<https://www.youtube.com/watch?v=zid-MVo7M-E&t=169s>

Use Case Diagrams have four different elements:

Systems

Actors

Use Cases

Relationships

Movie Theater App

**Systems:** whatever you are developing

Website

App

software component

business process

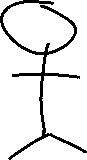
**Actor:** someone or something that uses the system to achieve a goal (keep things categorical)

Person

Organization

Another System

External Device



**Primary Actors:** initiates the use of the system (customer) to the left of system

**Secondary Actors:** reactionary (Movie Theater) to the right of the system (only going to act if the customer does something)

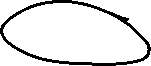
This visually represents the customer engaging with the app and then the Movie Theater reacting

**Use Case:** describes what the system does, represents an action that accomplishes a task within the system

Placed within the rectangle because they are actions that occur within the app

Start with a verb and reinforces an action that takes place: Select Date, Watch Trailers, Purchase Seats

Be descriptive and place in a logical order



**Relationships:** each actor must react to at lease one use cases within the system

Solid line represents a relationship called an **Association \_\_\_\_\_\_\_\_\_\_**which signifies a basic communication or interaction

Don’t need to draw a line from Movie Theater to Watch Trailers because that process happens with in the app…theater will interact with Choose seats

**Include- - - - - - - ->:** shows dependency between a Base Use case and an Included Use Case (use a dash line **from base pointed to include Use case**) happens every time …Select Date is the base Use Case and Show Movies and Times is the Included Use Case. Choose Seats is the Base Use Case and Purchase Seats is the Included Use Case

Extend < - - - - - - - : Base Use case and an Extend Use Case will only happen some times not every time (use a dash line **from extend Use case pointing to Base Use case**) eg Display Login Error,

Generalization: also know as inheritance. Use terms parent and children…each child shares the common behavior as the parent but each child adds something more on its own. Eg from bank app-Make Payment(parent) Pay from Checking and Pay from Savings (children) represent by drawing a solid arrow from children up to parent

Another example Actors Customer (parent) New customer and Returning Customer (Children)

This allows you to have certain behaviors or qualities unique to each of the children

Show Movies and Times

Show available seats

Purchase seats

<https://online.visual-paradigm.com/app/diagrams/#workspace=qycpfyzs&proj=0&id=1>

