Name: Niraj Amrutkar

Roll No. 332002

PRN: 22010910

Batch: B1

Assignment 3

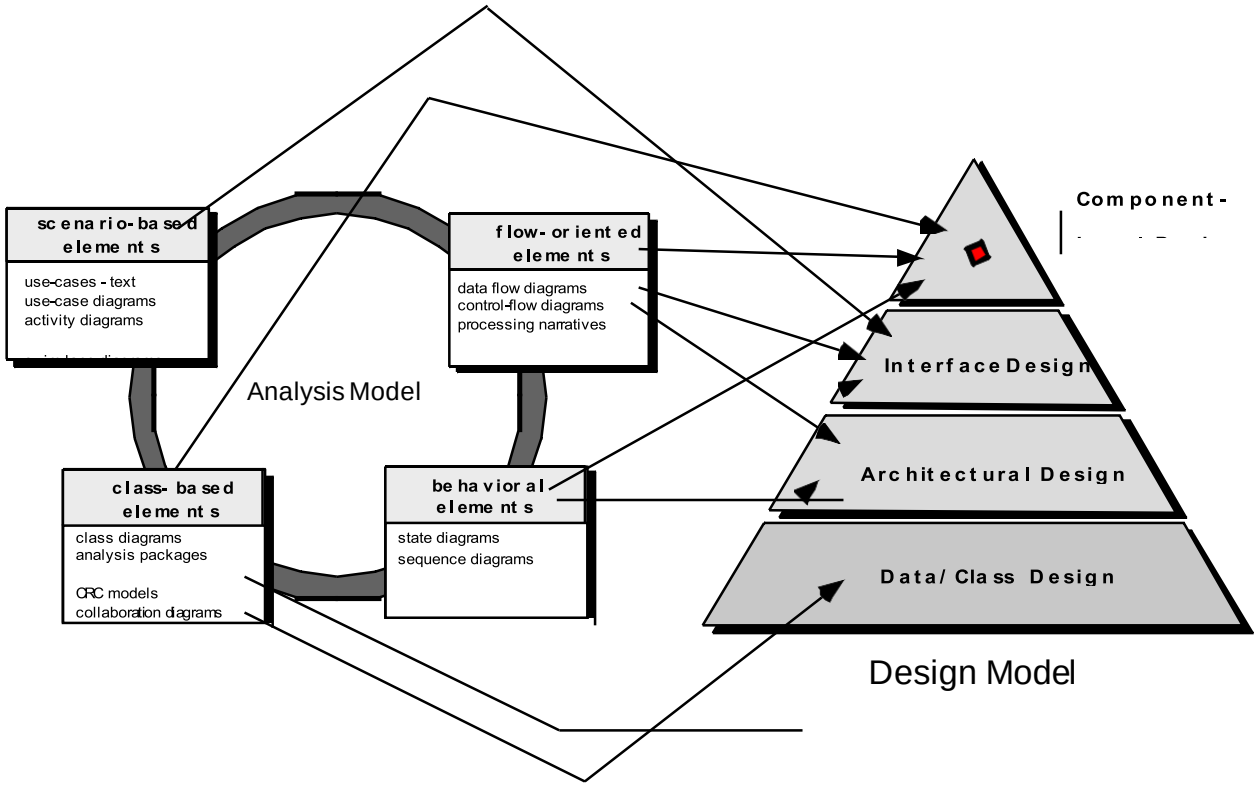
Aim:

Implement the design model with a suitable object-oriented language.

Theory:

Design Model Elements

- **Data elements**
  - Data model --> data structures
  - Data model --> database architecture
- **Architectural elements**
  - Application domain
  - Analysis classes, their relationships, collaborations and behaviors are transformed into design realizations
  - Patterns and "styles"
- **Interface elements**
  - the user interface (UI)
  - external interfaces to other systems, devices, networks or other producers or consumers of information
  - internal interfaces between various design components.
- **Component elements**-->Detail Design of s/w along with specification
- **Deployment elements**-->S/w function and S/w subsystem

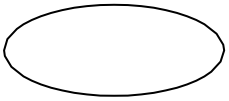
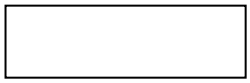
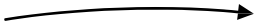
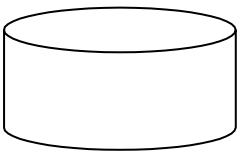


