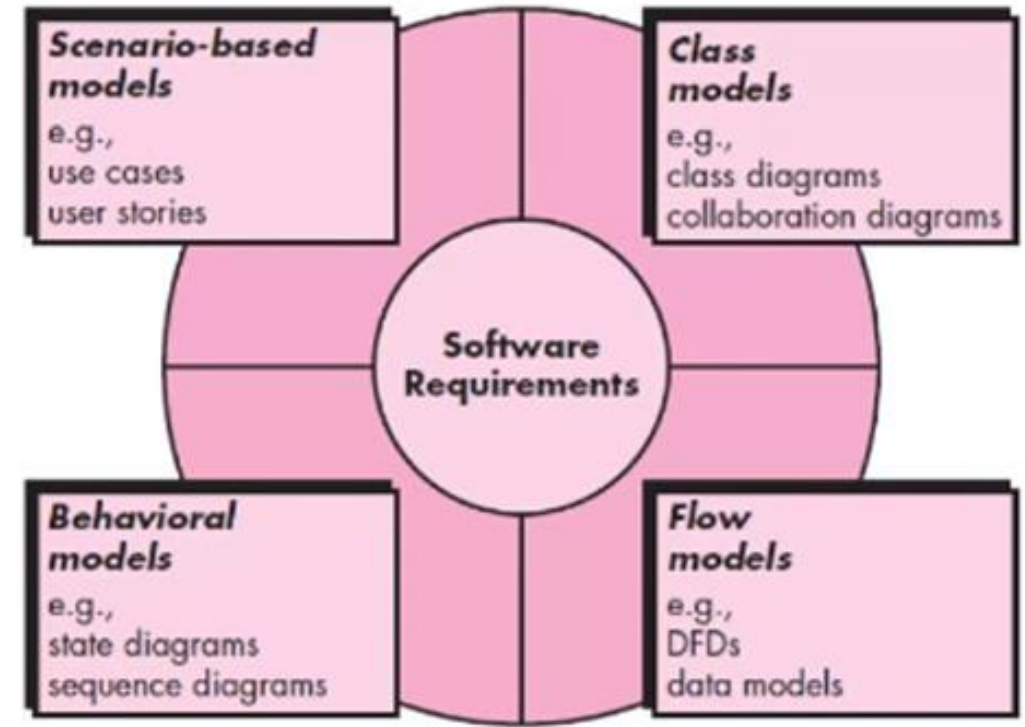




REQUIREMENT ANALYSIS TECHNIQUES

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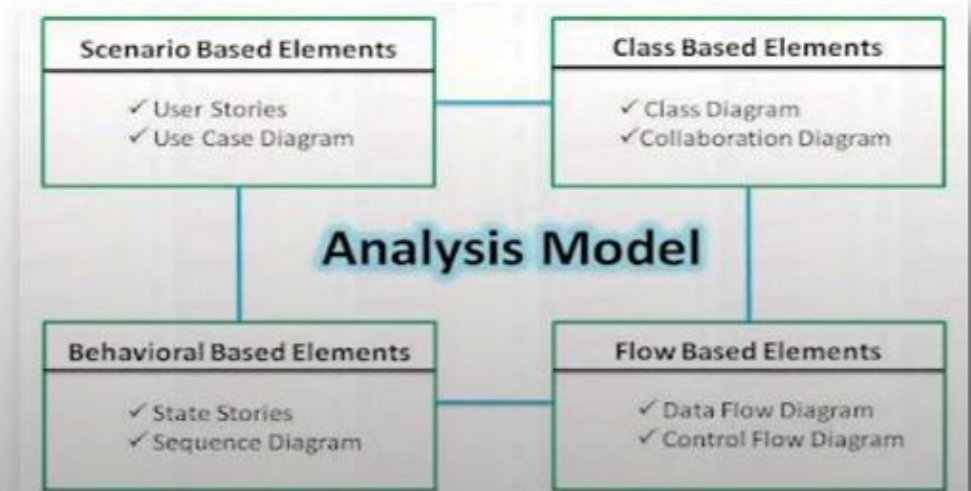


Requirement Analysis

- Requirement analysis is significant and essential activity after elicitation.
- This activity reviews all requirements and may provide a graphical view of the entire system.
- After the completion of the analysis, the understandability of the project may improve significantly.

