
# MIS 2101 Exam 1 Review

# *Advice*

How to prepare…

Review the slide decks

Review the assigned readings/videos

Review MaxLabs

# *Introduction & Systems Analysis*

- **Topics and Required Reading**
  Acquiring Information Systems And Services
  Systems Architecture
  Systems Analysis

# 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

# Designing UX (User Experience)

**Four Steps**

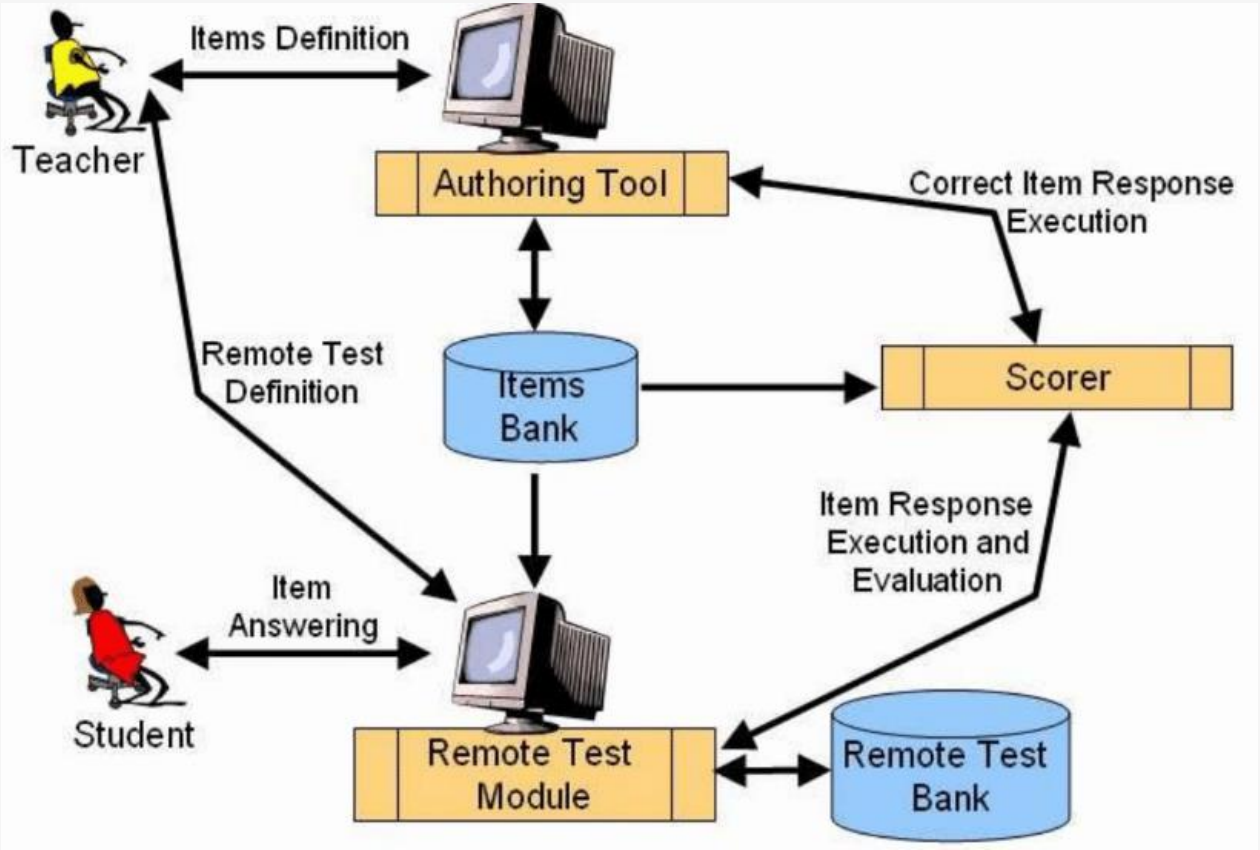
1. Problem Definition
2. Documenting Business Processes
3. Process Decomposition
4. Data Modeling

