, they send a purchase requisition to the procurement department.

The procurement agent verifies that the plant manager is authorized to place the order. They then select the supplier and send a purchase order to the supplier.

The supplier receives the order and picks, packs and ships the order. After the order has been shipped they send an invoice to the customer.

The warehouse receives the order and posts a goods receipt to show this. The person in the warehouse notifies the plant manager that the items have been received.

The invoice is processed by the accounts payable team in accounting. They match up the invoice with the purchase order and the goods receipt. If we received what we ordered and are being charged what we were expecting to pay then we pay the invoice. If not, we must figure out where the problem is and resolve the problem.

Step 2: As a Group (2-3 in a group)

On a blank piece of paper create a swim lane diagram that documents the P2P process here at FitterSnacker and answer the following questions:

1. How many swim lanes do you have and what are the roles of the people in each lane?
2. How many different functional areas are involved in this process?
3. How much chaos can be involved when accounting must "figure out where the problem is and resolve the problem"?

Step 3: Students called upon at random to discuss

Compare your diagram with the diagram displayed in class

Step 4: As a Group (2-3 in a group) then as a class – Discuss the impact

1. FitterSnacker has just implemented an ERP which will dramatically improve the efficiency of the organization.
2. Based on historical sales and information entered into the system by the sales organization a forecast of what you plan to sell is automatically generated by the system.
3. The system also manages inventory (both raw materials and finished goods). Since the system knows what you have (inventory) and the since the forecast tells you what you need (demand) the plant manager doesn't need to figure out what you are going to make and when you are going to make it (a.k.a. the production plan). The system will create the production plan. With the production plan the system can automatically create purchase requisitions at the appropriate times to acquire the required raw materials and execute the production plan.
4. With the ERP we maintain a list of preferred suppliers for all raw materials. We also keep track of things like lead time (how long it takes to get a raw material) and pricing information for each supplier. Based on lead times and pricing, the system can automatically choose the optimal supplier and can send an electronic purchase order (PO) to the supplier. The electronic PO includes a unique PO number that we will use later on.
5. The items are received at the warehouse. The PO number for the order is included with the shipping documents. The person at the warehouse pulls up the PO using the PO number and ensures that everything that was ordered was received and posts the goods receipt.
6. The supplier sends FitterSnacker an electronic invoice. The invoice includes the PO number. The system can automatically perform the three-way match, matching up the original PO, the goods receipt and the invoice and it everything matches can send the payment electronically to the supplier.

Step 5: Rate this activity (<u>individually</u>)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Step 6: Submit completed activity sheet

Name: _____ TUid: _____ Date: _____

Business Systems: Enterprise Systems

After completing this activity you will be able to:

- Describe the financial impacts of investing in an ERP system.

Step 1: Individually

Review the following narrative:

FitterSnacker has reached the decision point regarding an investment in an ERP system. While they believe there will be lots of benefits, it is now time to start trying to identify the financial impacts of this investment before moving forward with the project.

The ERP system will be expensive. It will be **very expensive** for a small company like FitterSnacker. It will cost a total of $10,000,000! The ERP system will create value for FitterSnacker over an extended period of time so the Accounting department will depreciate this investment over a period of 10 years or $1,000,000 per year.

The integrated database with the ERP provides superior decision making. From which customers to target for sales to where to acquire raw materials, the superior decision making of the ERP will provide countless benefits to FitterSnacker. From the sales perspective we believe that we will increase sales by 10%. This will increase our shipping costs by 10%. While we will make and sell 10% more goods, our purchase and production costs as well as direct labor costs will only increase by 5% due to efficiencies introduced by the ERP.

The accounting function at FitterSnacker has been a mess! With separate systems for order processing, order fulfillment, accounts payable, procurement, accounts receivable, payroll etc., etc., etc., FitterSnacker has needed a small army of accountants to keep track of all of the relevant information. As a result of the increased efficiencies of the single integrated database, what once required a small army of accountants will now only require a handful of accountants. We are projecting that our accounting and legal costs will be reduced by 50%. It is not only the accounting department that will realize a dramatic improvement in efficiency but many other areas including order processing, order fulfillment, production planning, and others will also experience an improvement in efficiency and we are projecting that salaries and wages will be reduced by 20%.

Finally, we use ADP for payroll processing. With fewer employees, we project that our payroll expenses will drop by 35%.

Step 2: In Small Groups (2-3)

Discuss the narrative and review the income statement displayed on the screen. Identify the line items that will be impacted by the implementation of the ERP system.

1. Starting with "Income", what areas of the income statement will be impacted by the ERP. How will the ERP impact sales, cost of goods sold, gross profits and total income?

2. Working you way through "Expenses", what areas of the income statement will be impacted by the ERP?

3. In terms of "Net Income", what is the impact of the ERP?

Step 3: Class Discussion (*unhide columns H-K*)

Step 4: Answer these short-answer questions (individually)

1. A $10,000,000 investment in a computer system is a big investment for a small company like FitterSnacker. With $10,000,000 you could put a lot of new salespeople out in the field, expand manufacturing capacity or develop new products. Is a $10,000,000 a good investment or a bad investment for FitterSnacker? Explain?

Step 5: Rate this activity (individually)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

FitterSnacker

ERP Investment P&L Projection

INCOME		Pre-ERP	% of TS	Class Comments
Sales				
Sales - Qtr 1		15,000,000	17.9%	
Sales - Qtr 2		25,000,000	29.9%	
Sales - Qtr 3		25,000,000	29.9%	
Sales - Qtr 4		18,000,000	21.5%	
Other		675,000	0.8%	
Total Sales (TS)	**$**	**83,675,000**	100.0%	
Cost of Goods				
Beginning Inventory		12,000,000	14.3%	
Purchases and Production Costs		20,000,000	23.9%	
Shipping and Delivery		375,000	0.4%	
Labor (wages and payroll)		8,750,000	10.5%	
Other		329,000	0.4%	
Less Ending Inventory		10,000,000	12.0%	
Total Cost of Goods Sold	**$**	**31,454,000**	37.6%	
Gross Profit	**$**	**52,221,000**	62.4%	
Non-Operating Income				
Interest Income		480,000		
Rental Income		272,000		
Other		372,000		
Total Non-Operating Income	**$**	**1,124,000**		
Total INCOME	**$**	**53,345,000**	63.8%	
EXPENSES				
Operating Expenses				
Accounting and Legal		1,200,000	1.4%	
Advertising		450,000	0.5%	
Depreciation		4,000,000	4.8%	
Dues and Subscriptions		175,000	0.2%	
Insurance		280,000	0.3%	
Interest Expense		250,000	0.3%	
Maintenance and Repairs		685,000	0.8%	
Office Supplies		32,000	0.0%	
Payroll Expenses		92,000	0.1%	
Postage		4,000	0.0%	
Rent		500,000	0.6%	
Research and Development		400,000	0.5%	
Salaries and Wages		2,400,000	2.9%	
Taxes and Licenses		45,000	0.1%	
Telephone		30,000	0.0%	
Travel		45,000	0.1%	
Utilities		60,000	0.1%	
Web Hosting and Domains		2,000	0.0%	
Other		4,500	0.0%	
Total Operating Expenses	**$**	**10,654,500**	12.7%	
Non-Recurring Expenses				
Furniture, Equipment and Software		25,000	0.0%	
Gifts Given		13,000	0.0%	
Other		12,000	0.0%	
Total Non-Recurring Expenses	**$**	**50,000**	0.1%	
Total EXPENSES	**$**	**10,704,500**	12.8%	
Net Income Before Taxes	$	42,640,500		
Income Tax Expense		7,675,290		
NET INCOME	**$**	**34,965,210**		
Owner Distributions / Dividends				
Adjustment to Retained Earnings	$	34,965,210		

