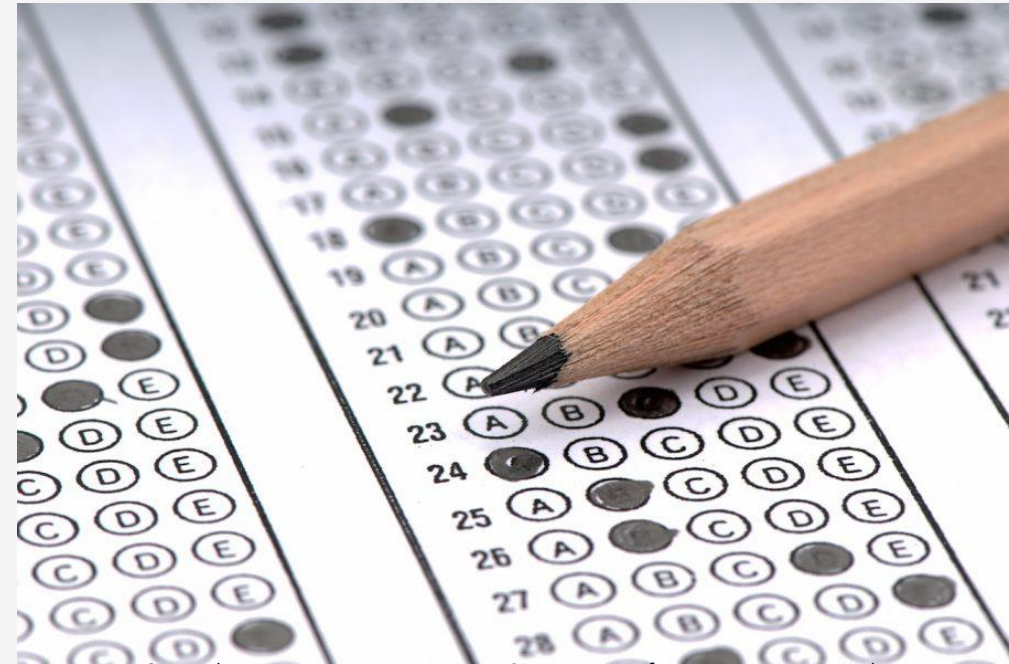**MIS 2101**
Exam 1 Review

Exam Will Cover Discussions: week 1 through 4

- **Readings, Videos and Lectures (60%)**
  - **Information Systems**
  - **Systems Analysis/Systems Architecture**
  - **Swim Lane**
  - **ERD**
  - **DPM**
  - **Digital Identity**

- **Mini-Case – Demonstrate your ability to apply (40%)**
  - **Swim Lane Diagram**
  - **ERD**

  Note: The same narrative/Swim Lane and ERD is used for ALL questions from 16-25

Advice

How to prepare…

Review the slide decks	Review the assigned readings/videos	Review your notes

Introduction & Systems Analysis

- **Topics and Required Reading**
  What is an Information System?
  Systems Architecture
  Systems Analysis
  What is Software Development Lifecycle (SDLC)

- **Review**
  Weekly PowerPoint slides

Collection of Systems

Systems = People + Process + Technology

- Manipulation of information = value

- Managed by MIS professionals

- Systems surround us 24/7

- Application Program Interface (API's)

- "Information System – an integrated set of components for collecting, storing, and processing data and for providing information, knowledge and digital products."