# Systems Analysis

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

# Systems Architecture

- Conceptual Diagram
- Structural Components
- Identify/Solve Problems
- Existing or New
- Communication Tool



# *Introduction to Process Mapping*

- **Topics and Required Reading**
  An Introduction to Swim Lane Diagrams

# Process Mapping

What

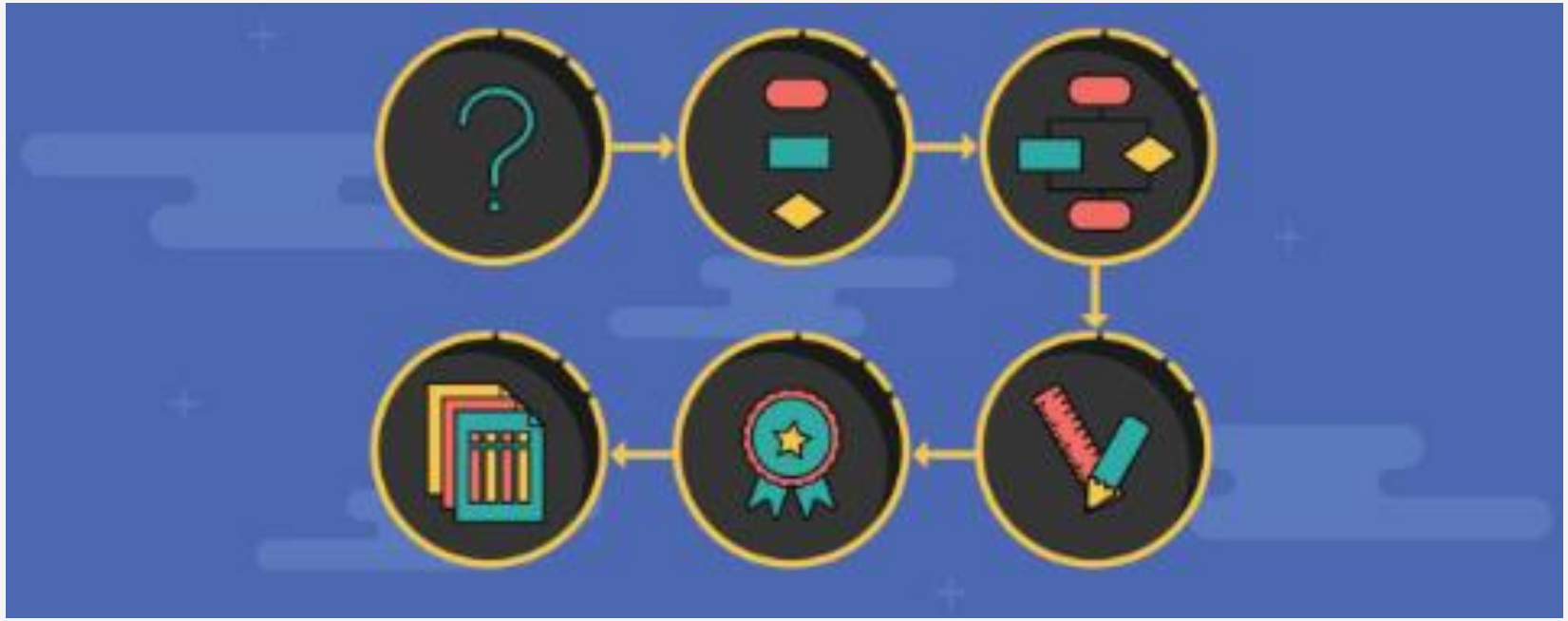
- Visual Representation

Why

- Identify Problems

How

- Draw the “as-is”