Name: _____ TUid: _____ Date: _____

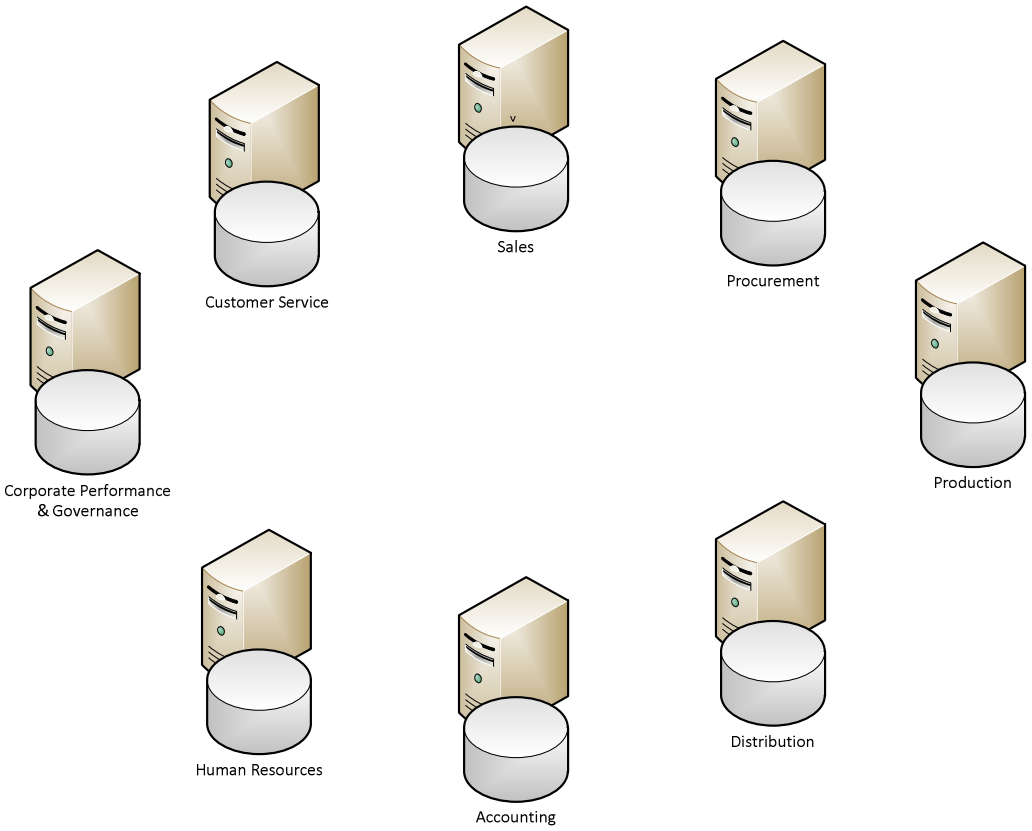
Organizational Systems: Filling in the Income Statement

After completing this activity you will be able to:

- Discuss how ERP systems dramatically improve the efficiency of the accounting organization.
- Discuss how ERP systems can improve the decision making of a company.

Step 1: Individually Complete

Read: You are an accountant with FitterSnacker. You are responsible for creating the income statement. The data that you need to create the income statement is spread out across a variety of systems. Here are the systems:



Step 2: Discuss as a Group (2-3)

1. Which systems will you need to get data from to complete each line of the income statement? Feel free to ask questions about what each of the systems do.

Gross Sales: _____

Cost of Goods Sold: _____

Expenses: _____

Personnel: _____

Rent: _____

Operating Expenses: _____

2. How often is the same piece of information captured in more than one place, and when it is, which place should you get this information from?

3. What are the odds that information that is stored in multiple locations is always identical or can this information get out of synch? If it is not identical how can this impact your ability to make decisions?

4. FitterSnacker receives a call from a prospective customer. This could be the first of many large orders from this customer! The customer is asking for a price of $1.00 per snack bar. It looks like your cost for making a snack bar is $0.90. However, due to the time and resources it takes to calculate the cost of making each snack bar it is only calculated once per quarter and this cost of $0.90 is two months old. You also know that the price of oats, a key raw material, has been going through the roof over the past few months so you're really not sure how much each snack bar costs to make. You don't want to turn away a prospective large customer but you don't want to lose money on the deal. Do you take the order at $1.00 per snack bar or walk away?

5. How do things get more complicated if you are the parent company for a collection of companies and you need to put together the income statement for the parent company?

6. How can an ERP system with a single integrated database improve the efficiency of the accounting organization?

7. How can an ERP system with a single integrated database improve the decision making of the organization?

Step 3: Students will be called upon at random to discuss

Discuss the answers to these questions.

Step 4: Rate this activity (<u>individually</u>) and submit completed activity sheet

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
This activity helped me learn more about today's topic.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

FitterSnacker

ERP Investment P&L Projection

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Income Tax Expense		7,675,290		
NET INCOME	**$**	**34,965,210**		
Owner Distributions / Dividends				
Adjustment to Retained Earnings	$	34,965,210		

Name: _____ TUid: _____ Date: _____

Organizational Systems: Decision Making with Neural Networks

After completing this activity you will be able to:

- Describer how neural networks can aid in decision making.

Step 1: Individually Complete

Neural network (formally called artificial neural networks (ANNs)) fall under the category of artificial intelligence (AI) and can be used to help business professionals make better decisions. What makes a neural network valuable is its ability to learn and adapt over time. It does this by consuming large quantities of data pertaining to a problem and then seeing how every possible combination and permutation of each data element correlates to an outcome. As the system consumes more and more data, it learns and can better predict outcomes. Being a computer system, a neural network can examine much more data in a very short period of time and can look at the relationships between every combination and permutation of data elements, not just the relationships that are intuitively obvious to a person.

Step 2: Discuss as Teams (2-3)

You are a loan officer at a new bank. Your job is to create the process the bank will use to review loan applications and make approval/rejection decisions about each loan application. When you make good decisions about loans the bank makes money. When you make bad decisions about loans the bank loses money.

Prepare a list of the pieces of information you will want to know about each loan application (i.e. age, gender, loan amount, income) and explain why each piece of information is important to you:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Step 3: As a class

Compile a shared list on the board.

Step 4: In groups

1. Are there any individual pieces of information that are a "make or break" for the application?

2. Are there any pieces of information that alone are not "make or break" but depending on the combination of these pieces of information may be "make or break" for the application?

Step 5: Students will be called upon at random to discuss

Step 6: In groups

In addition to using neural networks for making decisions on bank loans, neural networks are also used to detect credit card fraud. Make a list of the things that these types of neural networks might monitor and describe how these things, alone or in combination, might indicate fraudulent activity:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Step 7: Students will be called upon at random to discuss

Step 8: Rate this activity (individually) and submit completed activity sheet

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
This activity helped me learn more about today's topic.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Organizational Systems: Gathering Systems Requirements

After completing this activity you will be able to:

- State strategies for asking questions when gathering systems requirements.

Step 1: Individually Complete

You have been asked to perform a security audit on a professor's process of calculating, storing, and submitting final course grades. To complete this task it is suggested that you "think like a hacker" and try to figure out how, if at all possible, the integrity of the grading process could be breached.

What kinds of information do you need to know in order to fraudulently change a grade?

1.

2.

3.

How would you go about finding out this information? What questions would you ask a professor to help uncover the information you need?

1.

2.

3.

4.

5.

Step 2: Discuss as Teams (2-3 students)

1. Discuss your strategies as a team. Identify the 2-3 most probable strategies to explore further.

2. Discuss your requirements gathering questions. Prioritize and sequence the questions you wish to ask.

Step 3: Students will be called upon at random to ask questions

Each team takes turns asking the professor questions.

Step 4: In groups

Prepare additional questions.

Step 5: Students will be called upon at random to ask questions

Each team takes turns asking the professor questions.

Step 6: Students will be called upon at random to discuss

Discuss the requirements gathering process.

Step 7: Answer these short-answer questions (individually)

1. Do you think that sufficient safeguards are in place to secure the grading process? Why or why not?

2. Name at least two different approaches to asking questions when gathering requirements.

3. What is something you learned doing this activity?

Step 8: Rate this activity (individually) and submit completed activity sheet

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
This activity helped me learn more about today's topic.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ Date: _____

Consumer Systems: The Long Tail

After completing this activity you will be able to: explain what a long tail distribution is and why it matters.

