Data Flow Diagrams

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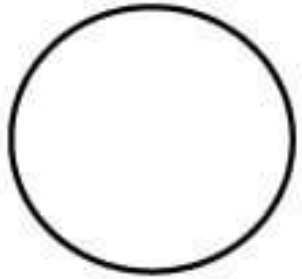
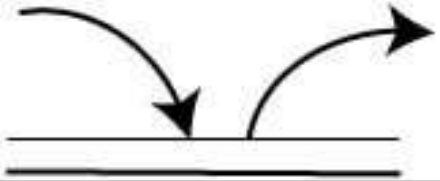
Outline

- DFD

Data Flow Diagrams

- The flow of data of a system or a process is represented by DFD.
- It shows how data enters and leaves the system, what changes the information, and where data is stored.

- The objective of a DFD is to show the scope and boundaries of a system as a whole. It may be used as a communication tool between a system analyst and any person who plays a part in the order that acts as a starting point for redesigning a system. The DFD is also called as a data flow graph or bubble chart.

Symbol	Name	Function
	Data flow	Used to Connect Processes to each , other , to sources or Sinks; te arrow head indicates direction of data flow.
	Process	Perfroms Some transformation of Input data to yield output data.
	Source of Sink (External Entity)	A Source of System inputs or Sink of System outputs.
	Data Store	A repository of data; the arrow heads indicate net inputs and net outputs to store.

Symbols for Data Flow Diagrams

Levels in Data Flow Diagrams (DFD)

- The DFD may be used to perform a system or software at any level of abstraction.
- Infact, DFDs may be partitioned into levels that represent increasing information flow and functional detail.
- Levels in DFD are numbered 0, 1, 2 or beyond.
- Here, we will see primarily three levels in the data flow diagram, which are: 0-level DFD, 1-level DFD, and 2-level DFD.

0-level DFD

- It is also known as fundamental system model, or context diagram represents the entire software requirement as a single bubble with input and output data denoted by incoming and outgoing arrows.
- It is essential to preserve the number of inputs and outputs between levels.
- Thus, if bubble "A" has two inputs x1 and x2 and one output y, then the expanded DFD, that represents "A" should have exactly two external inputs and one external output as shown in fig:

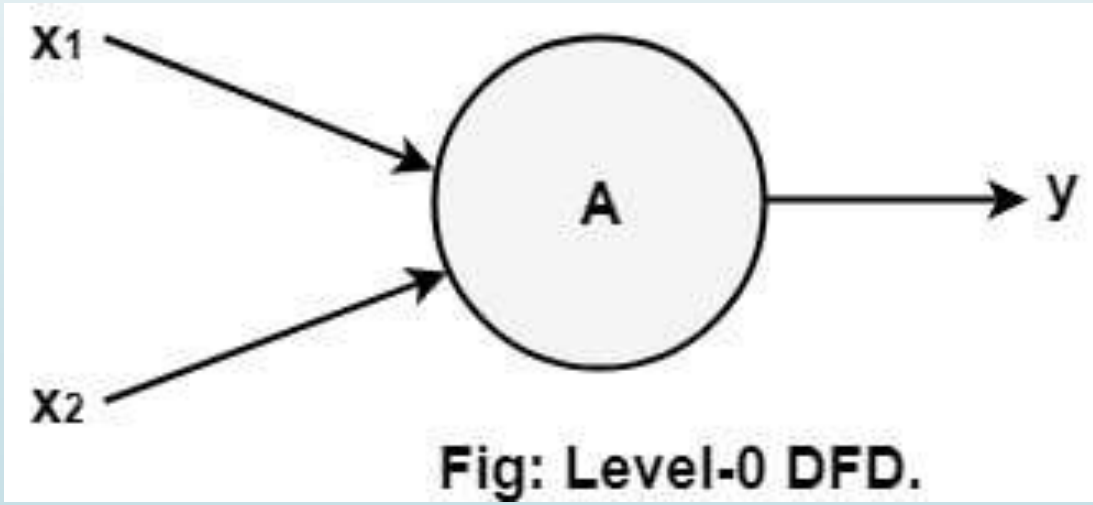


Fig: Level-0 DFD.

- The Level-0 DFD, also called context diagram of the result management system is shown in fig. As the bubbles are decomposed into less and less abstract bubbles, the corresponding data flow may also be needed to be decomposed.