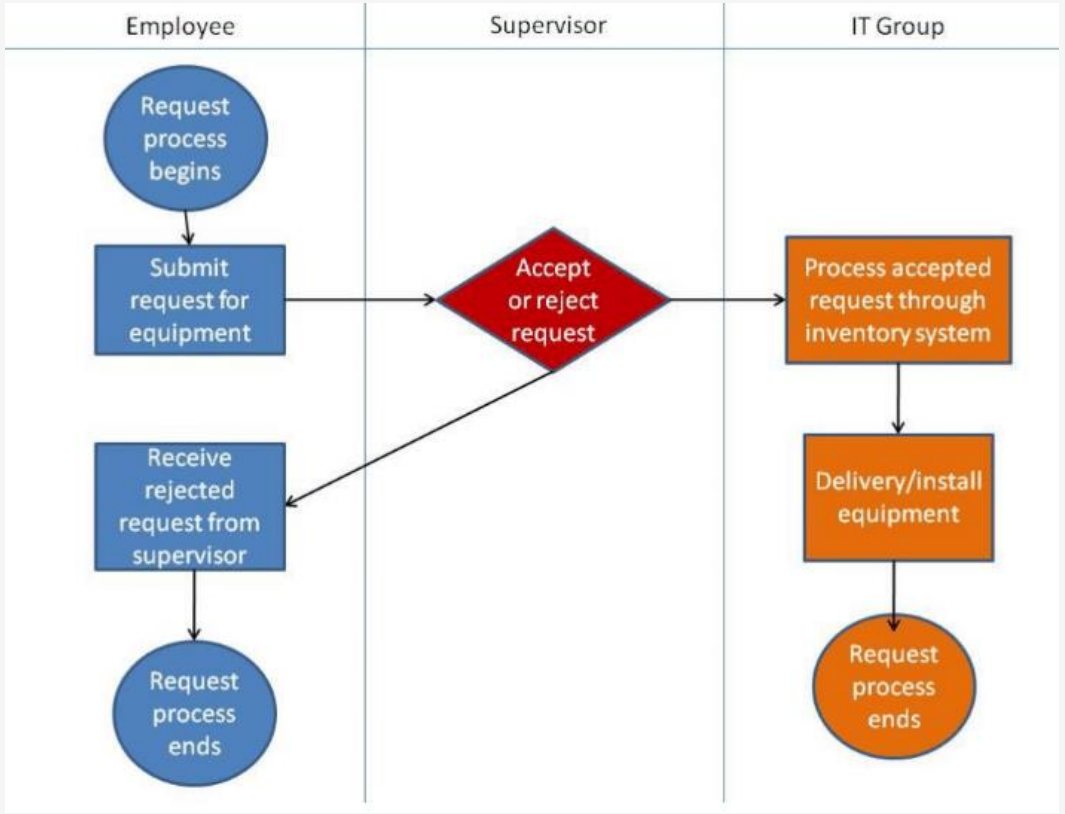
# Swim Lane Diagrams

Advantages

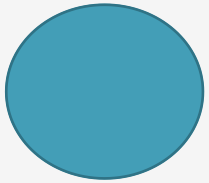
- Identifies who does what & in what order
  - Logical & Chronological
  - Indicates hand-offs

Versatile

- Applied to other diagrams
- Training Tool

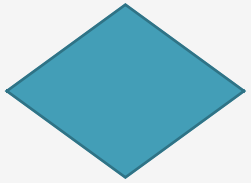


# Swim Lane Diagrams - Symbols



- 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

# *Digital Product Management*

- **Topics and Required Reading**
  Max Labs Pre-Flight (Canvas)
  Entity Relationship Diagram
  What is Entity Relationship Diagram (ERD)?