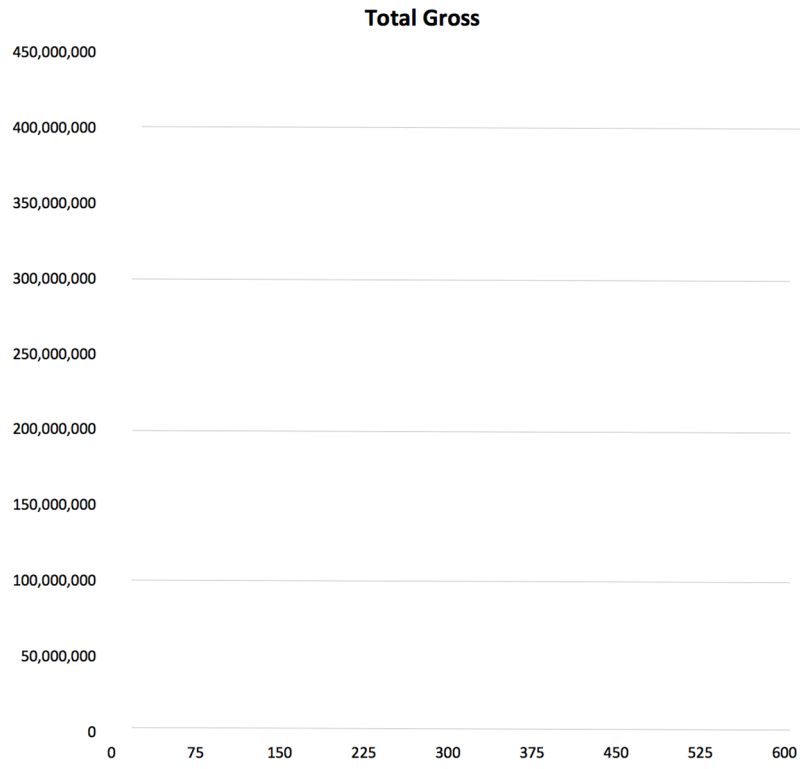
Step 1: Individually

Head to the website showing 2016 Domestic (US) Box Office Totals: http://www.boxofficemojo.com. Look under Box Office…Yearly and Select "2017" then complete this table:

Rank	Movie Title	Gross Sales		Rank	Movie Title	Gross Sales
1				225		
10				300		
25				375		
50				450		
75				525		
150				600		

Step 2: In Groups (2-3)

Compare your tables with other group members (e.g., reach agreement on the data!). Graph the data onto this chart:



Once all the data is charted, draw a line connecting the individual data points. Then answer these questions:

- There are 3 general measure of central tendency (e.g., average). How much money did the average movie make?
    - Mean:
    - Median:
    - Mode:

- If you totaled up box office receipts from the bottom N movies, about how many movies would it take to match the total for the top-grossing film?

- Do you think the top-ten ranking movies were the best movies of the year?

Step 3: Discuss as a Class

- Differences between mean, median, and mode in long-tail distribution vs. normal distribution.

Step 4: Answer these short-answer questions (individually)

1. Draw a long-tail distribution:

2. What is an example of a product or service (other than movies!) that follows the long-tail distribution?

3. Why does it matter what distribution products sales follow?

4. What is something you learned doing this activity?

Step 5: Rate this activity (individually)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
This activity helped me learn more about today's topic.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Mini-Case - Read the following narrative carefully:

You work for a company called Barb's Bikes. Barb's Bikes is a small company that purchases high-end bicycle parts (i.e. frames, wheels, tires, peddles), assembles these parts into bikes and then sells these bikes to small, high-end regional retailers. Barb's Bikes has recently implemented an ERP system that has really helped streamline operations and has dramatically reduced the chaos and associated costs they encountered when they used to run separate order processing, inventory, manufacturing and procurement systems.

Before the ERP system was implemented, managing inventory was a nightmare! What the sales people were selling never seemed to be in stock and what we had in stock was never what the sales people were selling. The sales people were not communicating with the production people and the production people were not communicating with the procurement people. It was a mess! The new ERP system solved most of these problems by generating better forecasts, managing the production plan and acquiring the parts we need when we need them to make the bikes to meet demand.

Using historical sales data and information about marketing campaigns that we are currently running, the system generates a forecast of what we expect to sell week by week over the next quarter. The system then compares this sale forecast against the finished goods that we will have in stock week by week over the next quarter. Note that this is not what we currently have in stock what we will have in stock by referencing the current production plan showing what bikes we will be building week by week over the next quarter.

If the supply is not expected to meet demand, then the system will automatically update the production plan scheduling so that we will make the additional bikes we will need to meet demand.

When the production plan is updated, the system checks the inventory levels of the raw materials (i.e. frames, wheels, tires, etc.) to ensure that we have the raw materials needed to execute the production plan. The system has information about all of our suppliers including what we can purchase from them, how much they charge for each item and how long it takes to receive a shipment from the supplier, also known as "lead time". If we don't have the needed raw materials the system reviews the suppliers of the needed raw materials and selects the supplier that can get us the needed raw materials at the lowest cost in time to assemble the bikes we need to execute the production plan. The system sends out purchase orders to these suppliers who ship the raw materials.

The production plan is executed like clockwork. Every day the production team receives raw materials and then assembles the bikes as specified by the production plan. All of the necessary raw materials are delivered by the lowest cost supplier shortly before the bikes are assembled. As the production team finishes the assembly of a bike, they store it in the warehouse and then update inventory. The entire process starts all over again the next week.

-------- *Based on the narrative provide the best answer to the following questions about the swimlane and ERD diagrams:*

1. What would be the best name for the actor labeled "A"?
    a. ERP
    b. Warehouse
    c. Procurement
    d. Production Team
    e. None of the above

2. For the box labeled "B", what would be the most appropriate description of this step in the process?
    a. Check with Accounting Department for Available Credit
    b. Compare Forecast to Future Finished Goods Inventory
    c. Compare Forecast to Production Plan
    d. In stock?
    e. None of the above

3. For the diamond labeled "C" what would be the most appropriate description of this step in the process?
    a. Production Plan Updated
    b. Create Purchase Requisitions
    c. Customer Notified of Delivery Date?
    d. Assembly Scheduled?
    e. None of the above

Name: _____ TUid: _____ Date: _____

4. For the box labeled “D” what would be the most appropriate description of this step in the process?
    a. Select Optimal Vendor Based on Cost and Delivery Times
    b. Production Plan Updated
    c. Create Purchase Requisition
    d. Acquire Approval for Purchases
    e. None of the above

5. For the box labeled “E” what would be the most appropriate description of this step in the process?
    a. Pick, Pack and Ship Order
    b. Update Production Plan
    c. Update Inventory
    d. Compare Forecast to Future Finished Goods Inventory
    e. None of the above

6. For the entity labeled “F”, what would be the most appropriate name for this entity?
    a. Purchase Order
    b. Bill
    c. Invoice
    d. Purchase Requisition
    e. None of the above

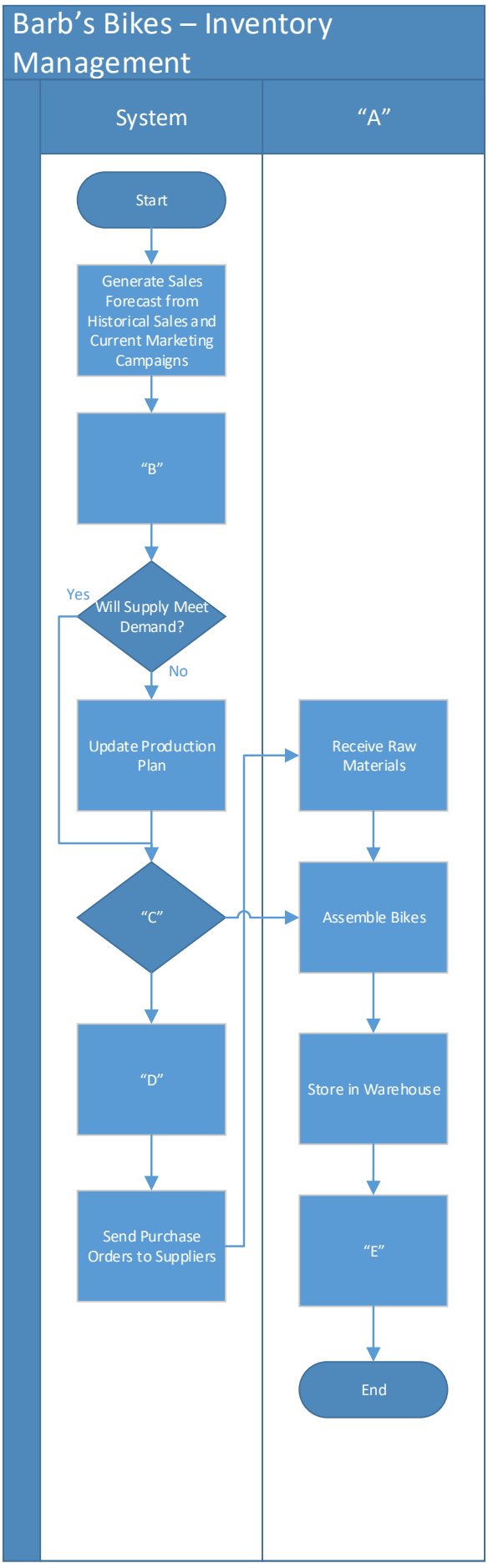
7. For the entity labeled “G”, what would be the most appropriate name for this entity?
    a. Items to Purchase
    b. Material Location
    c. Inventory Forecast
    d. Production Plan Request
    e. None of the above