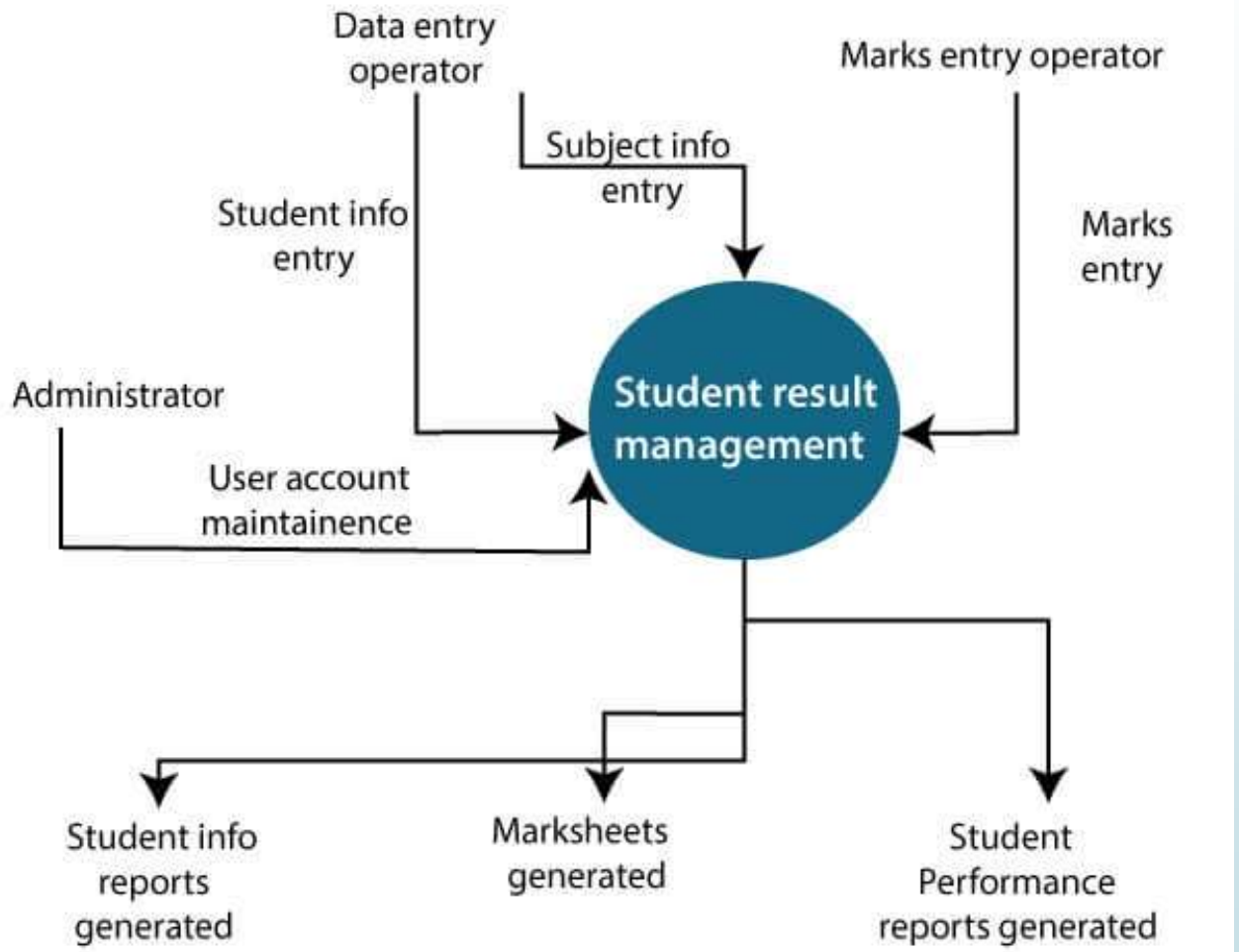


Fig: Level-0 DFD of result management system

Level-1 DFD

- In 1-level DFD, a context diagram is decomposed into multiple bubbles/processes. In this level, we highlight the main objectives of the system and breakdown the high-level process of 0-level DFD into subprocesses.

