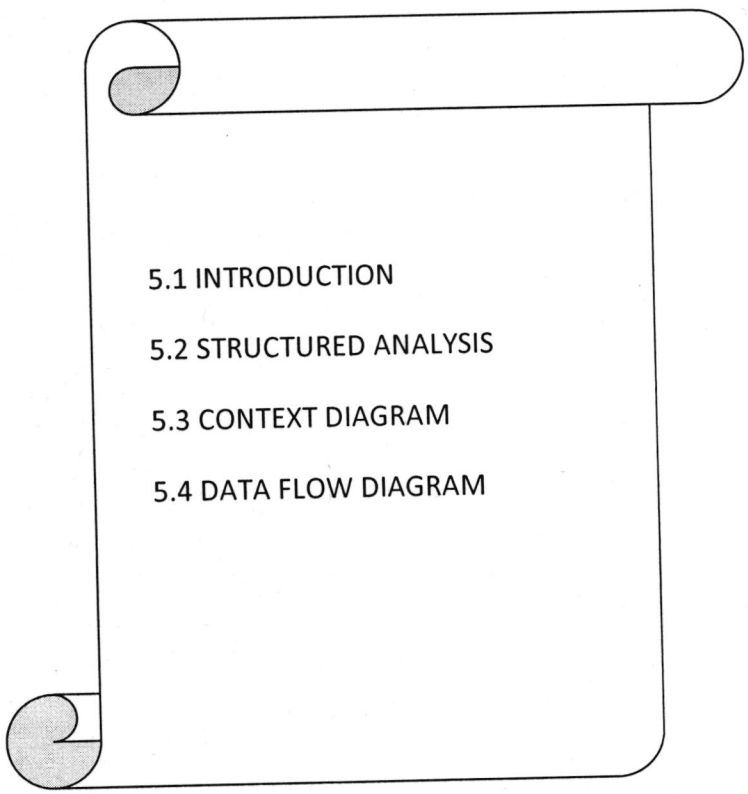
CHAPTER 5: SYSTEM ANALYSIS



CHAPTER 5: SYSTEM ANALYSIS

5.1 INTRODUCTION

It is the most critical phase of the system development life cycle. Structured analysis is a set of techniques and graphical tools that allow the analyst to develop a new kind of system specifications that are easily understandable to the user. Structured analysis considers new goals and structured tools for analysis.

Structured analysis has the following attributes-

1. It is graphical. The DFD, for example presents a picture of what is being specified and is a conceptually easy to understand presentation of the application.
2. The process is partitioned so that we have a clear picture of the progression from general to specific in the system flow.
3. It is logical rather than physical. The element of system does not depend on vendor or hardware. They specify in a precise concise and highly readable manner the workings of the system and how it hangs together.
4. It calls for a rigorous study of the user area, a commitment that is often lighly in that traditional approach of the system analysis.
5. Certain tasks that are normally carried out late in the system development life cycle removed to the analysis rather than later in implementation.

5.2 STRUCTURED ANALYSIS

Structured analysis is a set of techniques and graphical tools that allow the analyst to develop a new kind of specification that is easily understandable to the users.

In this phase of the system development a team comprising of the concerned students under the supervision of a guide has conducted an in-depth analysis of the proposed system. The

team has reviewed the areas of information needs the users, data volume, integration requirement etc.

Here, in this phase we present the context diagram and the DFD of the system to conceptualize the proposed system easily. The processes are partitioned so that we have a clear picture of the application under development. To achieve these a rigorous study of the user area has been made, so that no major flaws occur in the later part of the system development.