8. For the relationship labeled “H”, what would be the most appropriate name for this entity?
    a. Invoices
    b. Creates PO
    c. Pays For
    d. Provides
    e. None of the above

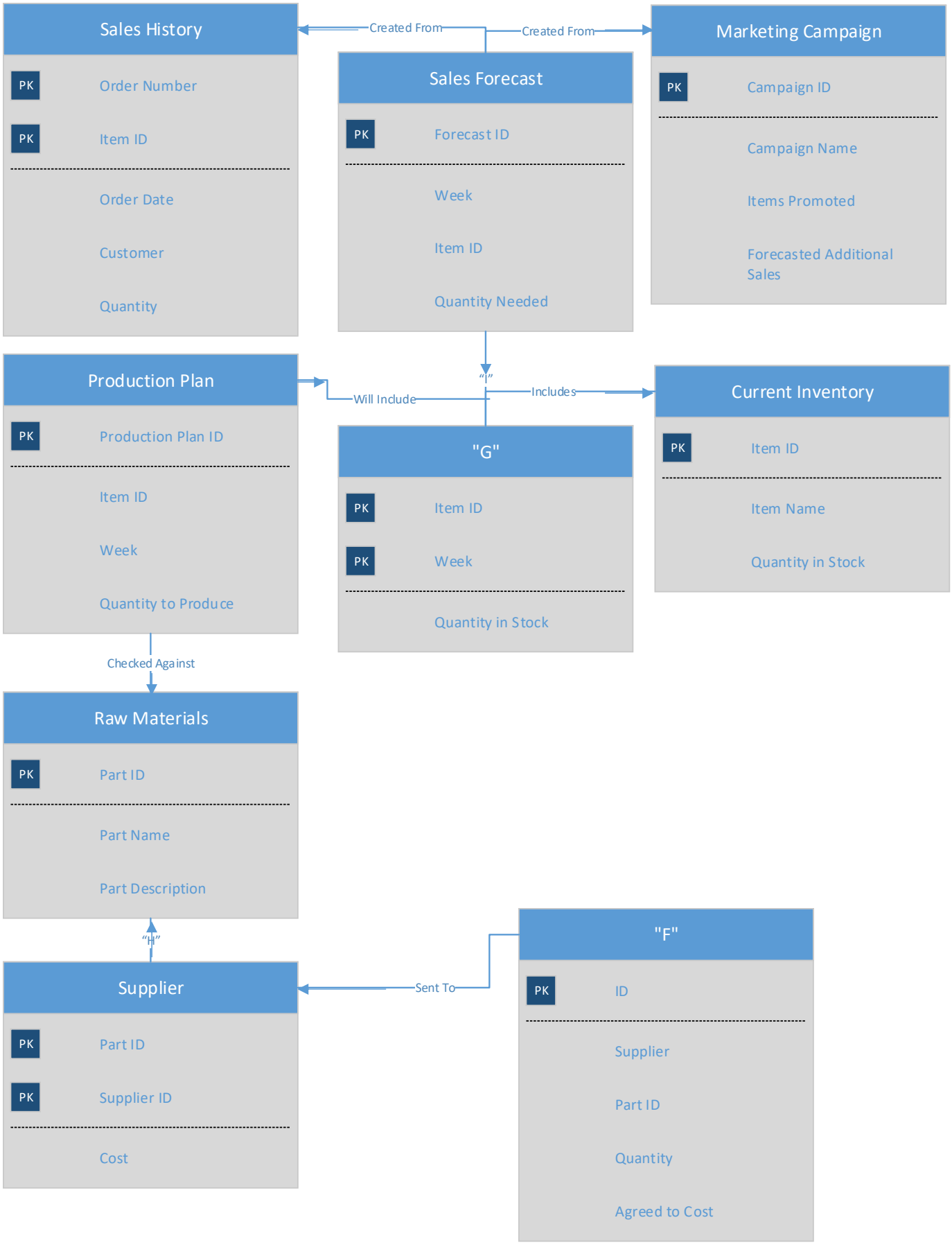
9. For the relationship labeled “I”, what would be the most appropriate name for this entity?
    a. Does Include
    b. Is Compared To
    c. Does Not Include
    d. Ordered By
    e. None of the above

10. What of the following attributes is missing from the Supplier entity?
    a. Lead Time
    b. Purchase Order Number
    c. Invoice Number
    d. Quantity
    e. None of the above

Name: _____ TUid: _____ Date: _____



Name: _____ TUid: _____ Date: _____



Name: _____ TUid: _____ Date: _____

Exam Prep

With the exception of the mini-case, the questions on the upcoming exam will come from:

- Assigned readings, assigned videos and class lectures/discussions

Step 1: Work in Team (2-3) and Share as a Class

Prepare three proposed exam questions from these readings:

Reading: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Reading: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Reading: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Step 2: Work in Team (2-3) and Share as a Class

Prepare three proposed exam questions from these videos:

Video: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Video: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Video: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Step 3: Work in Team (2-3) and Share as a Class

Prepare three proposed exam questions from these lectures/discussions:

Lecture/Discussion: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Lecture/Discussion: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Lecture/Discussion: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Step 4: Rate this activity (<u>individually</u>) and submit completed activity sheet

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
This activity helped me learn more about today's topic.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

SCM and the Income Statement

After completing this activity you will be able to:

- Describe the financial impacts of investing in an SCM system.

Step 1: Individually

Review the following narrative:

FitterSnacker has reached the decision point regarding an investment in an SCM system. While they believe there will be lots of benefits, it is now time to start trying to identify the financial impacts of this investment before moving forward with the project.

The SCM system will be expensive. It will be **very expensive** for a small company like FitterSnacker. It will cost a total of $3,000,000! The SCM system will create value for FitterSnacker over an extended period of time so the Accounting department will depreciate this investment over a period of 10 years or $300,000 per year.

Manufacturing is a mess! While the plant managers can put together a decent production plan, executing the production plan has been a nightmare. Last year FitterSnacker adopted a strategy of creating lots of safety stock and storing it in the warehouse. While this ensured that we could always fill orders, since our snack bars have a shelf life of 180 days many of the bars were getting old before they were even shipped to the customer and customers were returning lots of snack bars that were approaching the expiration date shortly after they received them. In addition, some bars were expiring before they even left the warehouse generating some serious losses for us so we killed that strategy quickly! While sales are projected to be up 5% which should increase our purchases and production costs by 5%, since then we are getting the raw materials we need when we need them and we're virtually eliminating product being returned by our customers for reaching its shelf life, we are projecting that our purchases and production costs will only increase by 2%.

While we typically have all of the required raw materials in the warehouse to execute the production plan, too often we would be missing one or two required raw materials which would force us to shut down the production line driving our costs through the roof. When we finally received the missing raw materials we would frequently need to run the production line 24 hours per day to get caught up so we could fill orders. Our workers on the production line would all be working double shifts and we'd be paying them all overtime driving up our cost of goods sold. Not good! With a projected increase in sales (see below) our labor costs would also increase by 5%. However, since the production line will run MUCH smoother we will virtually eliminate all overtime so this 5% increase in labor costs is reduced to only 2% increase in labor costs with the SCM system.

Finally, our manufacturing issues have been having an impact on sales. When we can't get our customers what they want, when they want it they start buying products from our competitors. When we can deliver the right product to the right customer at the right time our customers are happy and

buy more of our products. By eliminating many of our manufacturing issues, we are estimating that we will actually increase sales by 5%. If we are selling 5% more product, our shipping costs will increase by 5% but that's just the cost of doing business.

Step 2: In Small Groups (2-3)

Discuss the narrative and review the income statement displayed on the screen. Identify the line items that will be impacted by the implementation of the SCM system.

1. Starting with "Income", what areas of the income statement will be impacted by the SCM. How will the SCM impact sales, cost of goods sold, gross profits and total income?

2. Working you way through "Expenses", what areas of the income statement will be impacted by the SCM?

3. In terms of "Net Income", what is the impact of the SCM?

Step 3: Class Discussion (*unhide columns H-K*)

Step 4: Answer these short-answer questions (individually)

1. A $3,000,000 investment in a computer system is a big investment for a small company like FitterSnacker. With $3,000,000 you could put a lot of new salespeople out in the field, expand manufacturing capacity or develop new products. Is a $3,000,000 a good investment or a bad investment for FitterSnacker? Explain?

Step 5: Rate this activity (individually)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

FitterSnacker

SCM Investment P&L Proje

INCOME		Pre-SCM	% of TS
Sales			
Sales - Qtr 1		15,000,000	17.9%
Sales - Qtr 2		25,000,000	29.9%
Sales - Qtr 3		25,000,000	29.9%
Sales - Qtr 4		18,000,000	21.5%
Other		675,000	0.8%
Total Sales (TS)	**$**	**83,675,000**	100.0%
Cost of Goods			
Beginning Inventory		12,000,000	14.3%
Purchases and Production Costs		20,000,000	23.9%
Shipping and Delivery		375,000	0.4%
Labor (wages and payroll)		8,750,000	10.5%
Other		329,000	0.4%
Less Ending Inventory		10,000,000	12.0%
Total Cost of Goods Sold	**$**	**31,454,000**	37.6%
Gross Profit	**$**	**52,221,000**	62.4%
Non-Operating Income			
Interest Income		480,000	
Rental Income		272,000	
Other		372,000	
Total Non-Operating Income	**$**	**1,124,000**	
Total INCOME	**$**	**53,345,000**	63.8%

EXPENSES			
Operating Expenses			
Accounting and Legal		1,200,000	1.4%
Advertising		450,000	0.5%
Depreciation		4,000,000	4.8%
Dues and Subscriptions		175,000	0.2%
Insurance		280,000	0.3%
Interest Expense		250,000	0.3%
Maintenance and Repairs		685,000	0.8%
Office Supplies		32,000	0.0%
Payroll Expenses		92,000	0.1%
Postage		4,000	0.0%
Rent		500,000	0.6%
Research and Development		400,000	0.5%
Salaries and Wages		2,400,000	2.9%
Taxes and Licenses		45,000	0.1%
Telephone		30,000	0.0%
Travel		45,000	0.1%
Utilities		60,000	0.1%
Web Hosting and Domains		2,000	0.0%
Other		4,500	0.0%
Total Operating Expenses	**$**	**10,654,500**	12.7%
Non-Recurring Expenses			
Furniture, Equipment and Software		25,000	0.0%
Gifts Given		13,000	0.0%
Other		12,000	0.0%
Total Non-Recurring Expenses	**$**	**50,000**	0.1%

Total EXPENSES	**$**	**10,704,500**	12.8%
Net Income Before Taxes	$	42,640,500	
Income Tax Expense		7,675,290	
NET INCOME	**$**	**34,965,210**	
Owner Distributions / Dividends			
Adjustment to Retained Earnings	$	34,965,210	

Name: _____ TUid: _____ Date: _____

SCM Sourcing Planning

After completing this activity you will be able to:

- Describe the operational benefits of investing in an SCM system.

Step 1: Individually – Review the following narrative:

FitterSnacker only makes two snack bars, NRG-A bars and NRG-B bars. The following Bill of Materials (BOM) shows the raw materials that go into creating a 2,000 bar batch of snack bars:

	Quantity	
Ingredient	**NRG-A**	**NRG-B**
Oats (lb)	300	250
Wheat germ (lb)	50	50
Cinnamon (lb)	5	5
Nutmeg (lb)	2	2
Cloves (lb)	1	1
Honey (gal)	10	10
Canola Oil (gal)	7	7
Vit./Min. Powder (lb)	5	5
Carob Chips (lb)	50	
Raisins (lb)	50	
Protein Powder (lb)		50
Hazelnuts (lb)		30
Dates (lb)		70

FitterSnacker has a number of different suppliers for most raw materials and the pricing and lead times for raw materials is almost identical from supplier to supplier. However, the pricing of oats, raisins and dates varies greatly from one supplier to the next. The suppliers with the shortest lead times tend to have the highest prices. Here is the pricing and lead times for the three major suppliers of oats, raisins and dates.

Oats	**Guy with Funny Hat Oats**	**Oliver's Oats**	**Yummy Oats**
Cost (dollars per lb)	$0.50	$0.40	$0.45
Lead Time (days)	14	28	21
Raisins	**Dancing Raisins**	**Calif. Raisins**	**Yesterday's Grapes**
Cost (dollars per lb)	$1.00	$0.95	$0.75
Lead Time (days)	7	14	21
Dates	**Blind Dates**	**50 First Dates**	**eHarmony Dates**
Cost (dollars per lb)	$1.00	$1.25	$1.50
Lead Time (days)	25	15	10

*** Note – You only have so many mixers and ovens which limit your capacity to make product. Your maximum production capacity is 80,000 bars per week without running a second shift and incurring overtime which increases your cost of goods sold significantly.

Step 2: In Small Groups (2-3)

Your group is responsible for figuring out both the quantities of raw materials FitterSnacker will buy and who you will buy them from. Since the prices and lead times don't vary for most raw materials, you are really focused on the oats, raisins and dates that you will need to order over the next four weeks starting three weeks from now. The following production plan shows the number of snack bars we plan to make each week. Fill in the blanks to identify what raw materials you will buy and who you will buy them from.

Week	21 days from now	28 days from now	35 days from now	42 days from now
NRG-A Bars	40,000	50,000	40,000	40,000
NRG-B Bars	20,000	40,000	50,000	40,000
Oat Quantity				
Oat Source				
Raisin Quantity				
Raisin Source				
Date Quantity				
Date Source				

Step 3: Class Discussion

Discuss how SCM systems make this process much less painful and responsive to changes in demand. If we provided our SCM with a forecast and the BOM, can a machine do this much better than a person?

Sales just notified manufacturing that they forgot to mention a promotion that will start next week and is expected to increase sales by 20%. What kind of chaos will that cause?

Step 4: Rate this activity (individually)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	Rating (1 to 5)
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

CRM Data & Planning

After completing this activity you will be able to:

- Describe the operational benefits of investing in a CRM system.
- Understand the data that is collected in a CRM and how it is used to engage & retain customers.

Step 1: Individually – Review the following narrative:

You are the manager at a large travel agency that sells vacation packages to families in the United States. Your department focuses on maintaining customer relationships by providing current customers with access to the following:

1. Special amenities while they are on vacation
2. Access to discounted trips in their preferred destinations
3. Access to discounted trips with short lead times (i.e. departing in a few days)

As the manager, it is your job to make sure that the salespeople are achieving the above goals, that the customers are satisfied and that you can report to your supervisor that these goals are in fact being achieved. In your department, all of the salespeople are able to work with any current customer – they do not have a set group that belongs to them.

Step 2: Individually

What kind of data should your department be collecting about your customers to meet your goals? Why?

Step 3: In Small Groups (2-3)

Refine your list above in groups. Decide which 5 data elements are most important and why?

Step 4: Class Discussion

Discuss the data elements & come to a consensus as to what data should be collected.

Step 5: In Small Groups (2-3)

What is the best way to present the data to your supervisor? What kind of reports do you think they would want to see in order to prove that your team is succeeding? Discuss.

Step 6: Short Answer/Discussion Questions

1. Is it really necessary for companies to collect data on customers?

2. Based on what you have read about CRMs, do you think it is necessary that all companies, regardless of size utilize an application to collect and manage customer data?

3. Do you think that collecting the data and using it to sell additional vacation packages is ethical on the part of the travel agency? Should there be policies around how the data is used?

Step 7: Rate this activity (individually)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Tracking Customer and Service Information

After completing this activity you will be able to:

- Understand how information is collected and routed in an information system.
- Review the narrative and break it down into several diagrams.

Step 1: Individually – Review the following narrative:

Molly's Coffee Company wants to make sure they fully understand the process for entering and tracking customer issues on their website. They have interviewed the related departments and are interested in making sure that they provide the correct support for any customer related inquiries that come through the door. Their hired consultants developed the following narrative from their interviews and then created a Swim Lane diagram to map out the process.

The customer submits their error via a Web form and enters customer contact information, including name, email address and error information. They also include a .jpg screenshot of the error they are receiving. The Sales team receives all tickets first.

When the Sales team reviews the issue, they determine whether or not it is a sales ticket or a technical support issue. A typical Sales ticket is created when the customer receives an error about inventory out of stock or indicates that they received the wrong shipment. If it is determined to be a Sales related ticket, it is routed to the Sales team for review and resolution. The Sales Team reviews the ticket, makes updates or resolves it, confirms the correction or update has been made with the customer and marks the ticket as resolved. The customer is emailed with all of the details of the ticket, including the original issue and the resolution.

