Course Code: CSL601	Course Name:
Class :	Batch :
Roll no :	Name :

Experiment : 06

Aim : Draw DFD (up to 2 levels) and prepare Data Dictionary for the project.

Theory :

What is the use of DFD diagram?

DFD graphically representing the functions, or processes, which capture, manipulate, store, and distribute data between a system and its environment and between components of a system. The visual representation makes it a good communication tool between User and System designer. Structure of DFD allows starting from a broad overview and expand it to a hierarchy of detailed diagrams. DFD has often been used due to the following reasons:

- Logical information flow of the system
- Determination of physical system construction requirements
- Simplicity of notation
- Establishment of manual and automated systems requirements

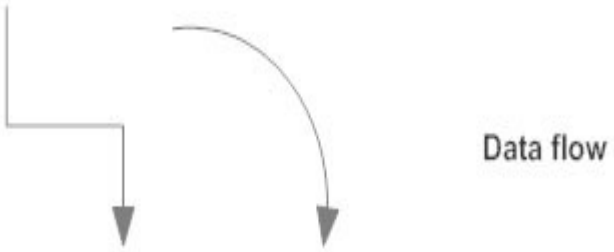
Explain the DFD symbols?

- There are essentially two different types of notations for data flow diagrams (Yourdon & Coad or Gane & Sarson) defining different visual representations for processes, data stores, data flow and external entities.
- Yourdon and Coad type data flow diagrams are usually used for system analysis and design, while Gane and Sarson type DFDs are more common for visualizing information systems.
- Visually, the biggest difference between the two ways of drawing data flow diagrams is how processes look. In the Yourdon and Coad way, processes are depicted as circles, while in the Gane and Sarson diagram the processes are squares with rounded corners.

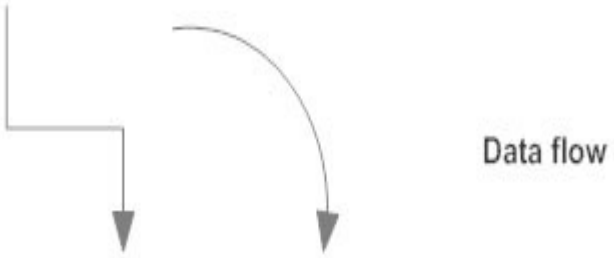
1) Process Notations: -A process transforms incoming data flow into outgoing data flow.

Gane & Sarson

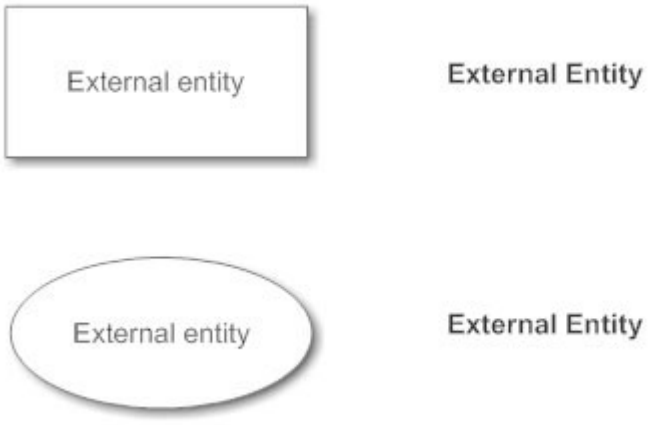
2) Datastore Notations: - Datastores are repositories of data in the system. They are sometimes also referred to as files.



3) Dataflow Notations: - Dataflows are pipelines through which packets of information flow. Label the arrows with the name of the data that moves through it.



4) External Entity Notations: - External entities are objects outside the system, with which the system communicates. External entities are sources and destinations of the system's inputs and outputs.



What is DFD Level 0 and DFD Level 1?

- DFD Level 0 is also called a Context Diagram. It's a basic overview of the whole system or process being analyzed or modeled. It's designed to be an at-a-glance view, showing the system as a single high-level process, with its relationship to external entities. It should be easily understood by a wide audience, including stakeholders, business analysts, data analysts and developers.
- DFD Level 1 provides a more detailed breakout of pieces of the Context Level Diagram. You will highlight the main functions carried out by the system, as you break down the high-level process of the Context Diagram into its subprocesses.