5.3 CONTEXT DIAGRAM

Context diagram is the starting in the structured analysis. They are constructed to show the highest-level model of the system. They are used to represent pictorially the scope or the boundaries to the system. Actually the system shown by the context diagram does not describe the system in detail. For more details it is necessary to identify the major system process and draw a data flow diagram made up of these processes and the data flow between them. The context diagram of the proposed system is given below:

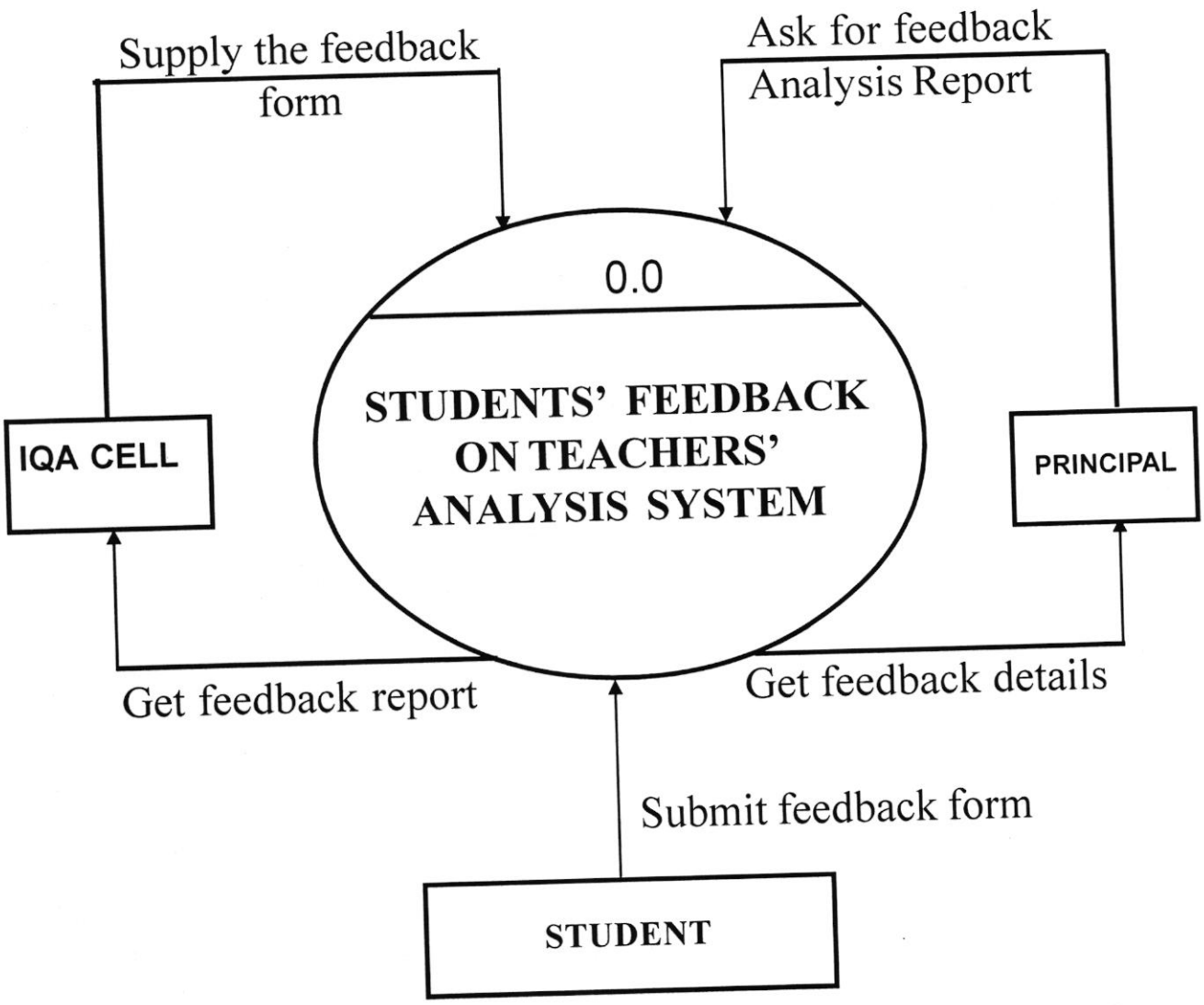
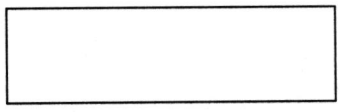
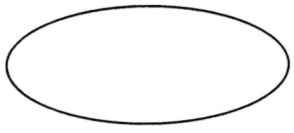
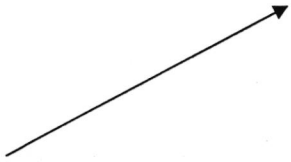
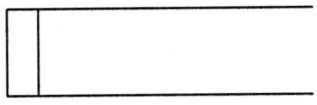