If it is not a Sales related issue, the ticket is routed to Tech Support. The Tech Support team determines if the issue is a new issue or one that is currently being addressed. If it is a new issue, the team works on a fix and then sends the fix to the Testers to ensure the fix actually "fixes" the issue. If the testers can reproduce the issue with the data provided, they create an error log, which is sent to the Development team who provide an analysis of the issue and write the code to resolve the issue. They then send the code back to the Tester where the tester ensures the fix is working. If the Tester confirms that the fix works, the code is provided to Tech Support who confirms with the customer that their issue is resolved – if it is resolved & the customer confirms resolution, the ticket is closed. The customer is emailed with all of the details of the ticket, including the original issue and the resolution.

If the issue cannot be reproduced with the Tester, they go back to the Customer for more details. Once they have more details, they go back through the process of reproducing the error and technical analysis. This process is repeated until the issue is resolved and the customer has confirmed resolution. As stated above, the customer is emailed with all of the details of the ticket, including the original issue and the resolution.

Step 2: In Small Groups (2-3)

Develop a Swim Lane Diagram that represents the above process.

Step 3: Class Discussion

Review the Swim Lane Diagram as a class and ensure that everyone is clear on the steps.

Step 4: In Small Groups (2-3)

Develop a simple ERD for the data that Molly's App Company will need to track.

Step 5: Short Answer/Discussion Questions

1. Why is it important for companies to track issues & their resolutions – whether technical or non-technical?

2. How do you feel when you contact a company and you have to re-detail your entire customer history every time you call?

Step 6: Rate this activity (individually)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Platform Business Models: Pros and Cons

After completing this activity you will be able to:

- Understand pros and cons of building a business on a proprietary platform vs. leveraging an existing platform.

Step 1: Individually – Review the following narrative:

You are the CEO and co-founder of a new media publishing company, looking to launch their first publication. Your CTO co-founder wants to launch via exclusive partnerships with existing social platforms like Facebook, Snapchat, and Medium, leveraging their existing audience of users. You fear it's risky to tie distribution exclusively to these networks, because a policy decision or change to interface could adversely affect how many views your publication receives. You would prefer to launch as a standalone, distributed through the mobile platform Newstands (iOS and Android) and your own website.

Based on this week's readings, list what you see as the pros and cons to a publishing strategy that leverages existing platforms. Then list the pros and cons to building a standalone publication distributed through the mobile app stores, and proprietary website.

Step 2: Small Groups (3-4)

If your group is on the left side of the room, further discuss and explore the pros and cons of publishing on your own new platform.

If your group is on the right side of the room, further discuss and explore the pros and cons of publishing through other content platforms.

Step 3: Class Discussion

Discuss your answers as a class, listing pros and cons for each business model on the whiteboard.

Step 4: Small Groups (3-4)

If your group is on the left side of the room, devise a marketing strategy for your publication on your own platform.

If your group is on the right side of the room, devise a marketing strategy for your publication, leveraging Facebook's platform.

Step 5: Class Discussion

Discuss your answers as a class.

Step 6: Answer the following questions (Individually)

How would your technology strategy differ if you were building your own network, versus leveraging Facebook's platform?

Assuming you charge for subscriptions, how would your transaction system differ on your own platform, versus through Facebook's platform?

How would customer support services differ?

If you, or Facebook, were to decide terminate the partnership, how would you exit and pivot away to a standalone business model? What elements of your business strategy would have to change to adjust? Where would additional costs be incurred, and would they be one-time or recurring in nature?

Step 7: Rate this activity (individually)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Cloud Computing

After completing this activity you will be able to:

- Understand the benefits and risks of using a Cloud Computing Model vs. designing and building your own on-premise network and system.

Step 1: Individually – Review the following narrative:

Over the past decade, cloud computing services have increasingly become the model for how many organizations store, process, and manage their information. In the past, organizations had to design, build, and maintain their own on-premise information networks, which was capital intensive, required in-house IT expertise, and was often difficult to maintain. Today, companies can simply pay for world-class computing services from a wide variety of cloud service providers. Information Technology has become a utility (like electricity and water), where organizations can just pay for what they actually need and use, utilizing world class systems and platforms in a cost effective way.

Like any solution, there are Pro's & Con's to Cloud Computing, as opposed to designing and building an on-premise network and systems for your organization. Managers need to understand the benefits and risks to each approach.

- View the following introduction to cloud computing: https://azure.microsoft.com/en-us/overview/what-is-cloud-computing/

Step 2: Individually

Develop a list of the Pro's & Con's for both Cloud Computing vs. On-Premise Computing (using your own network and systems).

Some questions to consider: Budget? In-House Development vs. Outsourced? Cloud vs. On Premise? Backup of Data? Recovery of Data? Reporting and Analytics? Number of Users? Recurring vs. One-Time Cost? Maintenance? Support? Talent? Features? Security? Data Privacy? Other questions?

Step 3: Team Discussion (Small Groups)

Discuss and compare your individual responses as a team, and select your best responses for each computing model.

Cloud	**On Premise**
Pros	Pros

Cons	Cons

Step 4: Class Discussion

Class discussion of the findings of the various small groups. Consider the following in your discussions:

- With regard to small, medium, and large organizations, does the size of your firm have an impact on your decision? If so, how?
- In the age of cyber crime and cyber terrorism, how big an impact does the security of your data have on your decision? What concerns would you have? Explain.
- When your information is in the Cloud, who is responsible for ensuring the control, security, and integrity of your information? Would you be comfortable outsourcing that responsibility to a third-party vendor? Explain.
- As a manager or business owner, what are some of the actions you would take to protect your information and systems in the Cloud?
- When would building and maintaining an on-premise system make sense for an organization? Give specific examples.
- Does government regulation and legal compliance requirements argue for or against moving your organization's information to the Cloud? Explain.
- Have you ever used a Cloud based information system? If so, what was your experience? Give specific examples.

Step 6: Rate this activity (individually)

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
I learned a lot completing this activity.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

The Turing Test and Mitsuku

After completing this activity you will be able to:

- Develop strategies to determine if you are speaking with a person or a computer.

Step 1: Individually (read the following)

"The **Turing test** is a test of a machine's ability to exhibit intelligent behavior equivalent to, or indistinguishable from, that of a human. Alan Turing proposed that a human evaluator would judge natural language conversations between a human and a machine that is designed to generate human-like responses. The evaluator would be aware that one of the two partners in conversation is a machine, and all participants would be separated from one another. The conversation would be limited to a text-only channel such as a computer keyboard and screen so that the result would not be dependent on the machine's ability to render words as speech.[2] If the evaluator cannot reliably tell the machine from the human (Turing originally suggested that the machine would convince a human 70% of the time after five minutes of conversation), the machine is said to have passed the test. The test does not check the ability to give correct answers to questions, only how closely answers resemble those a human would give." -Wikipedia

What are three questions that you would ask as part of a Turing test to differentiate between a human and a computer?

1.

2.

3.

Step 2: Discuss as Teams (2-3 students)

Discuss your questions with the team and devise a strategy for formulating questions as part of a Turing test. List your strategy/questions here:

Step 3: Students will be called upon at random to discuss their strategies

Step 4: In groups

Visit the site http://www.mitsuku.com/ and initiate a chat with Mitsuku. Use the strategy/questions you developed to prove that Mitsuku is simply a primate bot that responds to text messages and doesn't really demonstrate human like responses. Was your strategy effective in proving this was a bot?

Visit the site http://www.square-bear.co.uk/mitsuku/turing/ where you can try an actual Turing Test. You will be connected with either a person who is impersonating a bot or a bot that is impersonating a person. Your job is to figure out if you connected with a person or a bot.

Circle one of the following: I was connected with **a bot** or I was connected with **a person**

Make notes of any interesting interactions here:

Step 5: Students will be called upon at random to comment on interesting interactions

Step 6: Answer these short-answer questions (individually)

1. What about Mitsuku did you find to be surprisingly human like?

2. What about Mitsuku did you find to be surprisingly machine like?

3. What is something you learned doing this activity?

Step 7: Rate this activity (individually) and submit completed activity sheet

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
This activity helped me learn more about today's topic.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Expert Systems

After completing this activity you will be able to:

- Develop a better understanding of expert systems by using an expert system.

Step 1: Individually (read the following)

"In artificial intelligence, an **expert system** is a computer system that emulates the decision-making ability of a human expert. Expert systems are designed to solve complex problems by reasoning about knowledge, represented primarily as if–then rules rather than through conventional procedural code. The first expert systems were created in the 1970s and then proliferated in the 1980s. Expert systems were among the first truly successful forms of AI software.