➤ Requirement Analysis Model / Elements of Requirement Model

1. Scenario based Modelling
2. Class based Modelling
3. Flow oriented Modelling
4. Behavior Modelling

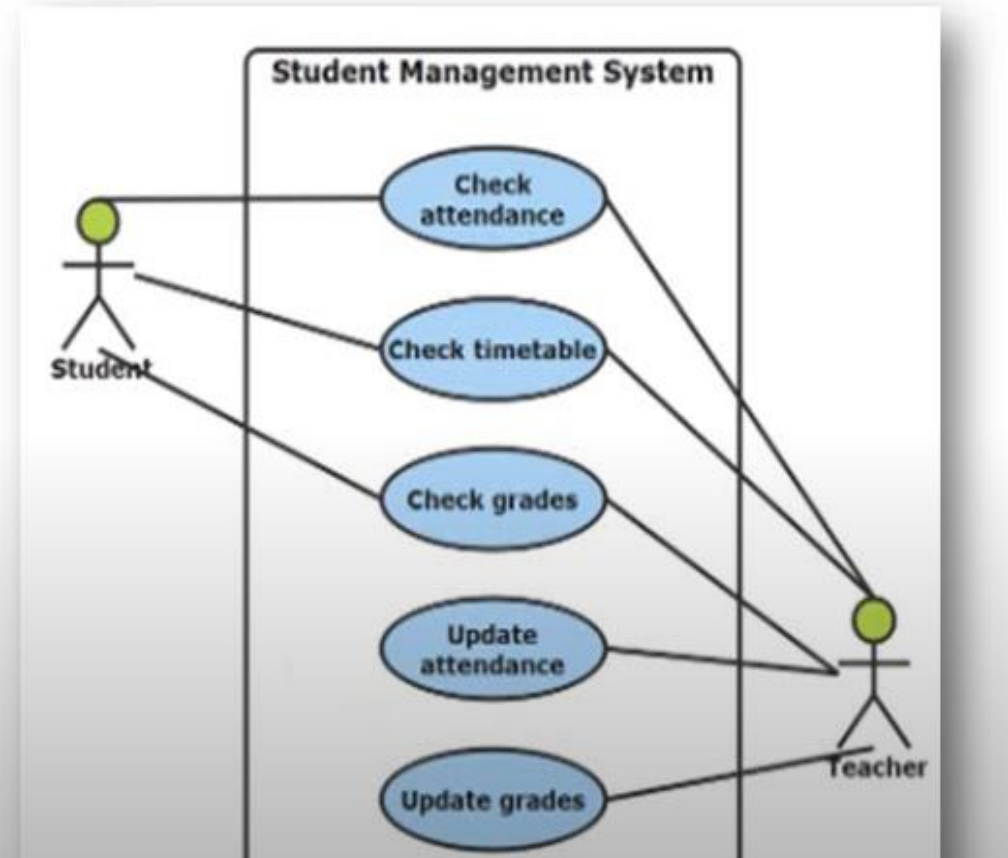
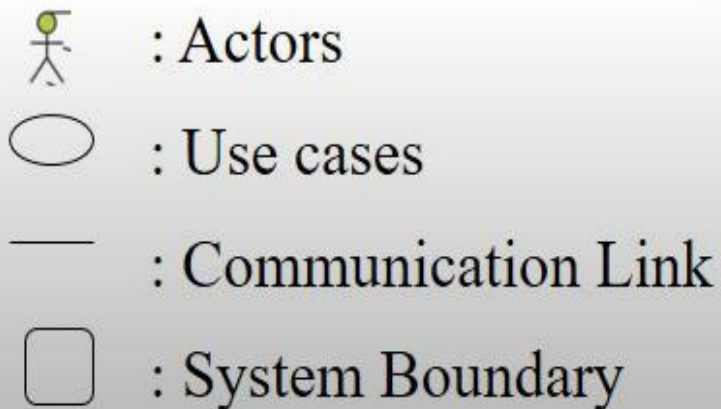


Scenario Based Modelling / Element

- For building the design & analysis model it is important for software engineer to understand how end users & other actors want to interact with the system.
- Here, creation of scenario by using Use case Diagram, Activity Diagram & User Stories.