Collection of Technologies

Including:

- Hardware
- Software
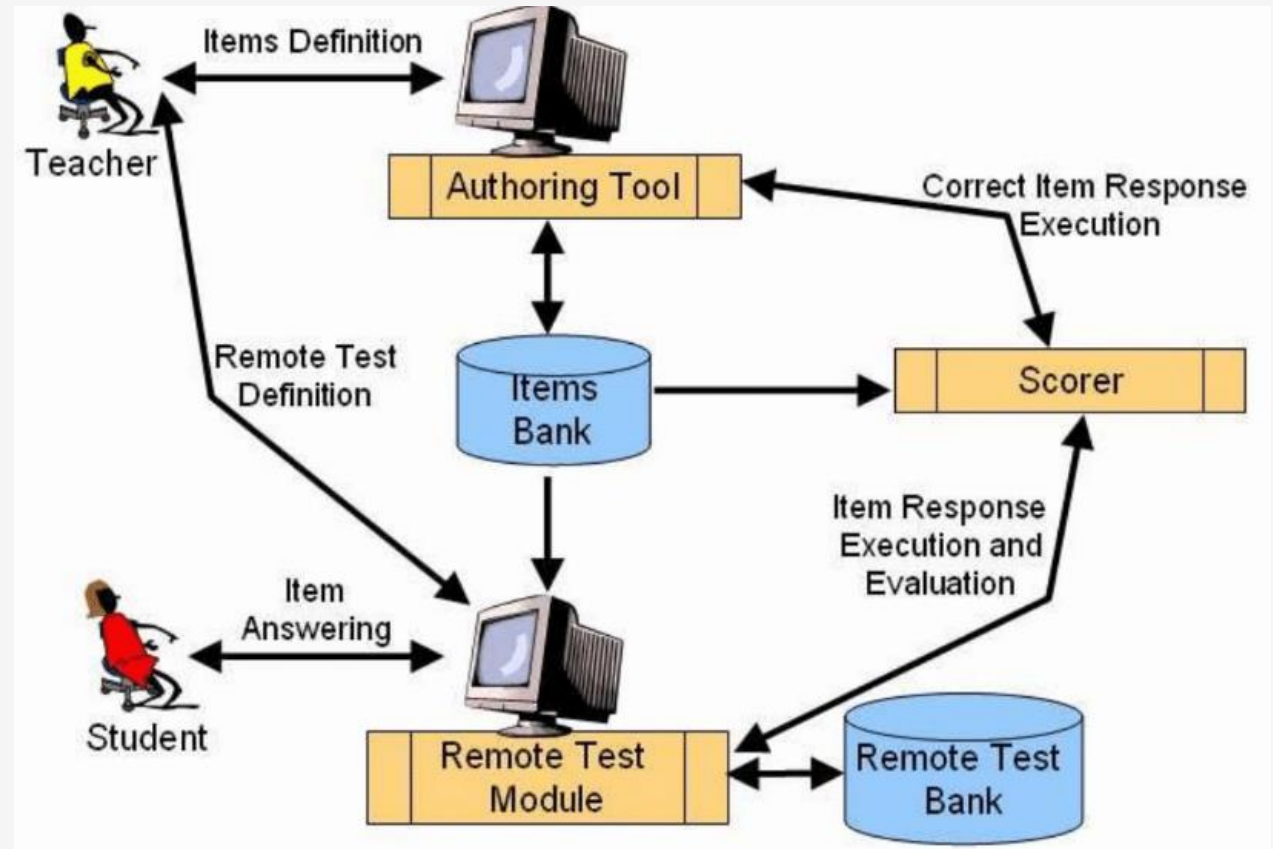- Policies
- Education Tools
- API's

Systems Analysis

What is "Systems analysis?": Problem solving technique that "<u>decomposes</u>" a system into its component pieces for the purpose of studying how well these parts work & interact to accomplish their purpose

Systems Architecture

- **We use "decomposition" to analyze the components of the system**

- Conceptual Diagram

- Structural Components

- Identify/Solve Problems

- Existing or New

- Communication Tool

Software Development Cycle (SDLC) Methodologies (Model)

- Waterfall

- Agile / Iterative

- Lean

- Scrum / Iterative

- DevOps

Introduction to Process Mapping

- **Topics and Required Reading**
  What is a product manager? A complex, cross-functional role in IT
  An Introduction to Swim Lane Diagrams