- **Required Viewing**
  What hiring managers look for in your social media profile

# Why Salesforce?

**A great platform to deliver cloud-based 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

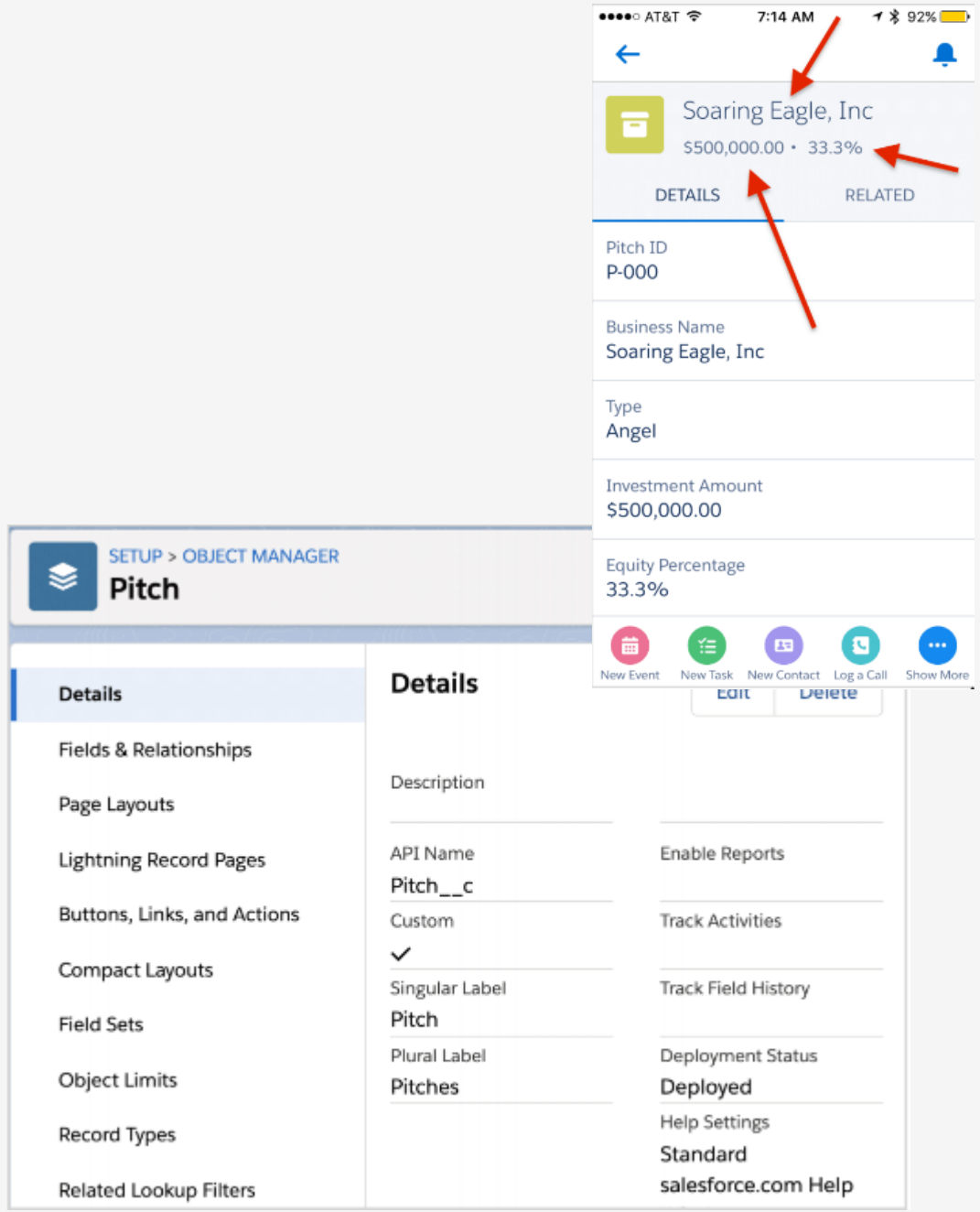
# Max Labs – Pre-Flight

**A great platform to deliver cloud-based systems products**

- Professional Development
  - Developing a professional brand
- Innovation
  - Scalability & new markets
- Business & Digital Models
  - B2B (Business to Business)
  - Used to manage their relationships to customers
- Data/Databases/Apps/Platforms
  - Platform: a collection of tools & services you can piece together to build a **database and apps**