1. Use case Diagram:

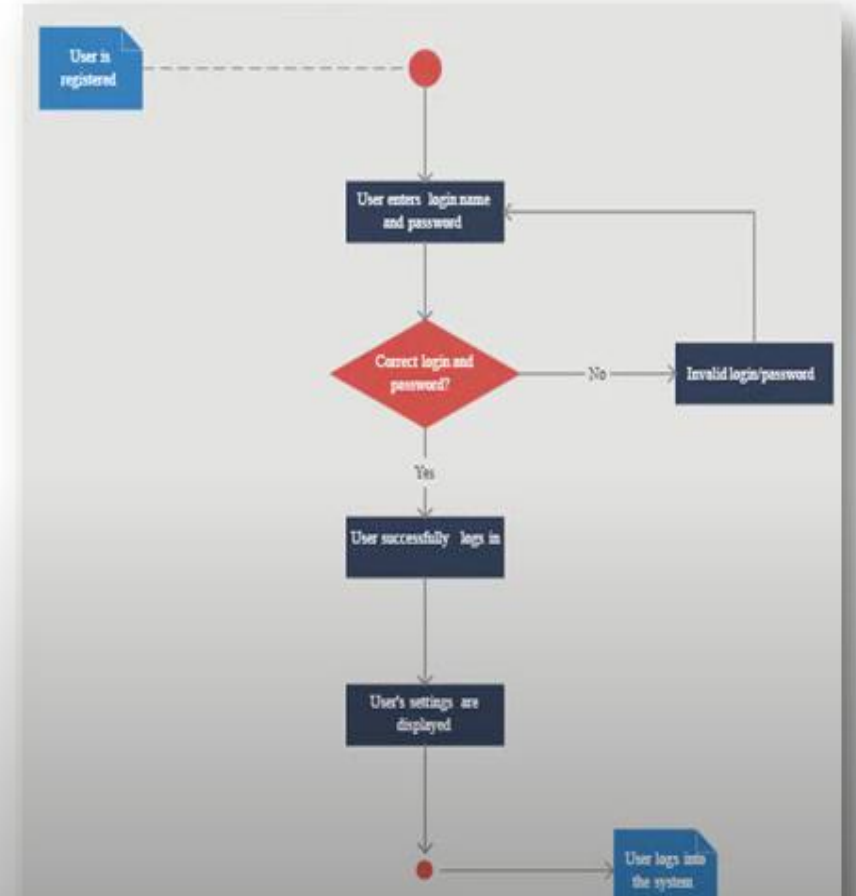
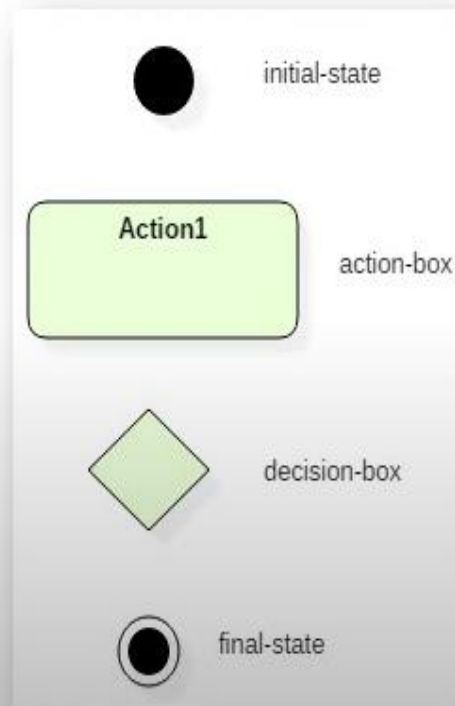
- A use case diagram is used to represent the dynamic behavior of a system.