- **Review**
  Weekly PowerPoint slides
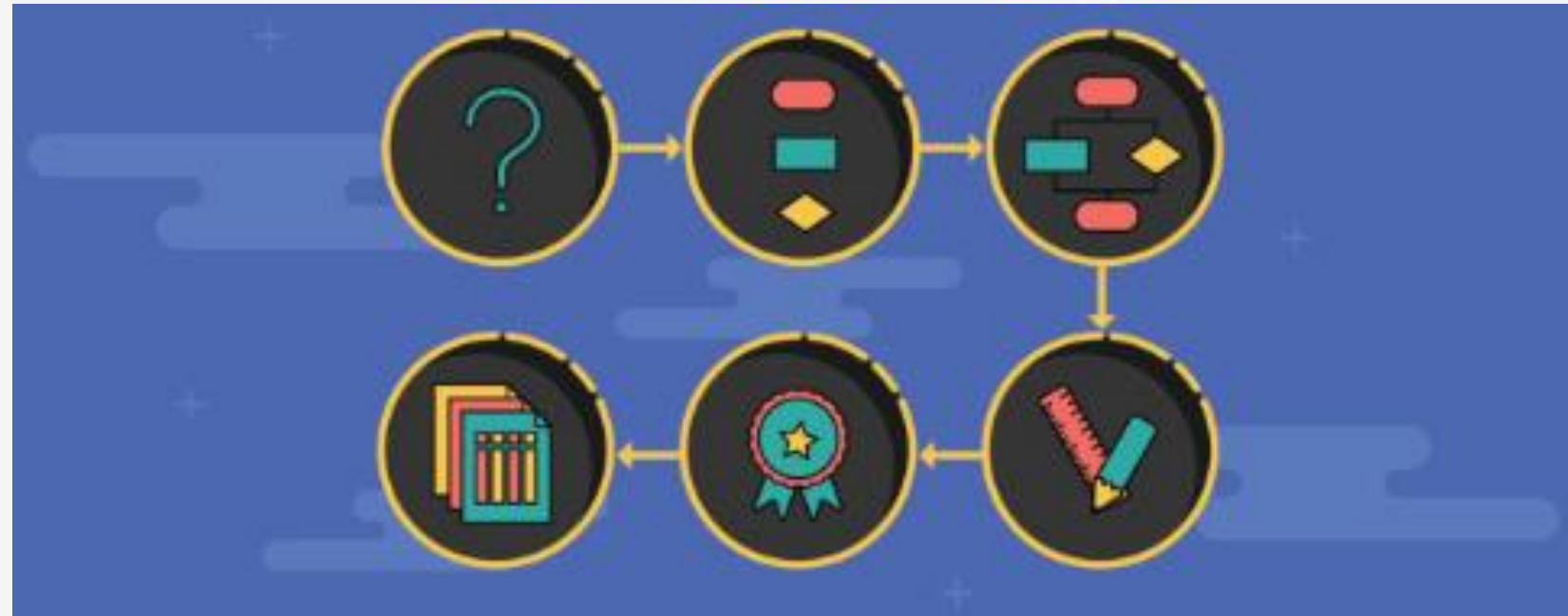
Process Mapping