# Max Labs – 1a

- Creating Databases (objects)
  - Why do we need these lists?
- Determining Data Needs
  - Max's needs for creating the "Pitch" (custom Object)
- Page Layouts
  - What information do we want to show?
- Mobile App



# Max Labs – 1b

- Digital Business Models
  - Share & Communicate
- Monetize Max's Blog
- Pitch Data File
  - CSV Files, organization
- Generating Reports
  - Visualizing the data
- **Dynamic Dashboards**
  - Real-time Monitoring
  - Collaboration
  - Customization
  - Report Generation

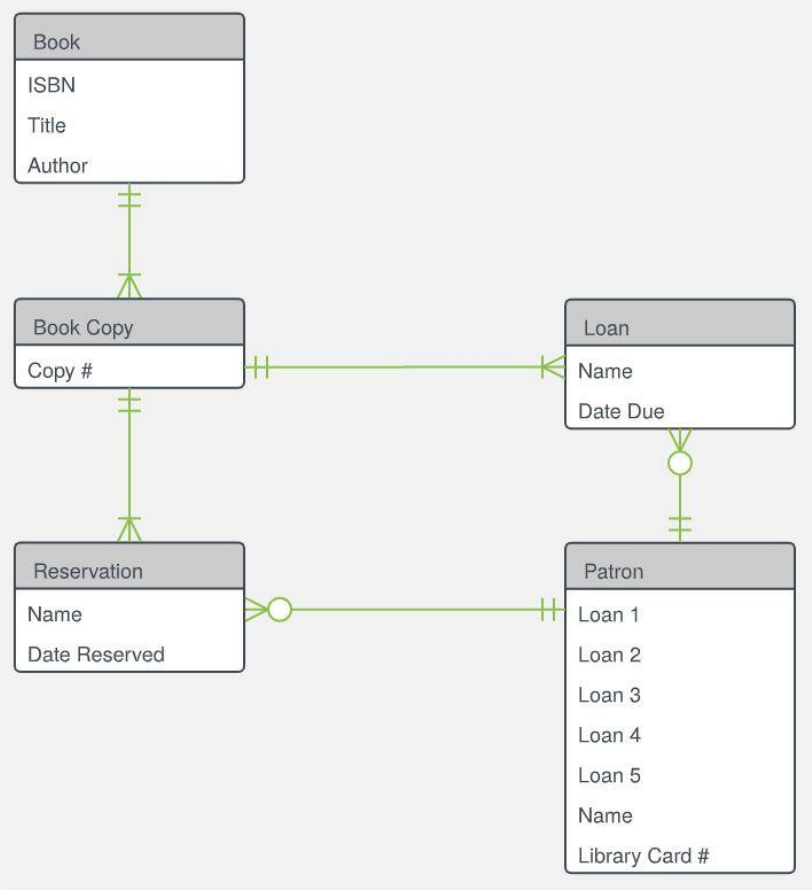

REPORT: PITCHES
**Average Amount & Equity by Type**

| Total Records | Average Investment Amount | Average Equity Percentage |
|---|---|---|
| 10 | $311,000.00 | 22.0% |

| Type | Pitch: Pitch ID | Business Name | Investment Amount | Equity Percentage |
|---|---|---|---|---|
| VC (5) | P-002 | Silicon Valley Extreme Venture | $360,000.00 | 12.0% |
| | P-003 | Net Wealth Leverage Associates | $450,000.00 | 18.0% |
| | P-004 | Smart Technology Investmen... | $80,000.00 | 8.5% |
| | P-008 | Move Over Ventures | $100,000.00 | 10.0% |
| | P-009 | Applied Investments Limited | $320,000.00 | 38.5% |
| Subtotal | | | Avg: $262,000.00 | Avg: 17.4% |
| Angel (5) | P-000 | Soaring Eagle, Inc | $500,000.00 | 33.3% |
| | P-001 | Engell & Associates | $200,000.00 | 25.0% |
| | P-005 | Rosen Ventures, LLC | $240,000.00 | 20.0% |
| | P-006 | Capital Magic | $700,000.00 | 50.0% |
| | P-007 | Valducci Amalgam | $160,000.00 | 5.0% |
| Subtotal | | | Avg: $360,000.00 | Avg: 26.7% |
| Total (10) | | | Avg: $311,000.00 | Avg: 22.0% |