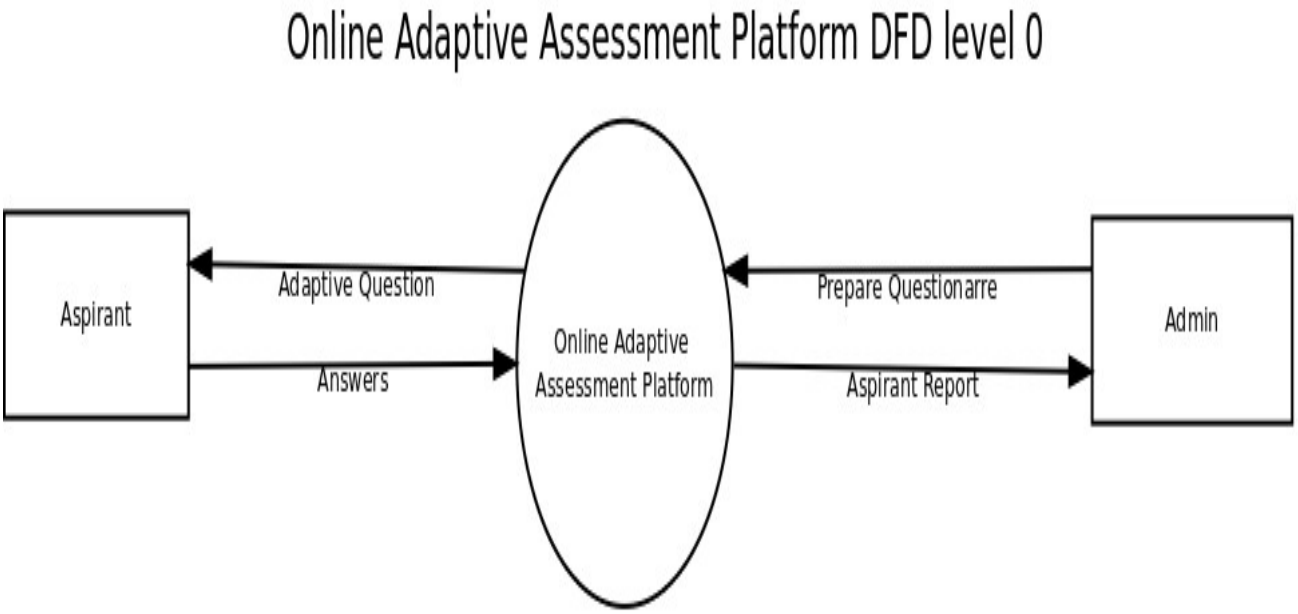
What is Data Dictionary?

A data dictionary is a collection of descriptions of the data objects or items in a data model for the benefit of programmers and others who need to refer to them. A first step in analyzing a system of objects with which users interact is to identify each object and its relationship to other objects. This process is called data modeling and results in a picture of object relationships. After each data object or item is given a descriptive name, its relationship is described (or it becomes part of some structure that implicitly describes relationship), the type of data (such as text or image or binary value) is described, possible predefined values are listed, and a brief textual description is provided. This collection can be organized for reference into a book called a data dictionary.

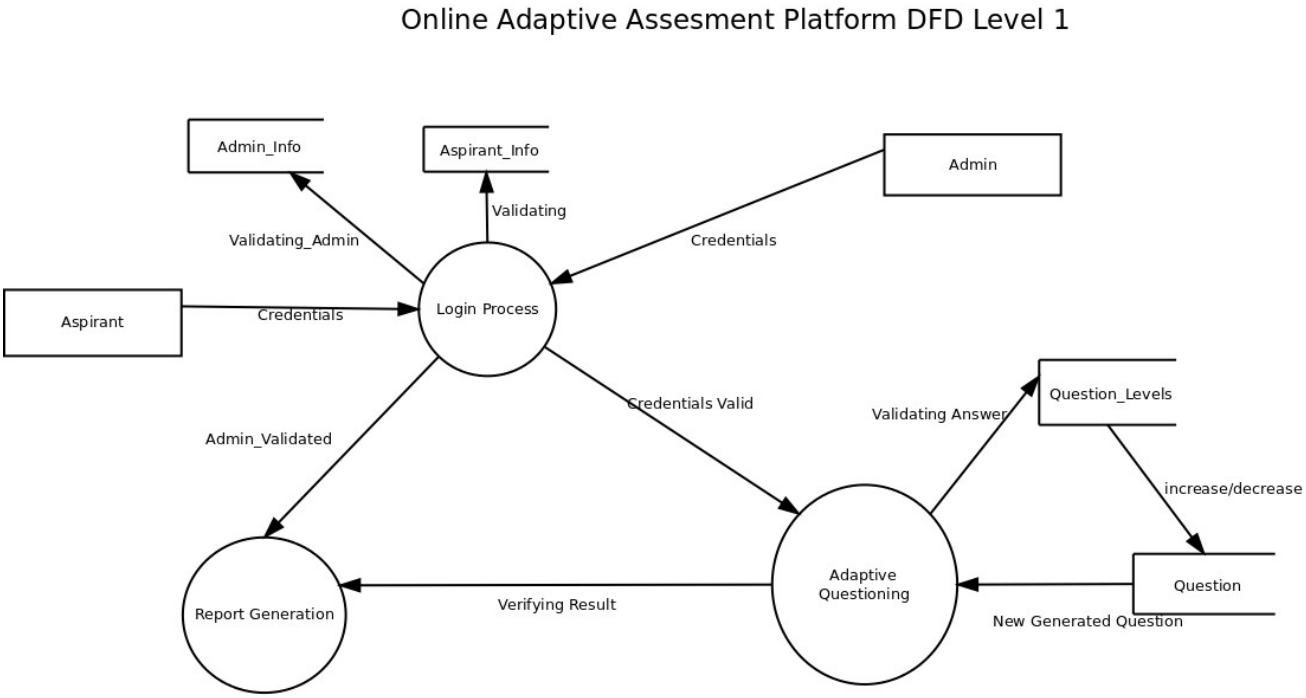
Output :

Prepare the DFD Level 0, Level 1 and Level 2 diagrams.