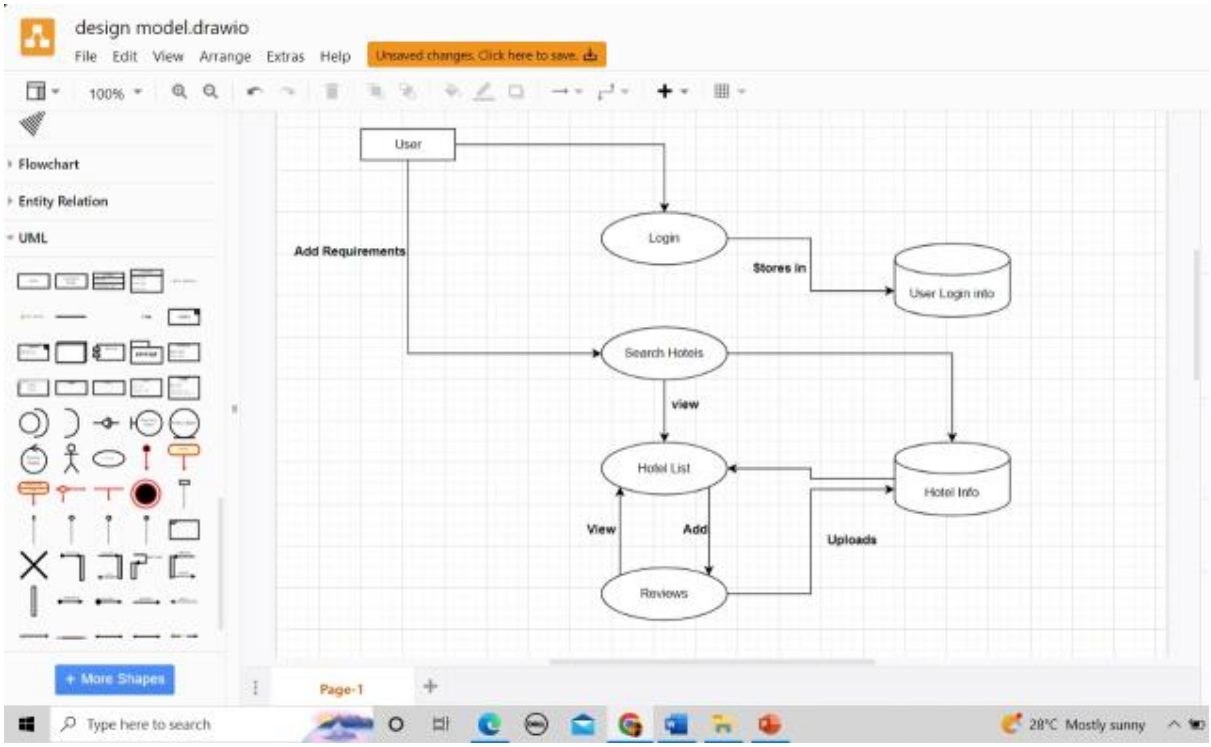
Data Flow Diagram (DFD):

A Data Flow Diagram (DFD) is a graphical representation of the "flow" of data through an Information System. A data flow diagram can also be used for the visualization of Data Processing. It is common practice for a designer to draw a context-level DFD first which shows the interaction between the system and outside entities. This context-level DFD is then "exploded" to show more detail of the system being modeled.

A DFD represents flow of data through a system. Data flow diagrams are commonly used during problem analysis. It views a system as a function that transforms the input into desired output. A DFD shows movement of data through the different transformations or processes in the system.

Dataflow diagrams can be used to provide the end user with a physical idea of where the data they input ultimately has an effect upon the structure of the whole system from order to dispatch to restock how any system is developed can be determined through a dataflow diagram. The appropriate register saved in database and maintained by appropriate authorities

NOTATION	DESCRIPTION
	Processes or transform are represented by circles in a DFD. This shows what systems do. Each process has one or more data inputs and produces one or more data outputs. Each process has a unique name which appear inside the circle that represent the process in a DFD.
	The rectangle Is used to represent an external entity, that is a system element or another system that produces information for transaction by the software or receives the information produced by the software.
	An arrow represent one or data items or data objects. A data flow shows the flow of information from its source toits destination.
	A database is a holding place for information within the system. It is represented by cylindrical notation. Data stores may be long-term files or may be short-term.



Conclusion: In this assignment we implemented the design model with a suitable object- oriented language.