Fig: Context Diagram

5.4 DATA FLOW DIAGRAM

The data flow diagram (DFD) is one of the most important tools used by the systems analysts. The use of the data flow diagrams as modeling tools was popularized by DeMacro (1978) and Gane and Sarson (1979) through their structured systems analysis methodologies. They suggested that a data flow diagram should be the first tool used by the systems analyst to model systems components. These components are the systems processes, the data used by these processes, any external entities that interact with the system, and the information flows in the system.

So, it is the starting point of the design phase that functionally decomposes the requirement specifying down to the lowest; level of details. The following diagram illustrates the notations and symbols used to construct the DFD.

	The User/Entity
	A transformation of information(i.e. process).
	A data item or collection of data item, the arrowhead indicates the direction of flow.
	The table in which information will be stored ultimately.

The Data Flow Diagram of the proposed system:

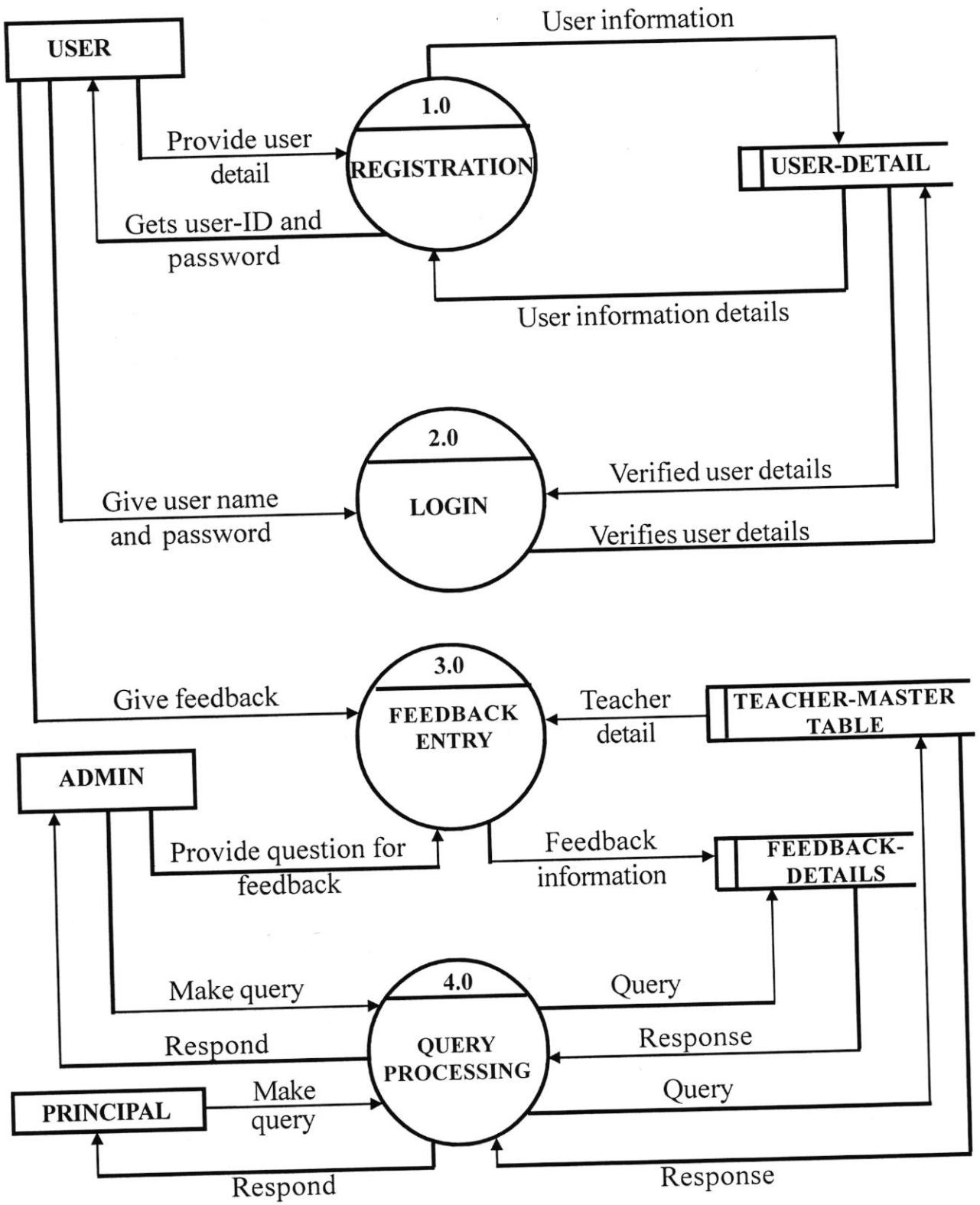


Fig: 1st level DFD for End-Users

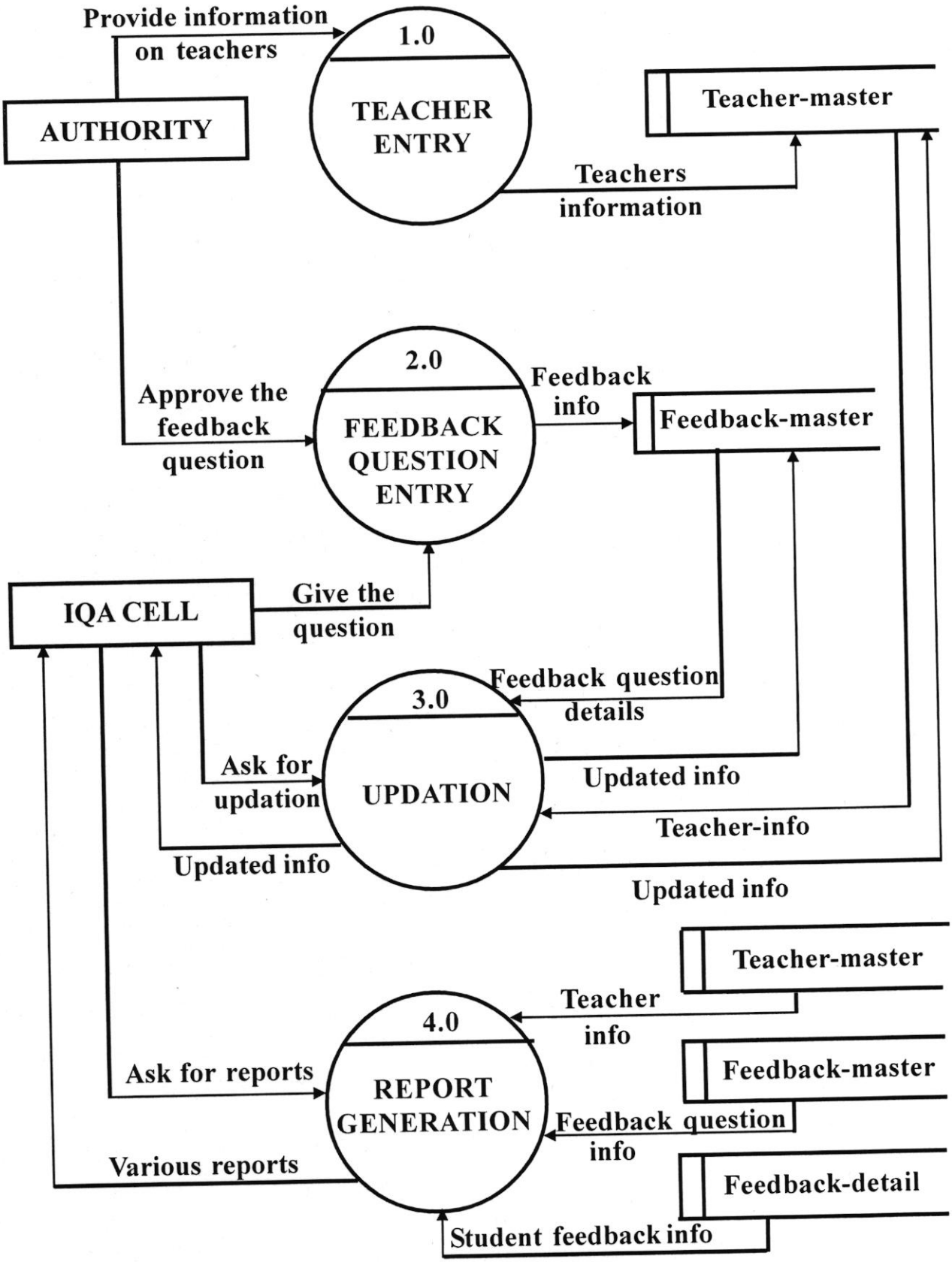


Fig: 1st level DFD for ADMIN

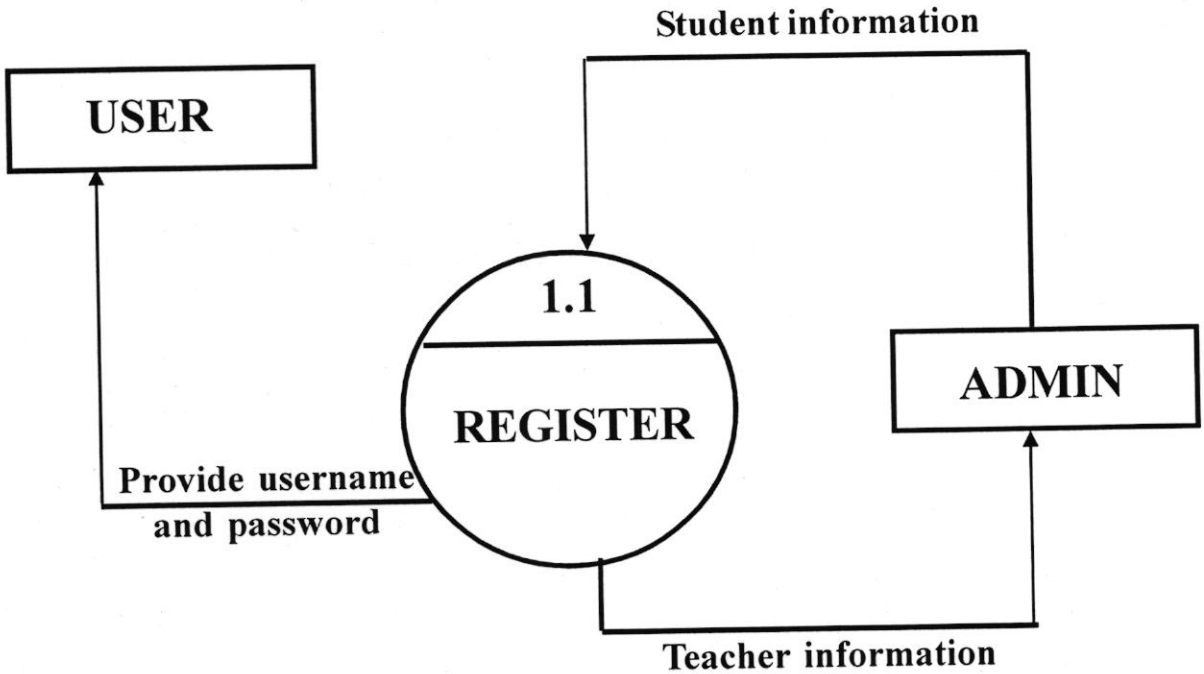


Fig: 2nd level DFD