An expert system is divided into two sub-systems: the inference engine and the knowledge base. The knowledge base represents facts and rules. The inference engine applies the rules to the known facts to deduce new facts. Inference engines can also include explanation and debugging capabilities. " - Wikipedia

Expert systems are used in many different settings ranging from diagnosing problems with automobiles to health care. Visit the site http://www.easydiagnosis.com/ and review the list of expert systems that are available from this company.

Step 2: Discuss as Teams (2-3 students)

Being a college student can be exhausting! From preparing for class to studying for exams and completing assignments (not to mention the countless "distractions" that can lead a college student away from their studies), many college students suffer from fatigue. Fatigue can be a serious medical condition that can be caused by many things.

Excluding the "distractions" that can lead a college student away from their studies, make a list of legitimate medical issues that can contribute to fatigue in a college student?

1. _____
2. _____
3. _____
4. _____
5. _____

Follow the "FREE Module (Fatigue)" link found at http://www.easydiagnosis.com/. Assume the role of a college student who is suffering from fatigue, answer the questions and review the results.

Make a list of the questions that the expert system asked which got your attention:

1. _____
2. _____
3. _____

Step 3: Students will be called upon at random to discuss as a class

Step 4: Make lists as a team

Make a list of the pros of using a system like this to diagnose medical issues:

1. _____
2. _____
3. _____

Make a list of the cons of using a system like this to diagnose medical issues:

1. _____
2. _____
3. _____

Step 5: Students will be called upon at random to discuss as a class

Step 6: Answer these short-answer questions (individually)

1. Where can expert systems be best utilized in businesses?

2. Where might an expert system be worth the risk? Where might an expert system be not worth the risk?

3. What is something you learned doing this activity?

Step 7: Rate this activity (individually) and submit completed activity sheet

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
This activity helped me learn more about today's topic.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Course Reflection

After completing this activity you will be able to:

- Articulate where you will be able to apply the skills and knowledge developed in MIS2101 in both school and your career.

Step 1: Individually

Review the following topics that were covered in MIS2101.

Unit 1– Introduction to MIS – What is MIS? – MIS Careers	**Unit 4** – Externally Focused Systems **Supply Chain Management Systems (SCM)** - What is SCM? - Just In Time - Vendor Managed Inventory - RFID **Customer Relationship Management Systems (CRM)** - What is CRM? - Benefits of CRM - ERP vs. CRM
Unit 2 - Analyzing Organizations as Systems and Processes – Modeling Process with Swimlane Diagrams – Modeling Data with ERDs – Modeling Business Rules with Decision Trees – Conceptual Architecture Diagrams	**Unit 5** – Platforms and Cloud Computing **Platforms** - What is a Platform? - Network Effect **Cloud Computing** - What is Cloud Computing? - IaaS, PaaS, SaaS
Unit 3 - Enterprise Systems **ERP** - What is ERP? - ERP Challenges and Benefits **Decision Support** - Data Analytics - OLTP vs. OLAP - Hypercubes, Data Warehouses & Data Marts - Big Data **Knowledge Management** **Systems Management** - SDLC - Compliance issues **Digital Business Innovation** - Disruptive Innovation -The Long Tail	**Unit 6** – Artificial Intelligence - What is Artificial Intelligence? - ANI, AGI and ASI - AGI Tests - Watson

Step 2: Discuss as teams (2-3 students) and then as a class

The goal of this course is to help you develop skills and knowledge that you can apply in other classes while studying at Temple University and in your career after you leave Temple University. Identify the five topics that you think will create the most value to you and briefly explain how they will create value (in order of relevance):

1. _____
2. _____
3. _____
4. _____
5. _____

Some topics are clearly more relevant than others. Please identify the five topics that you feel were less relevant for you as a student and as a future business professional (in order of least relevance):

1. _____
2. _____
3. _____
4. _____
5. _____

Activity based learning is a key component of this course. The goal of activity based learning is to help student develop a deeper and more genuine understanding of material. The downside of activity based learning is that it takes time. You can certainly plow through far more material with the traditional 3 hours of lecture each week. Which approach is better for you? On a scale of 1 to 10, please rate this activity based learning approach and share your personal comments on this approach here:

Rating (1-10): ____

Thoughts on Activity Based Learning: _____

_____

_____

_____

_____

Step 3: Rate this activity (<u>individually</u>) and submit completed activity sheet

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
This activity helped me learn more about today's topic.	
This activity should be included in future classes.	
Anything else you want the instructor to know?	

Name: _____ TUid: _____ Date: _____

Mini-Case - Read the following narrative carefully:

It all starts before anyone even realizes that they need a ride. Uber drivers hit the road. They fire up the Uber driver's application on their smartphone letting the Uber platform know that they are ready to service riders and the type of car they are driving. Using the GPS on the driver's phone, the Uber driver's application lets the Uber platform know exactly where this driver and car is even when it is driving around town. The Uber platform marks the driver's status as "On-Duty" and ready to provide rides.

When an Uber rider needs a ride they simply fire up the Uber application on their smart phone. They let the Uber platform know what type of car they need, where they are going and, using the GPS in the phone, where they are located. Once the pickup request is confirmed, the Uber platform updates the status of the rider to "Needs a Ride".

The Uber platform then identifies the closest driver with the right type of car that has not been dispatched and does not currently have a rider. They notify the driver that a rider needs a ride, where they'd like to go and the driver can either accept or reject the request. If the driver accepts the request, then the driver is dispatched to pick up the rider. If the driver does not accept the request, the Uber platform identifies the next closest driver with the right type of car that has not been dispatched and does not currently have a rider and the process repeats itself until a driver is finally dispatched to pick up the rider.

When the driver arrives and picks up the rider, they indicate this on the Uber driver's application which gets passed to the Uber platform. With the help of the GPS on the driver's phone, the Uber driver's application tracks the route of the driver from the time the driver picks the rider up to the time when they have reached the destination. Once the driver reaches the destination the driver uses the Uber driver's application to indicate that the rider has reached their destination and this is passed along to the Uber platform.

After the rider has reached their destination the Uber platform calculates the cost of the ride based on the type of car, distance driven, time of day and other factors. The Uber platform then debits the rider's credit card (on file) to cover the cost of the ride and then credits the driver's account for their service. The Uber platform also keeps track of what they have paid drivers throughout the year so they can issue 1099 statements at the end of the year.

-------- *Based on the narrative provide the best answer to the following questions about the swimlane and ERD diagrams:*

1. What would be the best name for the actor labeled "A"?
    a. Dispatcher
    b. Driver
    c. Ride
    d. Rider
    e. None of the above

2. For the box labeled "B", what would be the most appropriate description of this step in the process?
    a. Assign driver to rider
    b. Match closest "On-Duty" driver with the right type of car who is currently available with this rider
    c. Dispatch driver
    d. Driver available?
    e. None of the above

3. For the diamond labeled "C" what would be the most appropriate description of this step in the process?
    a. Does driver accept the request?
    b. Change status of driver to "Dispatched"
    c. Rider accepts driver
    d. Match closest "On-Duty" driver with the right type of car who is currently available with this rider
    e. None of the above

Name: _____ TUid: _____ Date: _____

4. For the box labeled “D” what would be the most appropriate description of this step in the process?
    a. Arrive at destination
    b. Charge rider for ride
    c. Drop rider off at final destination and notify platform
    d. Change status of driver to “On-Duty”
    e. None of the above

5. For the box labeled “E” what would be the most appropriate description of this step in the process?
    a. Dispatch driver
    b. Driver charges rider
    c. Rider pays driver
    d. Pay driver for service and record payment for 1099
    e. None of the above

6. For the entity labeled “F”, what would be the most appropriate name for this entity?
    a. Dispatcher
    b. Platform
    c. Ride_Request
    d. Rider
    e. None of the above