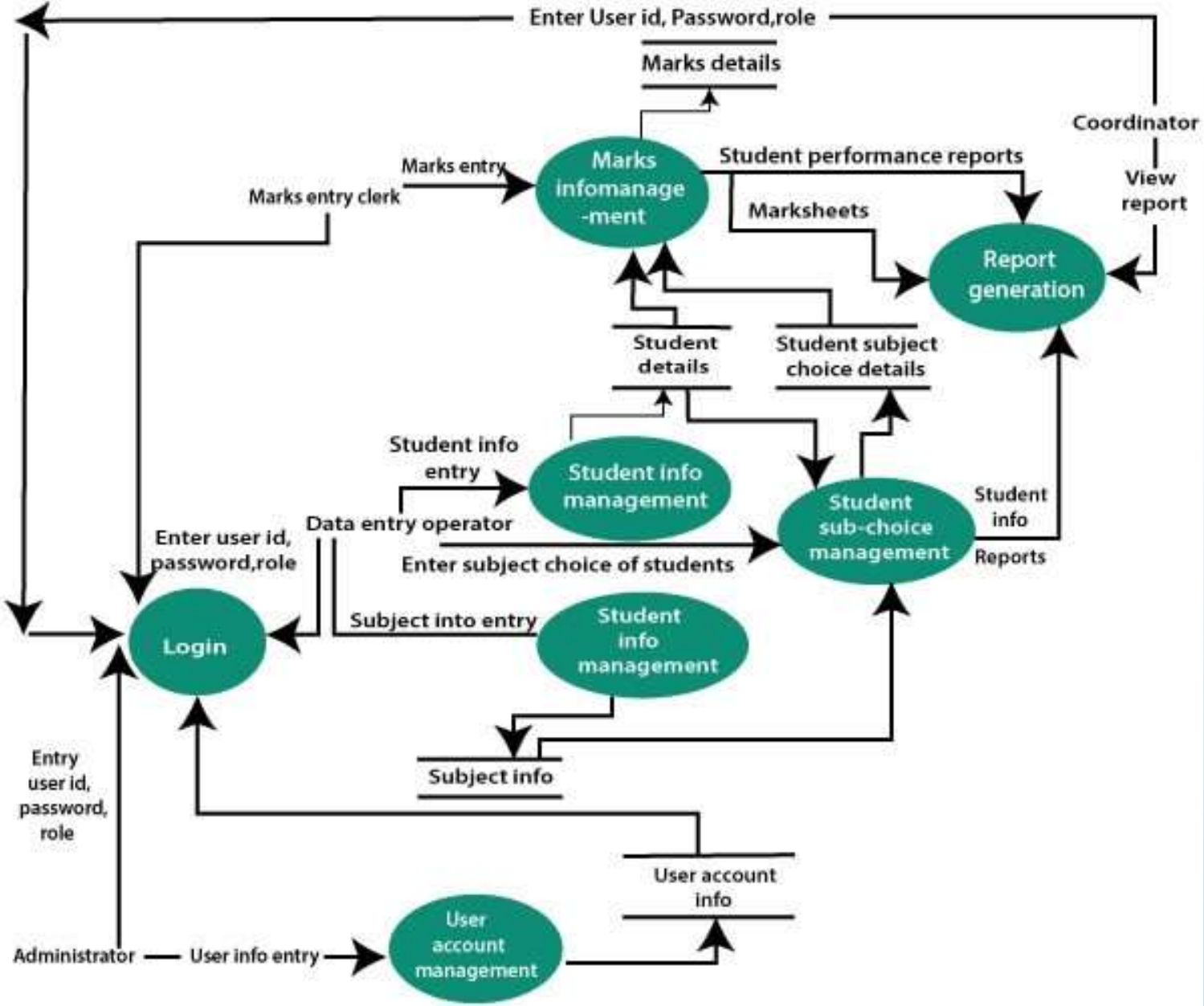