Scenario Based Modelling / Element

2. Activity Diagram:

- The activity diagram helps in predicting the workflow from one activity to another.
- It show condition of flow and the order in which it occurs.

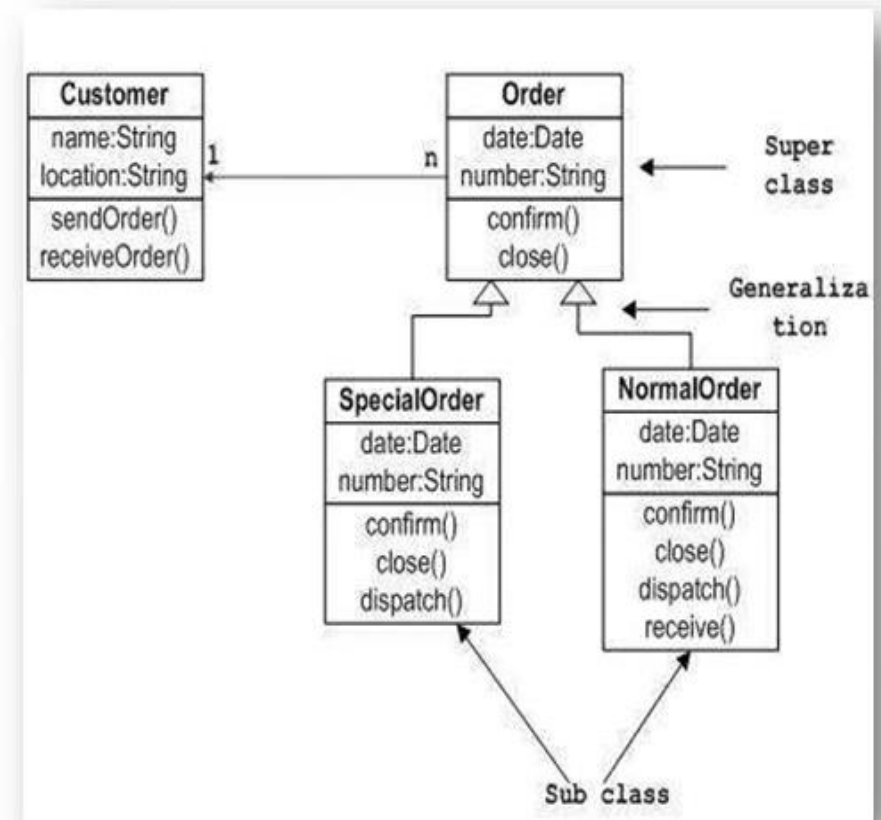


Class Based Modelling / Element

- Class based modeling represent classes, object, attributes & operations of system.

1. Class Diagram:

- The class diagram shows a static view of an application.
- It represents the types of objects residing in the system and the relationships between them.
- It describes the major responsibilities of a system.