What

- Visual Representation
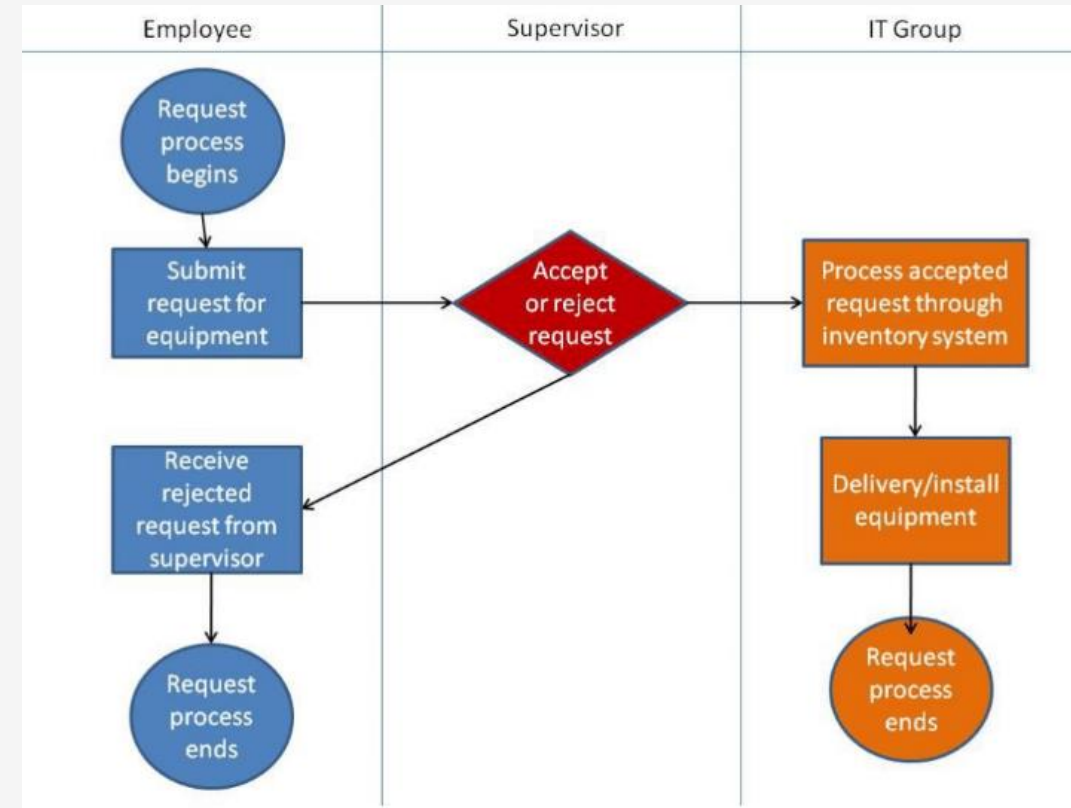
Why

- Identify Problems
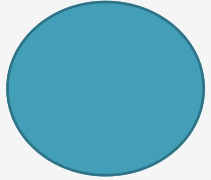
How

- Draw the "as-is"

Swim Lane Diagrams

- Identifies who does what & in what order
  - Logical & Chronological
  - Indicates hand-offs
- Advantages:
  - Helps see opportunity for improvements
  - Helps eliminating duplications
  - Basis for developing new solutions
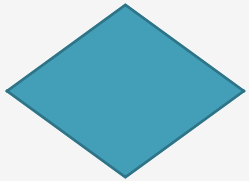 - Useful Training tool

Swim Lane Diagrams - Symbols

- Circle : signifies the starting and ending of an event in the process

- Rectangle : represents an activity in the process

- Diamond : represents a decision that must be made
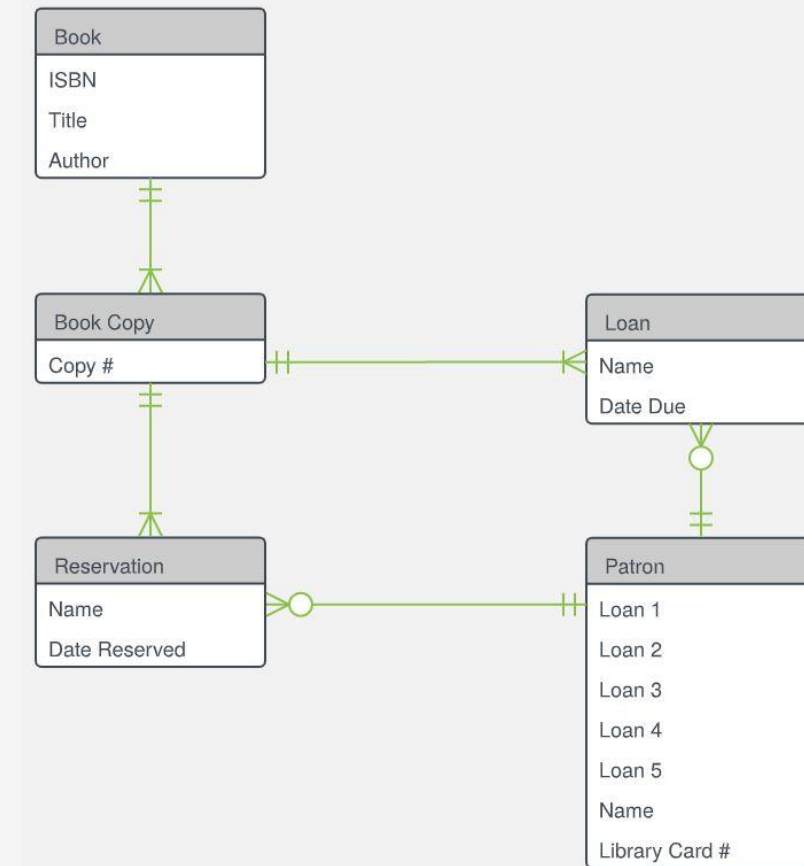
- Arrow : indicates the flow of the process

- Cylinder : represents stored data

Entity Relationship Diagram (ERD)

- **Topics and Required Reading**
  What is an Entity Relationship Diagram?
  Entity Relationship Diagram
  What is Entity Relationship Diagram (ERD)?

- **Review**
  Weekly PowerPoint slides

What is an Entity Relationship Diagram?

An Entity Relationship Diagram (ERD) is a visual representation of different data using conventions that describe how these data are related to each other.
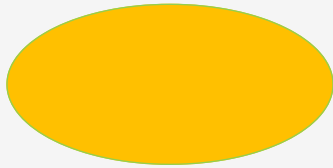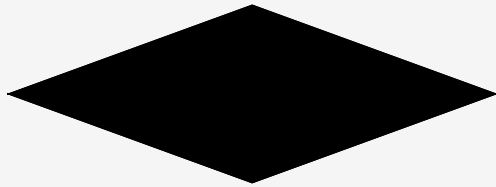
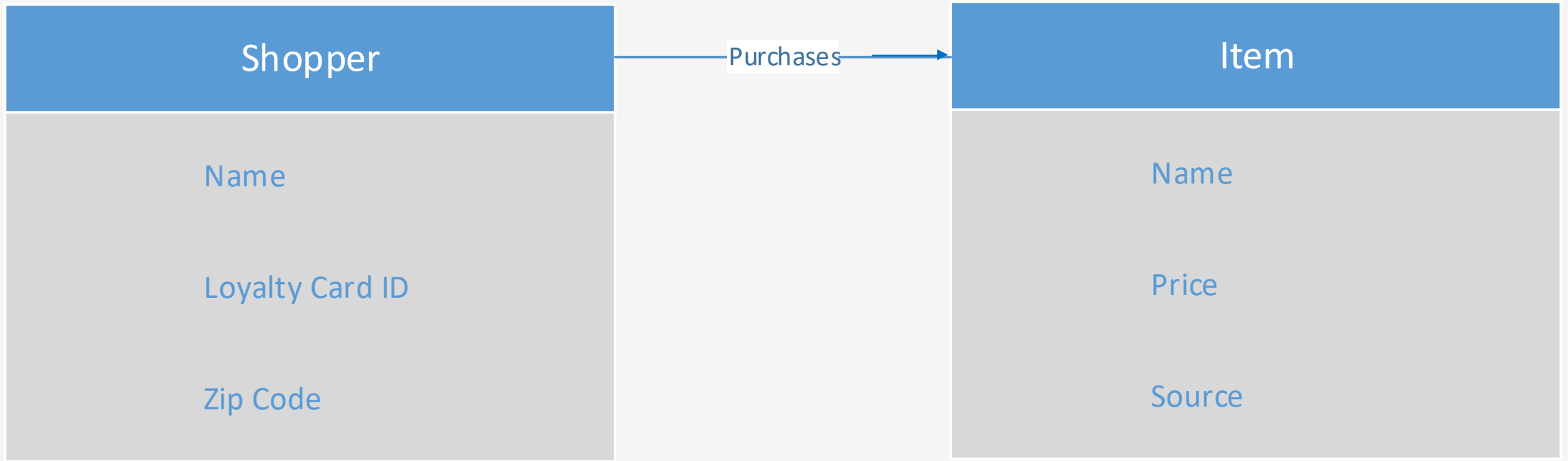# *Primary ERD Symbols:* *Chen's Database Notation*

- Entity = noun
  ex: shopper, item

- Attribute = adjective/characteristic
  ex: item price

- Relationship = verb
  ex: buys

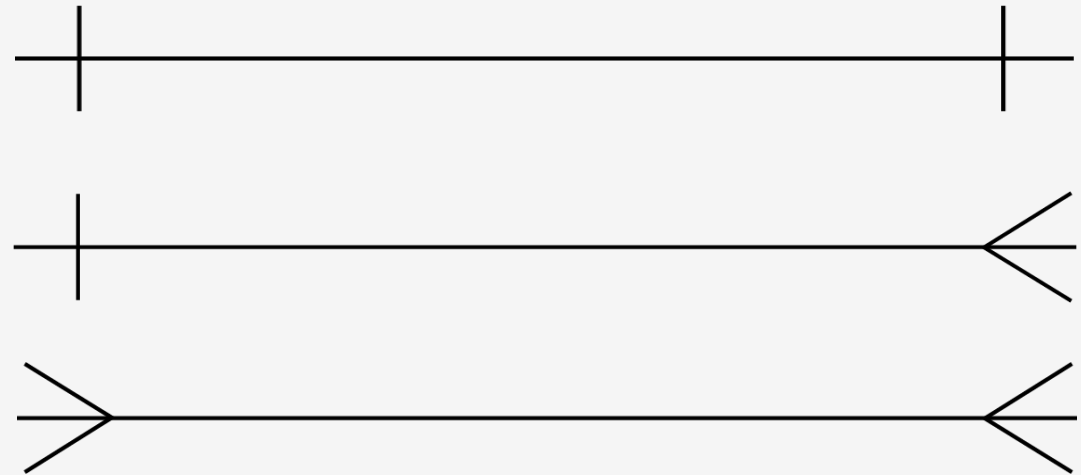# Entity Relationship Diagram: *ERD tables*

Shopper
Name
Loyalty Card ID
Zip Code

Purchases →

Item
Name
Price
Source

Crow's Foot Database Notation

Cardinality in Data Modeling: Relationships

Cardinality describes a fundamental characteristic of the relationship between two entities.

– 1:1 = a <u>one to one</u> relationship

– 1:m = a <u>one to many</u> relationship

– m:m = a <u>many to many</u> relationship

Digital Product Management

- **Topics and Required Reading/Video**
  How AI is deciding who gets hired
  What hiring managers look for in your social media profile

- **Review**
  Weekly PowerPoint slides

Why Salesforce?

A great platform to deliver <u>cloud-based</u> systems products

- Enables & Enhances Business

- Used by Industry Fortune 100's
  - Across all business function areas

Enabling Organizations

- Technology enables organizations to work faster/smarter/more efficient
  - See how it works
  - Understand how it used by industry

Remember!!

How to prepare…

Review the slide decks

Review the assigned readings/videos

Review your notes

On Tuesday, bring:
1. **TUID card**
2. **#2 Pencil**
3. **2 Highlighters**