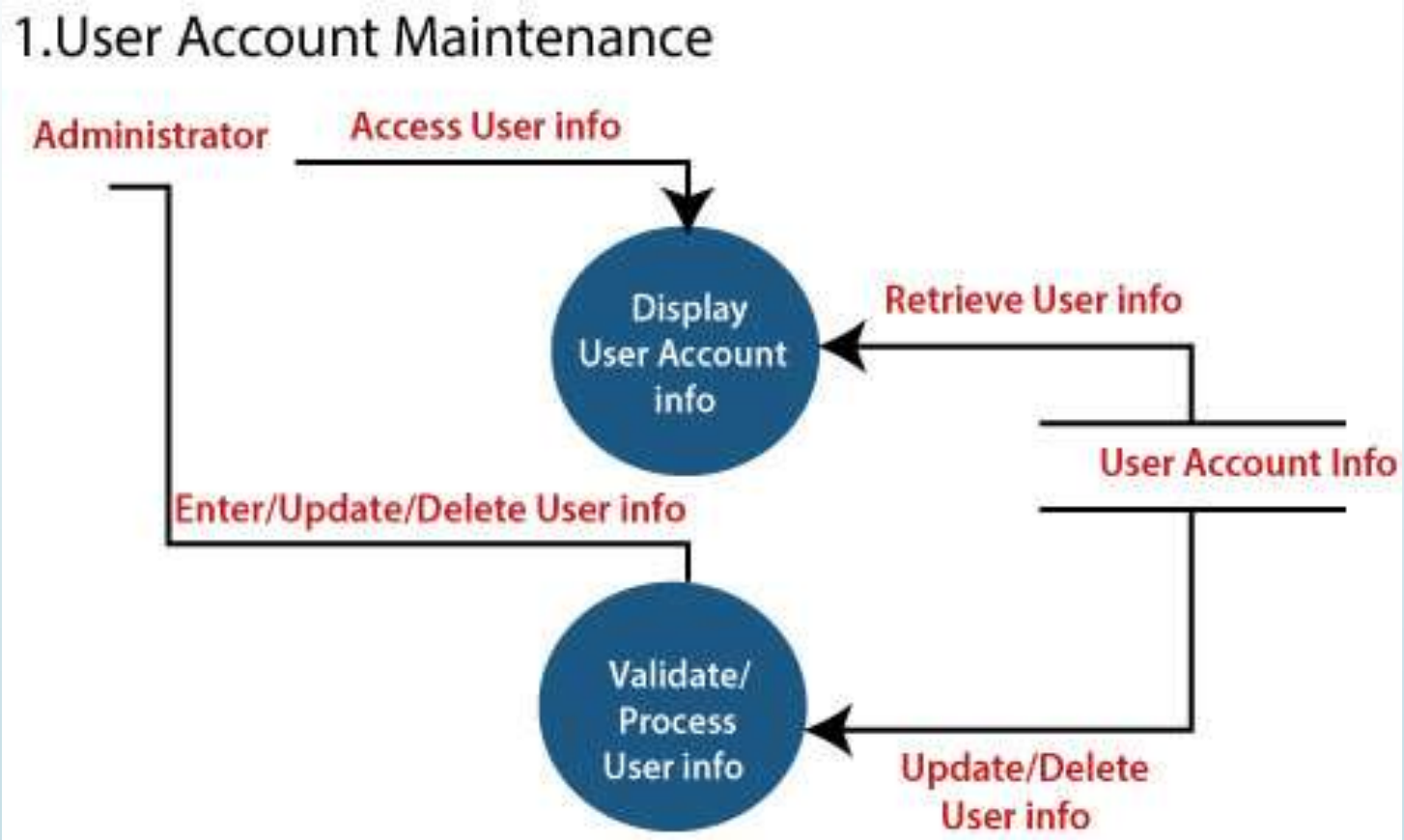