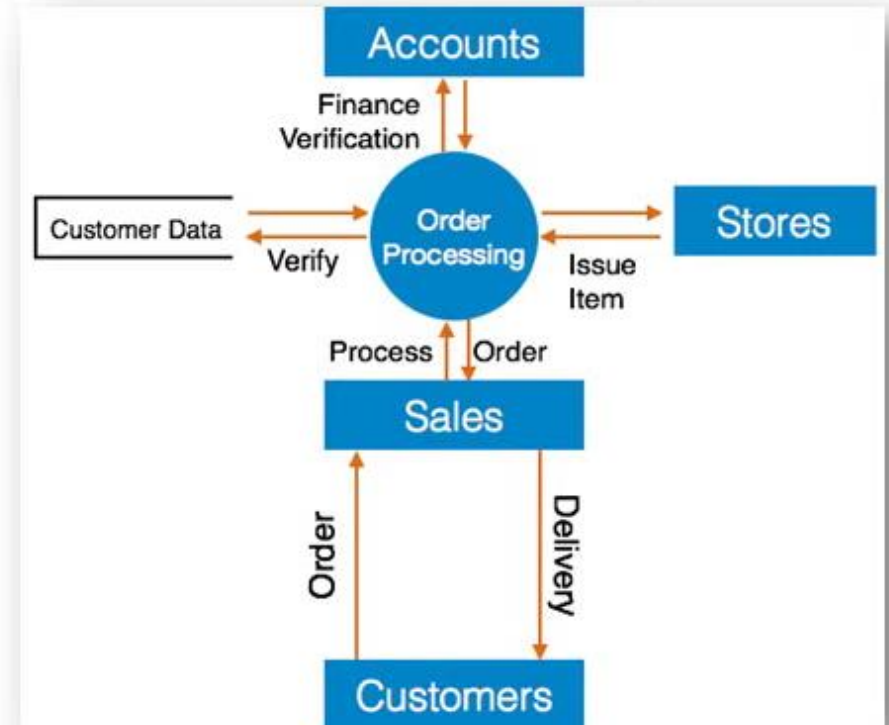


Flow Oriented Modelling / Element

- It shows how data objects are transformed by processing the function.

1. Data Flow Diagram:

- Data flow diagram is graphical representation of flow of data in an information system.
- It is capable of depicting incoming data flow, outgoing data flow and stored data.
- Components of DFD:



Flow Oriented Modelling / Element

2. Control Flow Diagram:

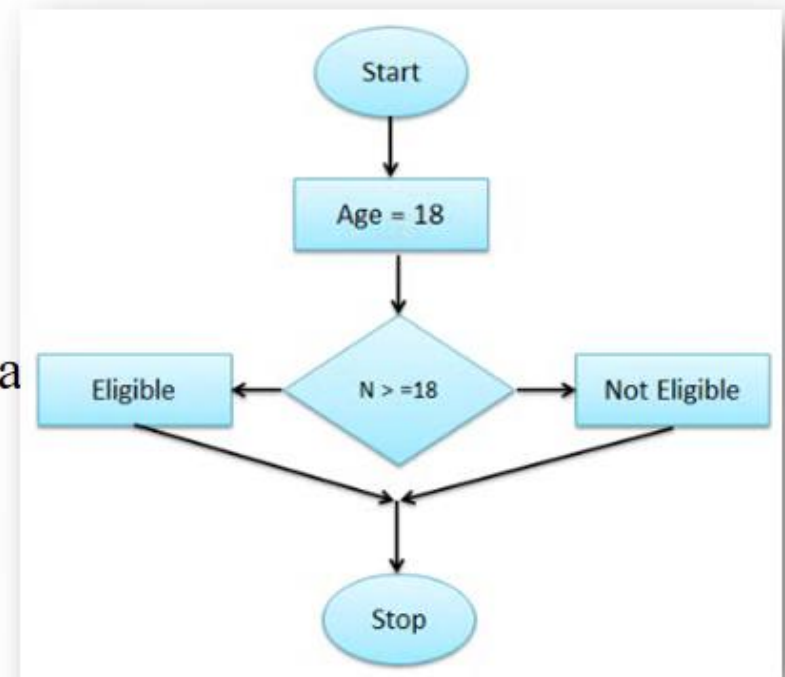
- It is a graphical representation of control flow or computation during the execution of programs or applications.
- Control flow graphs are mostly used in static analysis as well as compiler applications.
- Accurately represent the flow inside of a program unit.
- Used boolean values are true or false, on or off, 1 or 0.

➤ **Entry Block:**

Entry block allows the control to enter into the control flow gra

➤ **Exit Block:**

Control flow leaves through the exit block.