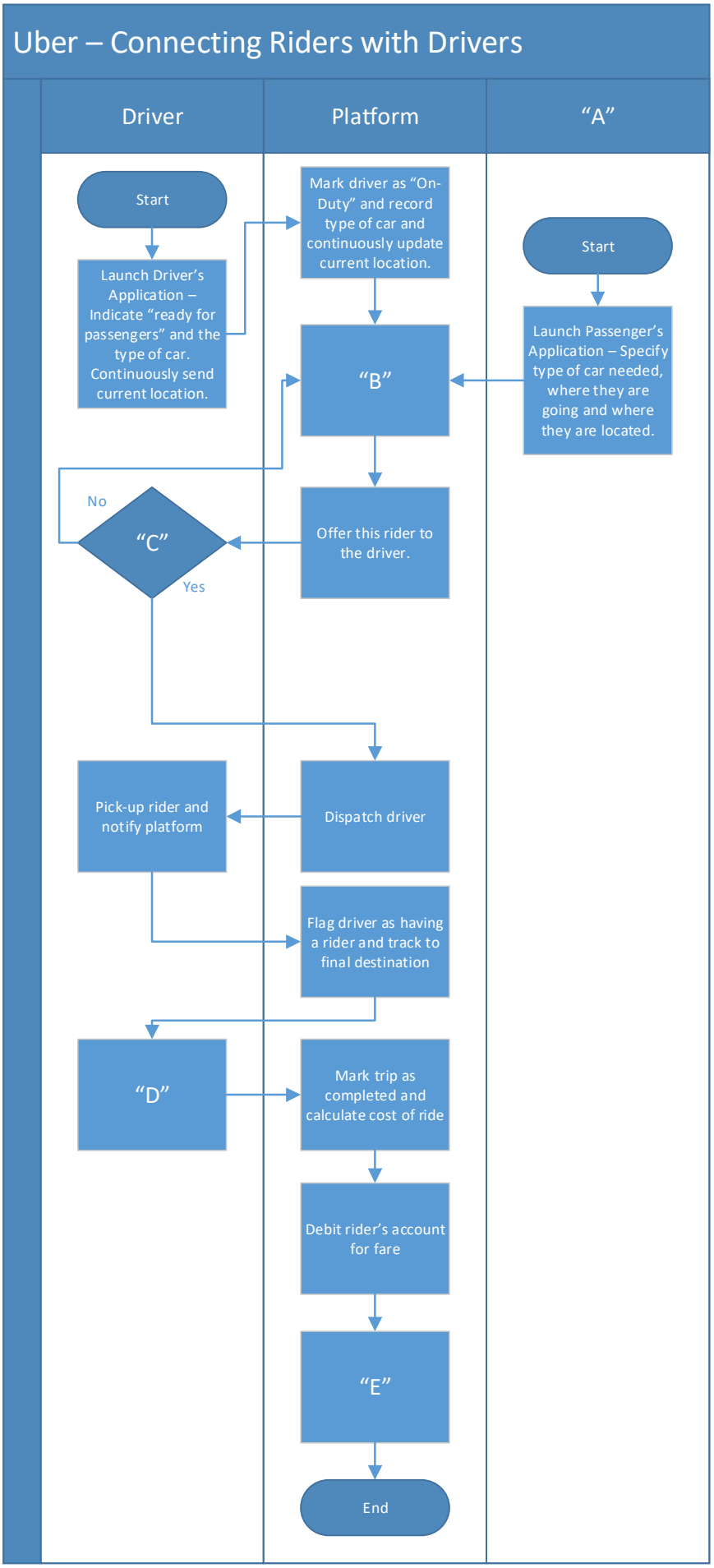
7. For the relationship labeled “G”, what would be the most appropriate name for this relationship?
    a. Requests
    b. Requires
    c. Provides
    d. Billed_For
    e. None of the above

8. Which of the following attributes is missing from the entity labeled “F”?
    a. Drivers_License_Number
    b. Cost
    c. Provider_ID
    d. Status
    e. None of the above

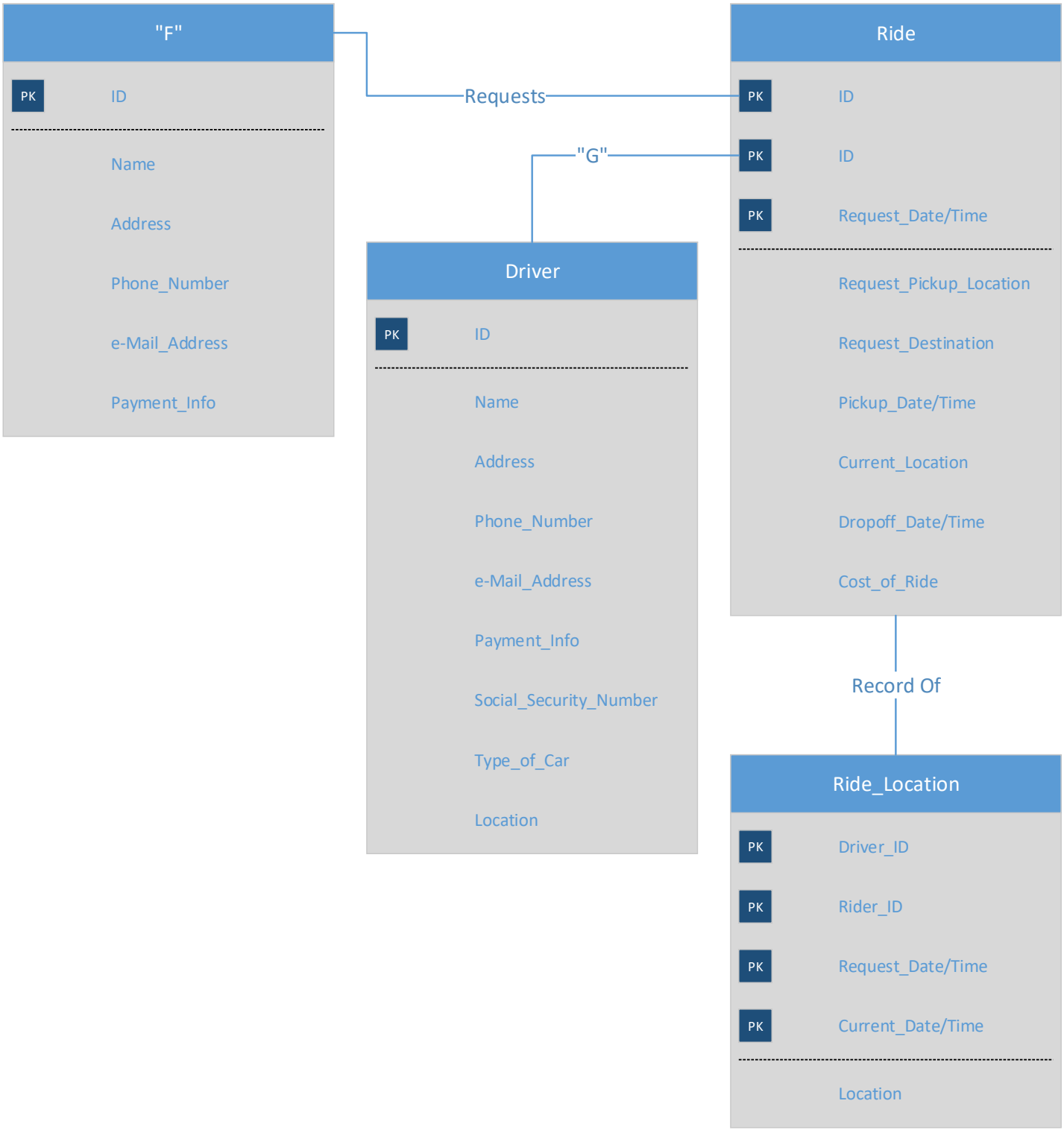
9. Which of the following attributes is missing from the entity labeled “Driver”?
    a. Pickup_Location
    b. Customer_Payment_Info
    c. Estimated_Time_of_Arrival
    d. Status
    e. None of the above

10. Which of the following attributes is missing from the entity labeled “Ride”?
    a. Drivers_License_Number
    b. Request_Car_Type
    c. Customer_Payment_Info
    d. Status
    e. None of the above

Name: _____ TUid: _____ Date: _____



Name: _____ TUid: _____ Date: _____



Name: _____ TUid: _____ Date: _____

Exam Prep

With the exception of the mini-case, the questions on the upcoming exam will come from:

- Assigned readings, assigned videos and class lectures/discussions

Step 1: Work in Team (2-3) and Share as a Class

Prepare three proposed exam questions from these readings:

Reading: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Reading: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Reading: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Step 2: Work in Team (2-3) and Share as a Class

Prepare three proposed exam questions from these videos:

Video: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Video: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Video: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Step 3: Work in Team (2-3) and Share as a Class

Prepare three proposed exam questions from these lectures/discussions:

Lecture/Discussion: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Lecture/Discussion: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Lecture/Discussion: _____

Question: _____

a) _____ b) _____

c) _____ d) _____

e) None of the above

Correct answer and why this is correct: _____

Step 4: Rate this activity (<u>individually</u>) and submit completed activity sheet

Ratings	1 Completely Disagree	2 Somewhat Disagree	3 Neutral	4 Somewhat Agree	5 Completely Agree

Statement	**Rating (1 to 5)**
This is an engaging activity.	
This activity helped me learn more about today's topic.	
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