Fig: Level-1 DFD of result management system

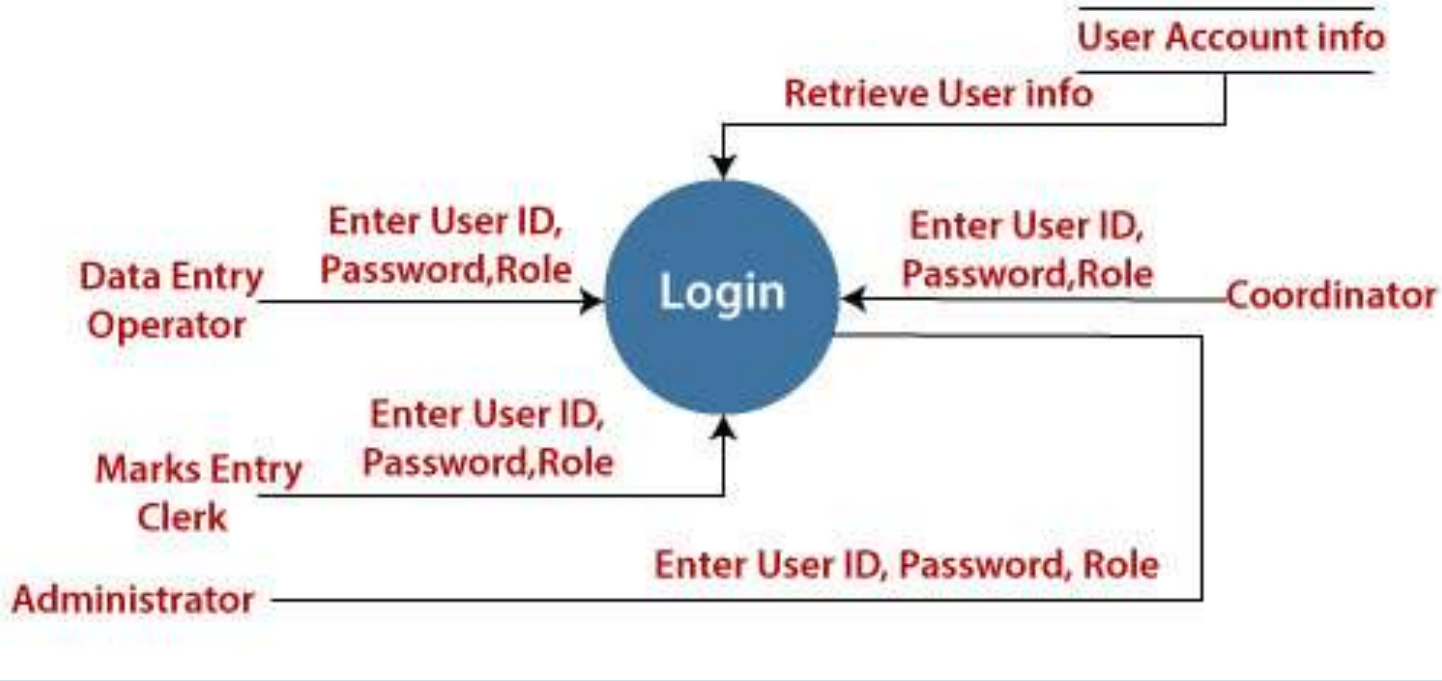
Level-2 DFD

- 2-level DFD goes one process deeper into parts of 1-level DFD. It can be used to project or record the specific/necessary detail about the system's functioning.

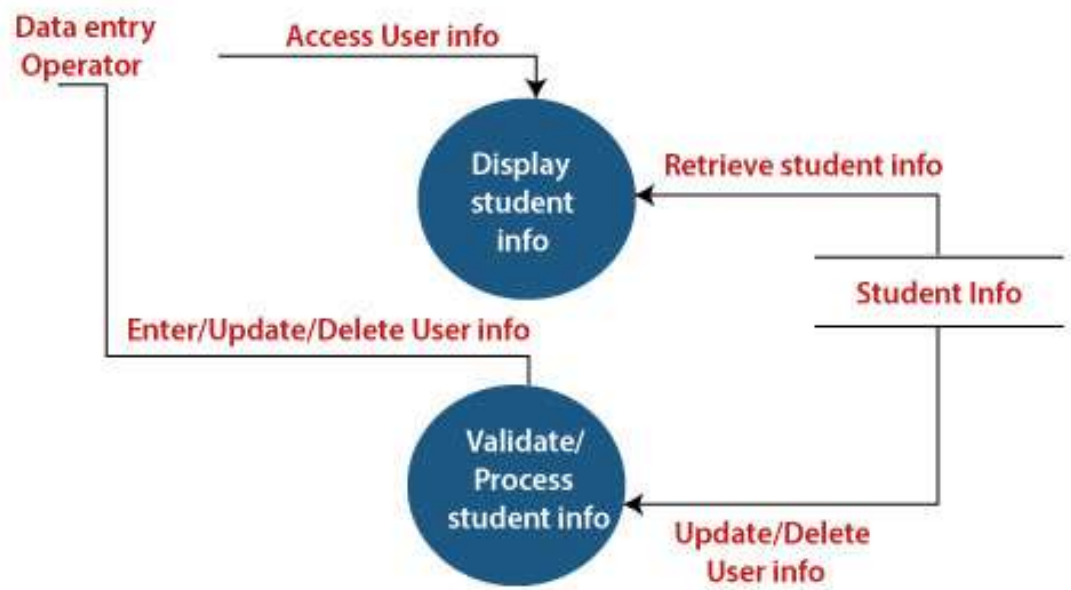


2. Login

The level 2 DFD of this process is given below:

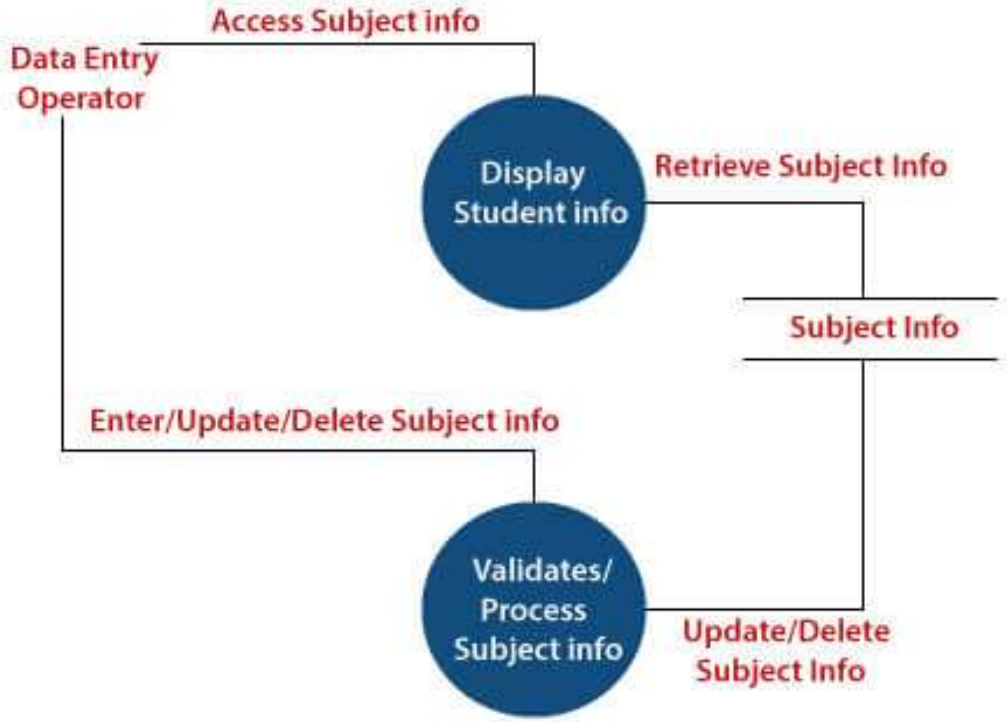


3. Student Information Management



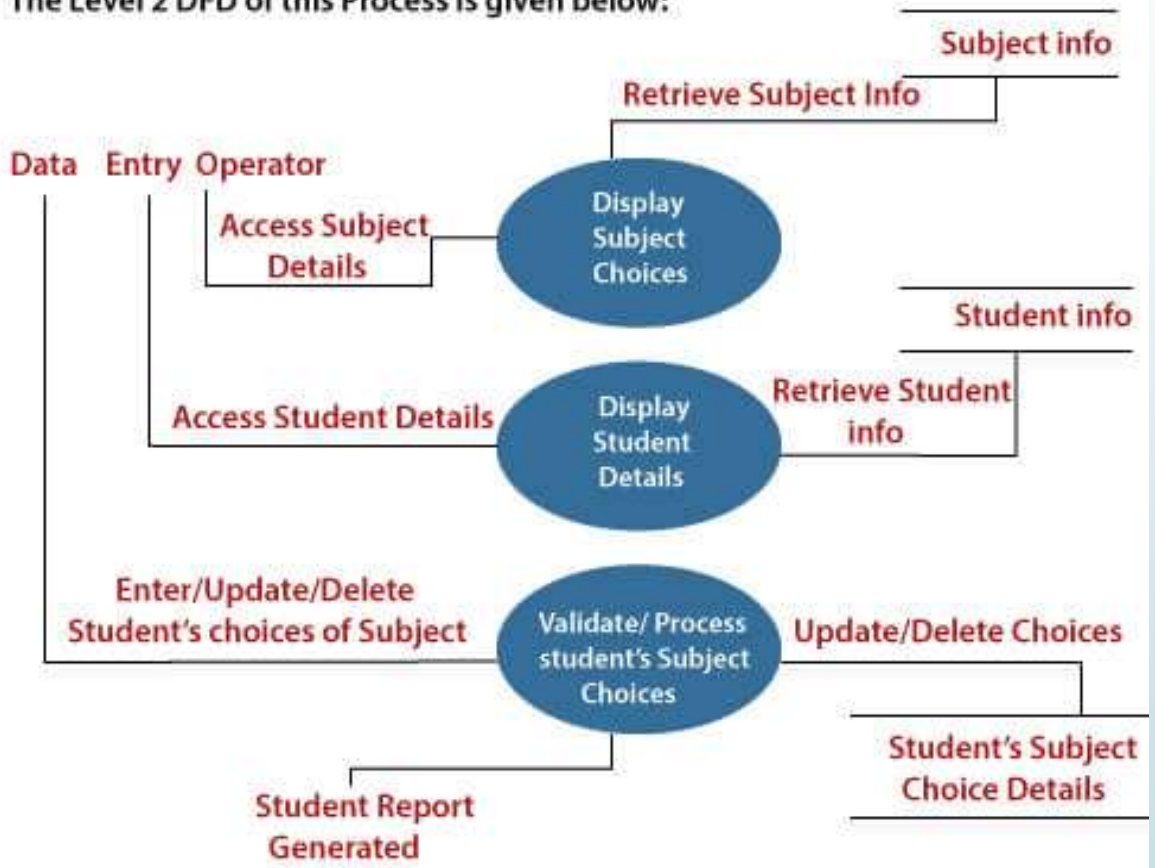
4. Subject Information Management

The level 2 DFD of this process is given below:



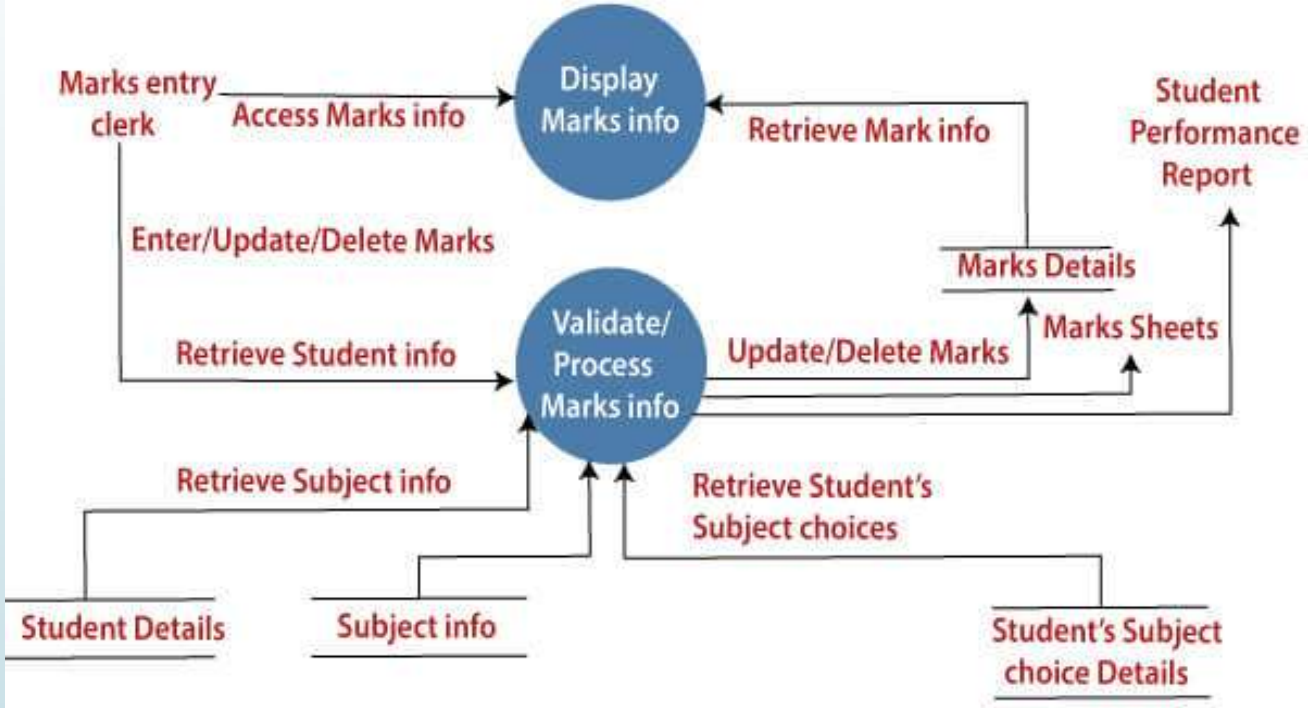
5. Student's Subject Choice Management

The Level 2 DFD of this Process is given below:



6. Marks Information Managment

The Level 2 DFD of this Process is given below:



Thank You