Contrast Systems at Start-ups vs. Multi-National Firms

After completing this activity you will be able to:
- List a differentiating characteristic of systems at smaller vs. larger firms.
- State a benefit of process decomposition.

Step 1: Prepare individually

What are 3 to 5 major steps involved in opening a new business location?
- Rent a space
- Order inventory
- Hire employees
- Marketing campaign
- Set up space (furniture, computers, etc.)

Step 2: Instructor leads full class discussion of answers

Step 3: Prepare individually

Regardless of company size, what are 3 to 5 major steps involved in hiring a new employee?
- Define job description
- Post the job
- Screen resumes
- Interviews
- Background check
- Offer
- On boarding
- Training

Step 4: Discuss in groups of 2-3

Compare answers from Step 3. Provide a refined answer to: What are the major steps involved in hiring a new employee?

See above

Step 5: Instructor leads full class discussion

Step 6: Research on web and discuss in groups of 2-3

Consider two firms:
- Manayunk iPhone Repair (MiR) is “a full service iPhone repair center. Most repairs are finished while you wait. We service the iPhone, iPad, iPod, and Mac Laptops.”
- Geek Squad (a Best Buy subsidiary) — multi-national company offering multiple computer-related services for residential and commercial clients: in stores, on-site, via Internet/remote access, phone, and emergency on-site support.

For each of the major steps involved in hiring a new employee (see step 4), identify the job title and/or department involved in that step (complete table below).
<table>
<thead>
<tr>
<th>Step in Process</th>
<th>MiR</th>
<th>Geek Squad</th>
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<tbody>
<tr>
<td>Define job</td>
<td>Manager/Owner</td>
<td>Manager</td>
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<tr>
<td>Post job</td>
<td>Manager/Owner</td>
<td>HR</td>
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<td>Manager/Owner</td>
<td>HR &amp; Manager</td>
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<td>Background check/offer</td>
<td>Manager/Owner</td>
<td>HR</td>
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<td>Onboarding</td>
<td>Manager/Owner</td>
<td>HR assistant</td>
</tr>
<tr>
<td>Training</td>
<td>Tech or Manager</td>
<td>Training Dept</td>
</tr>
</tbody>
</table>

Step 7: Instructor leads full class discussion

Step 8: Answer these questions (individually)

1. What is one thing different about systems in small firms and large firms?

2. Would you rather work for a start-up firm or a large established one? Why?

3. Thinking about this exercise as a whole, what are is a potential benefit of decomposing a process into smaller steps?

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

Step 7: After you confirm your name and today’s date are on pg. 1, submit completed activity sheet
Describe Role of Systems in Business Career

After completing this activity you will be able to:
- Differentiate between a Business Analyst and a Systems Analyst
- State a benefit of proactively managing your digital identity
- Draw an input-process-output-feedback diagram

Step 1: In small groups.

Define business analyst: Someone who analyzes an organization or business domain, documents business or process or systems, assesses the business model or its integration with technology.

Define systems analyst: Someone who analyzes, transforms, and ultimately resolves business problems with the help of technology.

Step 2a: Discuss as a class.

Step 2b: Instructor describes Input – Process – Output (I-P-O) models

Step 3: In small groups.

Draw an IPO diagram for a typical Business Analysis task:

Input
- Name of employees
- Title
- # employees under each manager

Process
- Hierarchy
- Dot line

Output
- Organizational chart

Draw an IPO diagram for a typical Systems Analysis task:

- Name of employees
- Start date on project
- End date on project
- Project name

- Define fields required
- Define user access
- Define reports
- Develop SWG build

DB to capture employees assignment

Step 4: Discuss as a class.
Step 5: Answer four short-answer questions (individually)

1. One difference between a business analyst and a systems analyst is:
   (BA)
   BA do not typically dive into the technical aspect of the task at hand.
2. Which role is more appealing to you? Why?
   BA or SA?

3. One benefit of proactively managing your digital identity through an ePortfolio is:
   Ensure all information is accurate, appropriate and appealing for my future employer.

4. Draw an I-P-O Model for preparing your ePortfolio.

   ![I-P-O Model Diagram]

Step 6: Rate this activity (individually)

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Step 7: Submit completed activity sheet
Systems Analysis: Stakeholder Analysis

After completing this activity you will be able to:

- Identify stakeholders in an example IT project.
- Assess the value of stakeholder analysis.

Step 1: In small groups

From http://stakeholdermap.com/stakeholder-definition.html

A stakeholder is anybody who can affect or is affected by an organization, strategy or project. They can be internal or external ... Stakeholders are crucial to the success of your project. Neglect them and they will actively work against you. Manage them well and they will actively promote you and your project. The first step in stakeholder mapping is to identify your stakeholders.

Consider the following project description:

The Owl Business School is considering a new instructional technology that works in classrooms with computers (e.g., netbook, laptop, and desktop computer classrooms / labs). If assessing the value of the proposed system, what stakeholder perspectives should be considered?

List 3-5 stakeholders:

1. Students
2. Professors
3. IT Dept
4. Dean Office
5. Finance Dept

Step 2: Discuss as a class

Step 3: In groups

Of the identified stakeholders, pick 3 to consider in more detail. Considering each perspective individually, assess the pros and cons of this software:

The EduTrack Scholar application is the ultimate student accountability and learning enhancement software. It provides comprehensive data collection, analysis and reporting to not only assess student comprehension but also to uniquely incentivize student engagement. By logging, capturing, and examining every keystroke, eye movement, and mouse click, an instructor can immediately identify engaged, distracted or disruptive students. The software even integrates with social media monitoring and electronic grade systems to seamlessly assess student performance.

In the grid below list 2-3 pros and cons each for your 3 selected stakeholders.
### Stakeholder

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Pros</th>
<th>Cons</th>
</tr>
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<tbody>
<tr>
<td>Student</td>
<td>- Exciting new technology - Stressful</td>
<td>- Invasion of privacy</td>
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<td>- All info in 1 spot</td>
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<tr>
<td>Professor</td>
<td>- Ability to monitor</td>
<td>- Learn new technology</td>
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<tr>
<td></td>
<td>- All info in 1 spot</td>
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</tr>
<tr>
<td>IT Dept</td>
<td>- Learn new technology - Additional workload</td>
<td>- Job security</td>
</tr>
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</table>

Assuming this software is implemented, what policies would you recommend regarding:

(a) informing students of the software capability,

- Privacy policy: need to consent or opt out

(b) providing options for opting-in or opting-out of usage, and

- What is the alternate option policy (if opt out)

(c) scope of data sharing and length of data retention?

List who has access and how long to retain data

(clearly define)

### Step 4: Discuss as a class

### Step 5: Answer these short-answer questions (individually)

1. What is one way that stakeholder analysis is a useful tool?

   Ensure a better success with change/program implementation

2. If you were on a student technology advisory board, would you support an application like this?

   The majority of students answered: "Not supportive"

3. What safeguards, if any, would be required for you to feel comfortable with this application?

   Data not stored or used for future classes

### Step 6: Rate this activity (individually)

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### Step 7: Submit completed activity sheet

Information Systems in Organizations - Activity Worksheet
Systems Analysis: Process Decomposition with Swim Lane Diagrams

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. Who does the invoicing? (Accounting)
2. What happens if the customer has no credit available? (A: Sales void customer)
3. What is the first step? (A: Post payment)

Step 2: In small groups.

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

Step 3: In small groups: consider a music listening device

Your group will be assigned a letter (A to F). Each group is assigned one topic as follows:

<table>
<thead>
<tr>
<th>A – Radio</th>
<th>B – LP Records</th>
<th>C – Compact Disc</th>
</tr>
</thead>
<tbody>
<tr>
<td>D – Napster</td>
<td>E – iPod (with iTunes)</td>
<td>F – Spotify</td>
</tr>
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</table>

For your assigned technology, prepare a swim lane diagram that covers these activities:
1. Playback Device: select and acquire
2. Recordings: acquire and store
3. Select music
4. Listen to music

3. Actors:
- HR
- Manager
- On boarding / training Dept.
Systems Analysis: Entity Relationship Diagrams

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. Which relationship is covered? (i.e. process) A: Buying
2. What are the attributes? A: item type, item price, item source
3. What are the entities? A: shopper & item

Step 2: In small groups.

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

Step 3: In small groups: consider the following scenario

TempleBank runs a free day care service for all of its employees. The company wants to more easily identify employees who use the service and also needs to parents where to pick up their kids.

- Each employee can have multiple children enrolled in the daycare center.
- Employees can be described by their employee ID number, first name, last name, phone number and work location.
- Children can be described by their first name, last name, gender, and date of birth.
- Because children are provided with lunch and snacks, it is important to track dietary restrictions (e.g., gluten-free, vegetarian, vegan, food allergies, etc.). Each child is assigned to one of 3 rooms based on age, maturity, and parents work location.

1. Identify entities (hint: there are at least 3) and relationships among the entities

- Employee
- Children: enrolled
- Room: assigned
- Temple Bank

2. Identify multiple attributes for each entity.

- Employee: ID number, first name, last name, phone #, work location
- Children: first name, last name, gender, date of birth, dietary restrictions
- Room: 1, 2, 3

Step 4: Discuss as a class
Step 4: Draw diagram on board and discuss as a class

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

1. When you think the swim lane diagram is most useful?
   To identify redundancies, problem areas, or inefficiencies in a business process.

2. Of the 6 technologies, which music listening device do you think is the most likely model for most people do in, say, 2025? Why?

Step 6: Rate this activity (individually)

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Step 7: Submit completed activity sheet
Step 5: In small groups: consider the following scenario

A wedding party DJ to create a database to keep track of their Compact Disc collection. For each CD relevant info includes genre, artist, songs and key information about each song.

A. Identify entities, 3-5 attributes per entity, and relationships
B. Draw a simple entity relationship diagram

See next page

Step 6: Draw diagram on board and discuss as a class

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

1. When you think an entity relationship diagram is most useful?
   When creating and manipulating databases (DB design)

2. What do you think are the most common types of errors made when creating an ERD?
   Mixing up entity and attributes

Step 8: Rate this activity (individually)

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Step 9: Submit completed activity sheet