# *What is an Entity Relationship Diagram?*

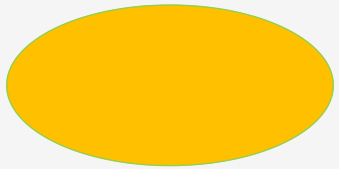
An Entity Relationship Diagram (ERD) is a visual representation of different data using conventions that describe how these data are related to each other.



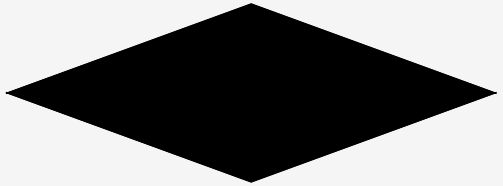

Source:https://d2slcw3kip6qmk.cloudfront.net/marketing/pages/chart/examples/libraryerdiagram.svg

# *Primary ERD Symbols:* *Chen's Database Notation*

- Entity = noun
  ex: shopper, item

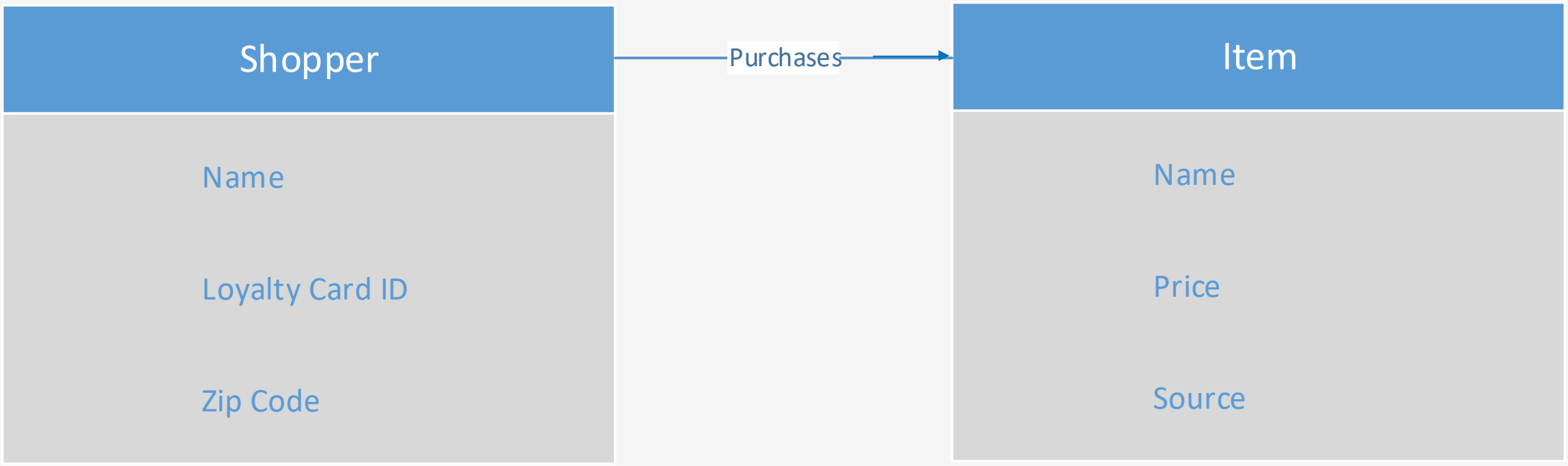


- Attribute = adjective/characteristic
  ex: item price



- Relationship = verb
  ex: buys

# *Entity Relationship Diagram: ERD tables*




Crow's Foot Database Notation

# *Cardinality in Data Modeling: Relationships*

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

- 1:1 = a one to one relationship
- 1:m = a one to many relationship
- m:m = a many to many relationship