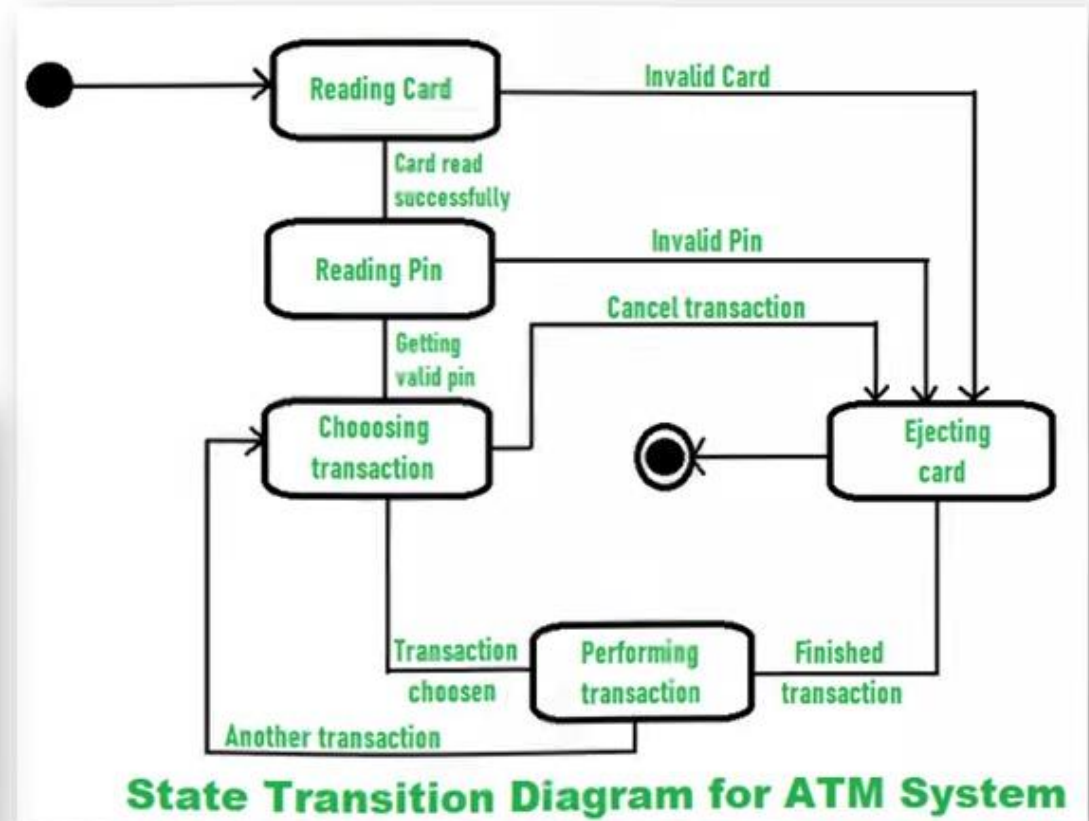
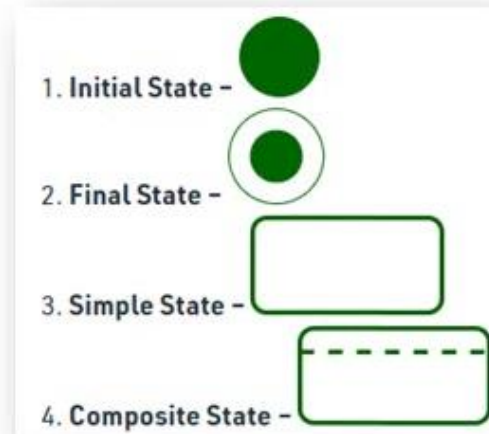


Behavioral Modelling / Element

- Behavioral Model is specially designed to make us understand overall behavior and factors that influence behavior of a System.

1. State Transition Diagram:

- It usually describes overall states of system.
- And events which are responsible for a change in state of a system.



1. Draw & explain use case diagram of library management system.
2. What are components of a use case diagram? Explain their usage with the help of an example.
3. Explain in detail Use case diagram & Activity Diagram.
4. What is Activity Diagram? Explain with Example.
5. Draw & explain class diagram for any web application.
6. Draw state diagram of ATM operations.