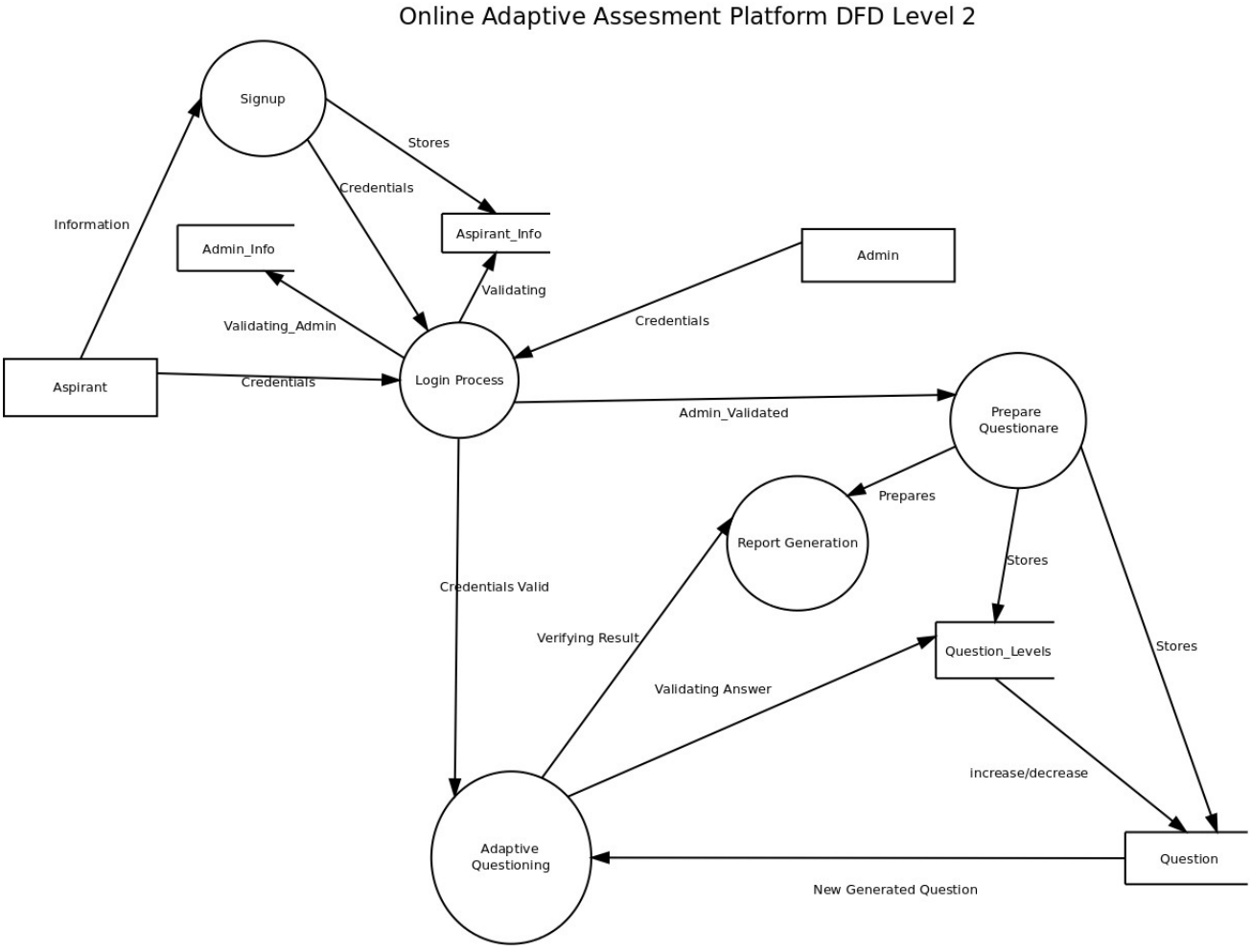
DFD Level 0



DFD Level 1



DFD Level 2



Reference:

https://www.lucidchart.com/pages/data-flow-diagram
https://www.visual-paradigm.com/guide/data-flow-diagram/what-is-data-flow-diagram/
https://www.draw.io/
https://creately.com/

Conclusion:
