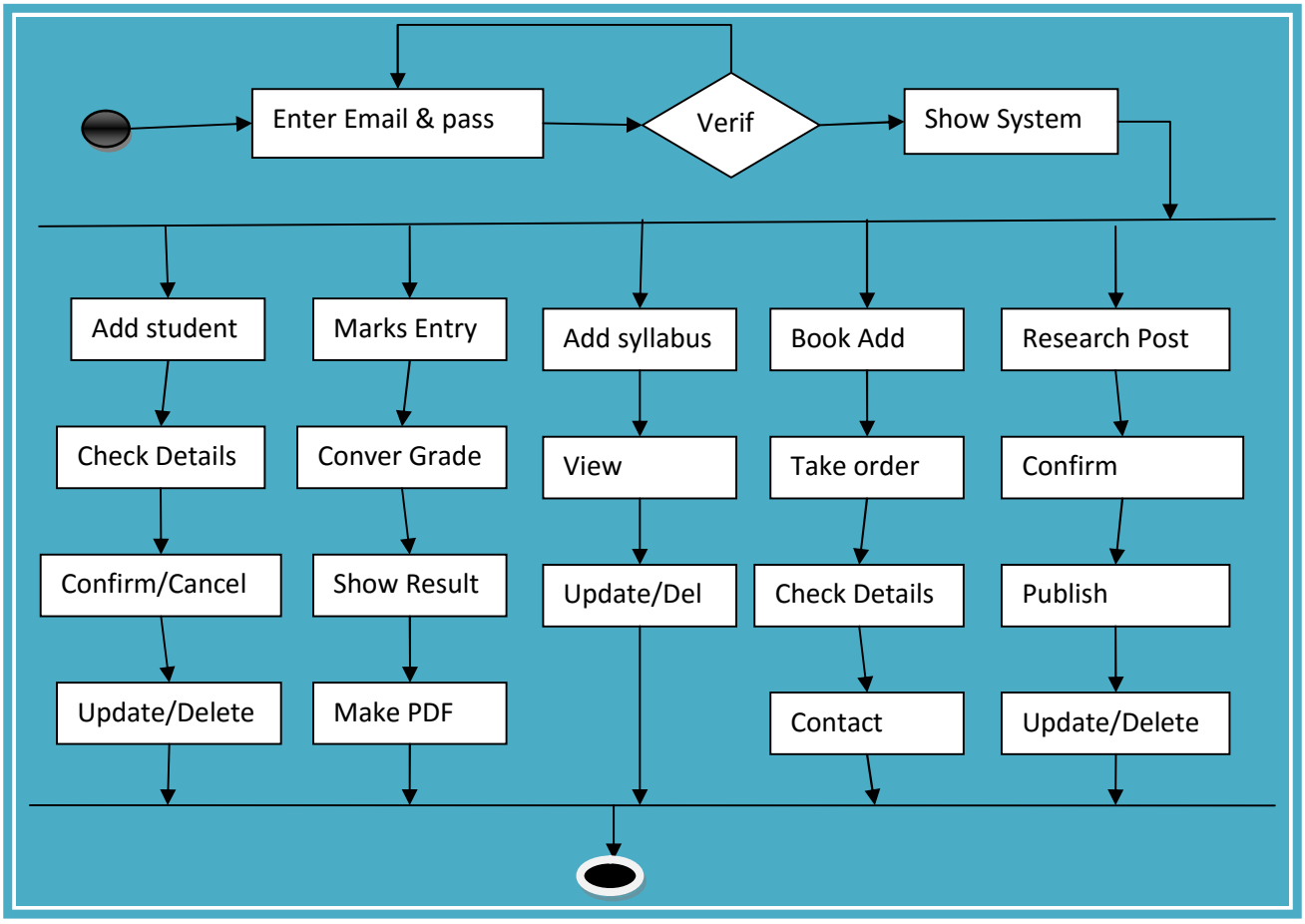
Chapter 6: Analysis & Design

Analysis modeling uses a combination of text and diagrammatic forms to depict requirements for data, function, and behavior in a way that is relatively easy to understand, and more important, straightforward to review for correctness, completeness and consistency. This section presents resources for conventional and object-oriented analysis (OOA) methods as well as resources for UML.

6.1 Activity Diagram

Activity diagrams describe the workflow behavior of a system. The diagrams describe the state of activities by showing the sequence of activities performed. Activity diagrams for Admin.



Activity Diagram for EMS Student:

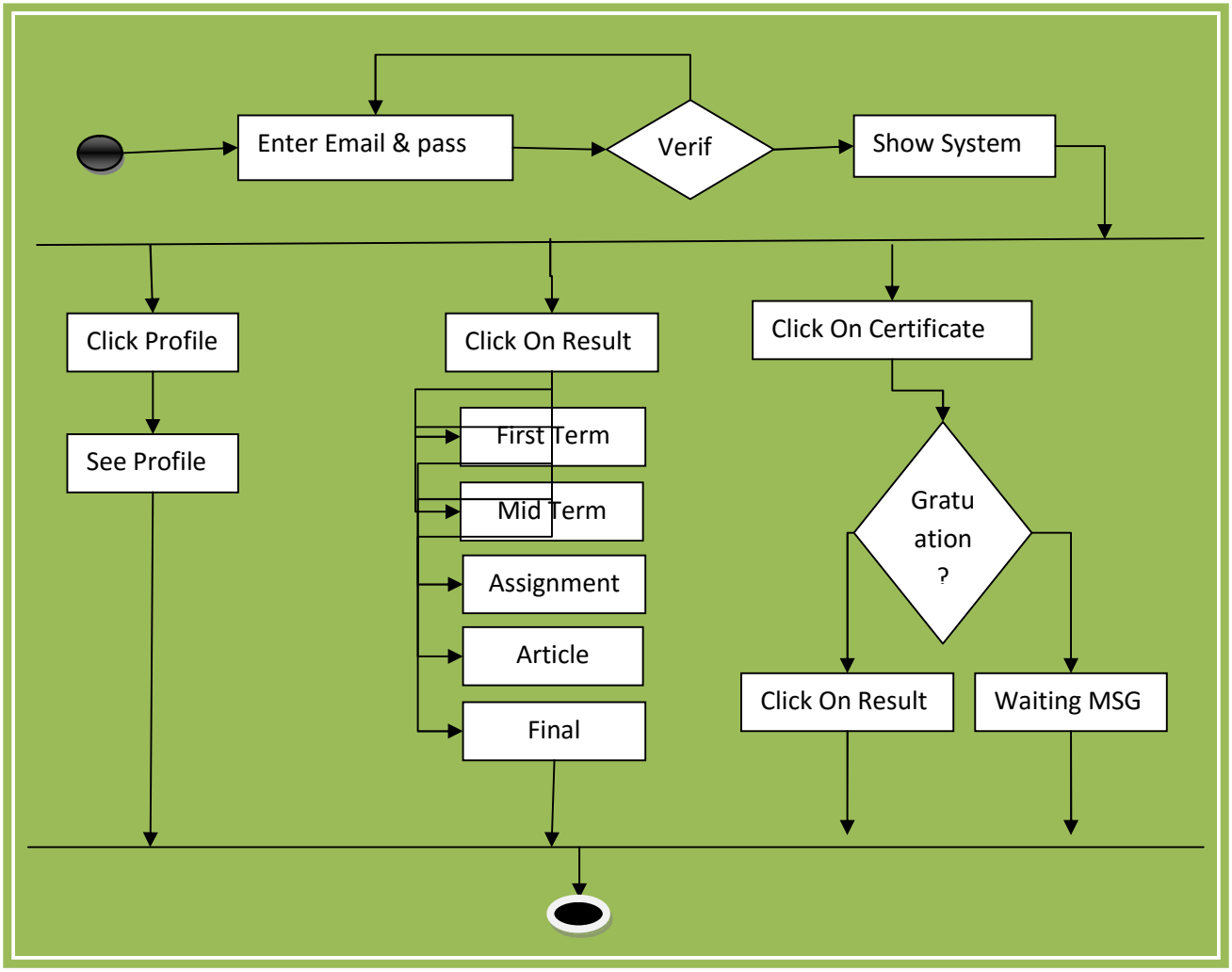
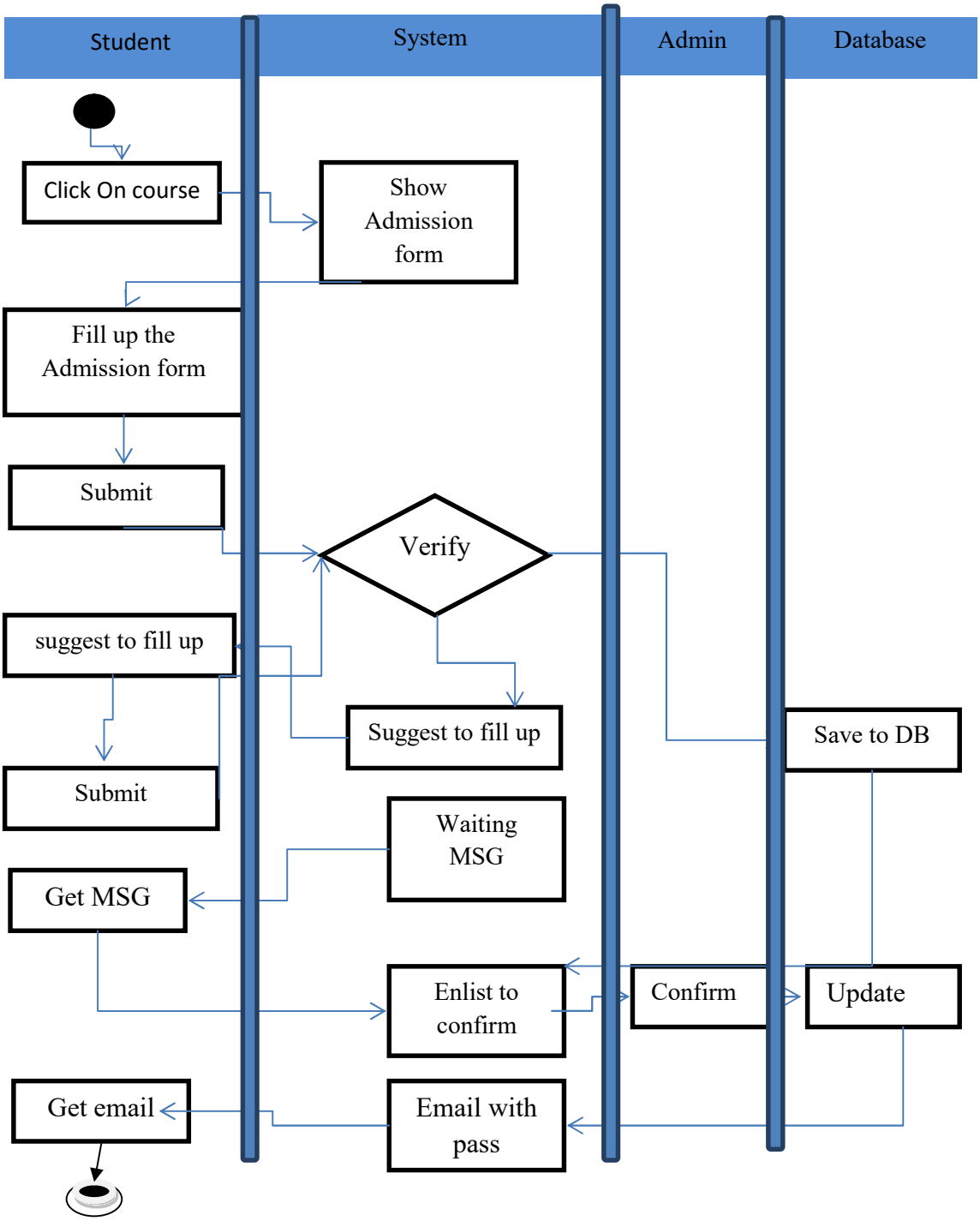


Figure: 6.1.2Activity Diagram for Student

6.2 Swim Lane Diagram

A swim lane diagram is a type of flowchart. Like a flowchart, it diagrams a process from start to finish, but it also divides these steps into categories to help distinguish which departments or employees are responsible for each set of action.(Online Admission Module)



Swim Lame Diagram for Result processing:

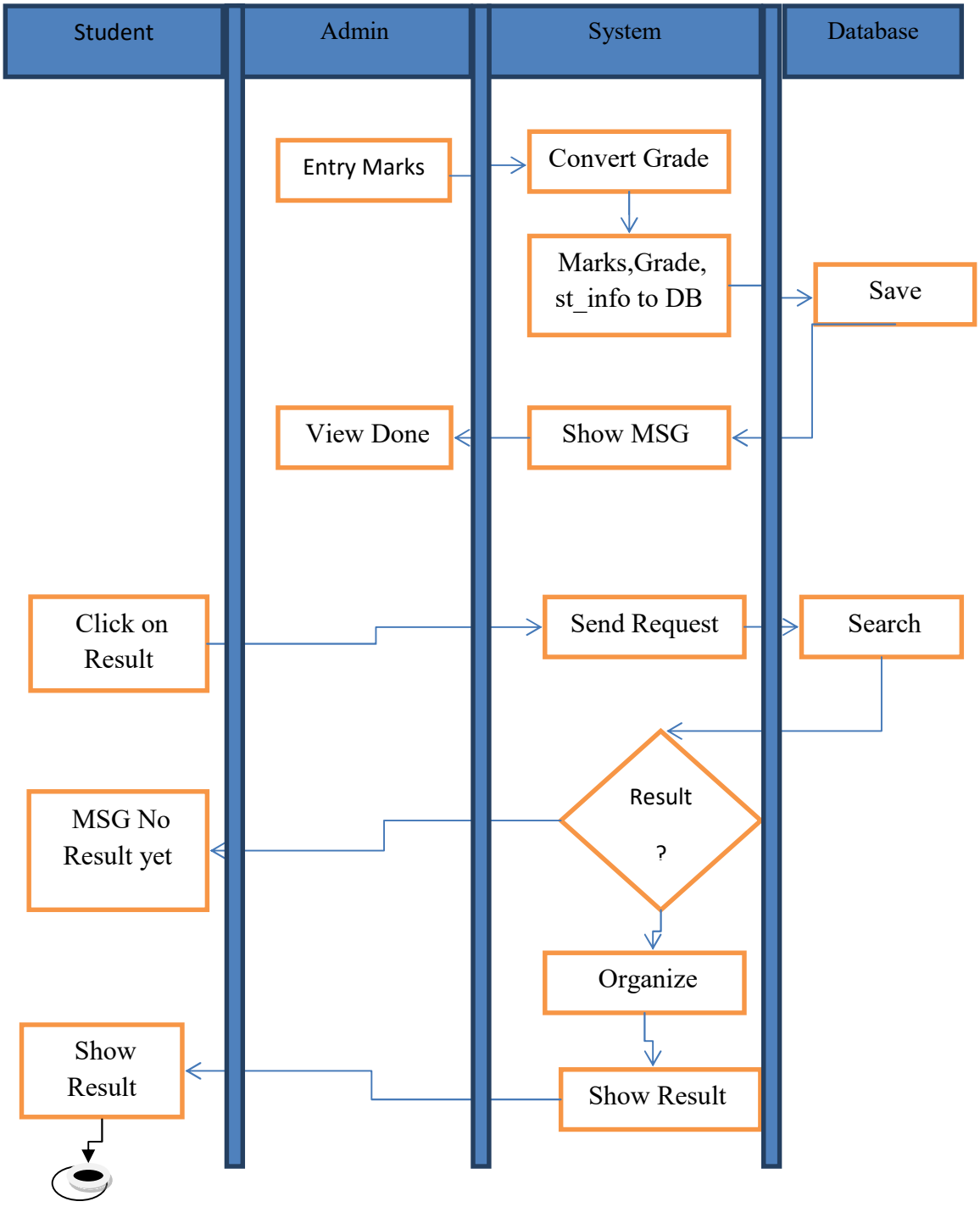


Figure: 6.2.2 Swim Lame Diagram for Result Processing

6.3 Sequence diagrams:

Sequence diagrams describe interactions among classes in terms of an exchange of messages over time. They're also called event diagrams. A sequence diagram is a good way to visualize and validate various runtime scenarios. These can help to predict how a system will behave and to discover responsibilities a class may need to have in the process of modeling a new system (Sequence Diagram of Result Processing)

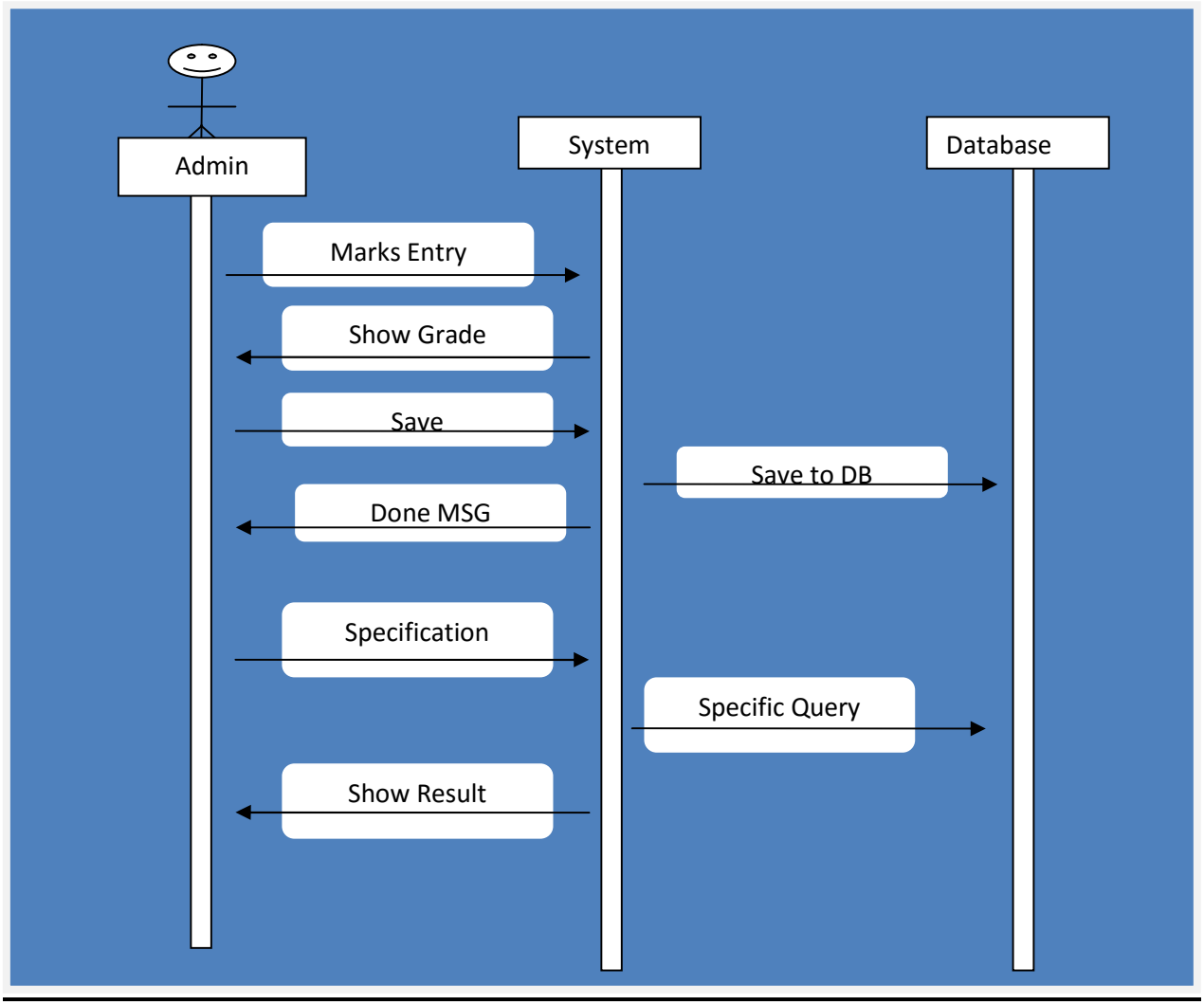


Figure: 6.3.1 Sequence Diagram of Result Processing

Sequence Diagram of Online Admission:

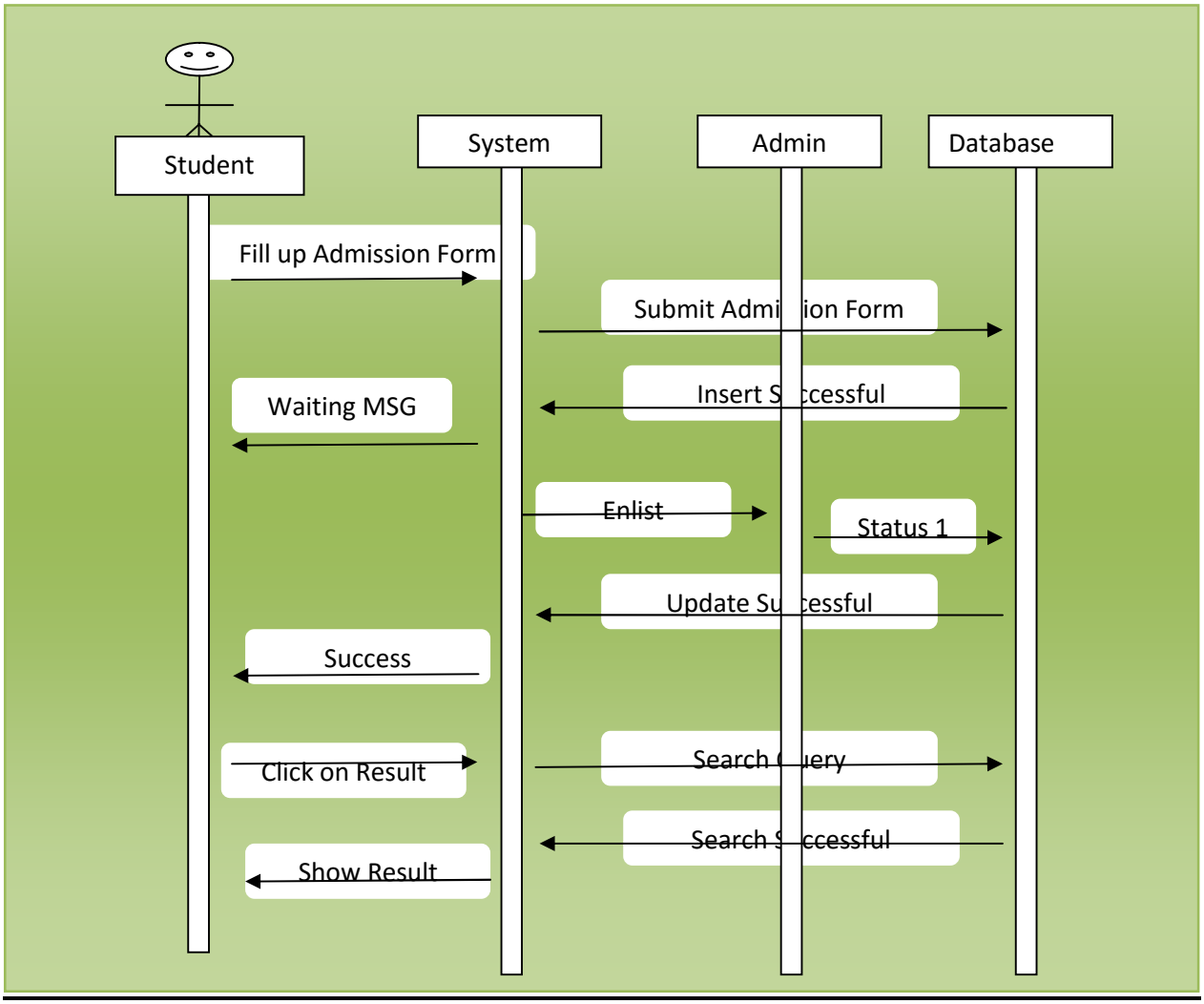
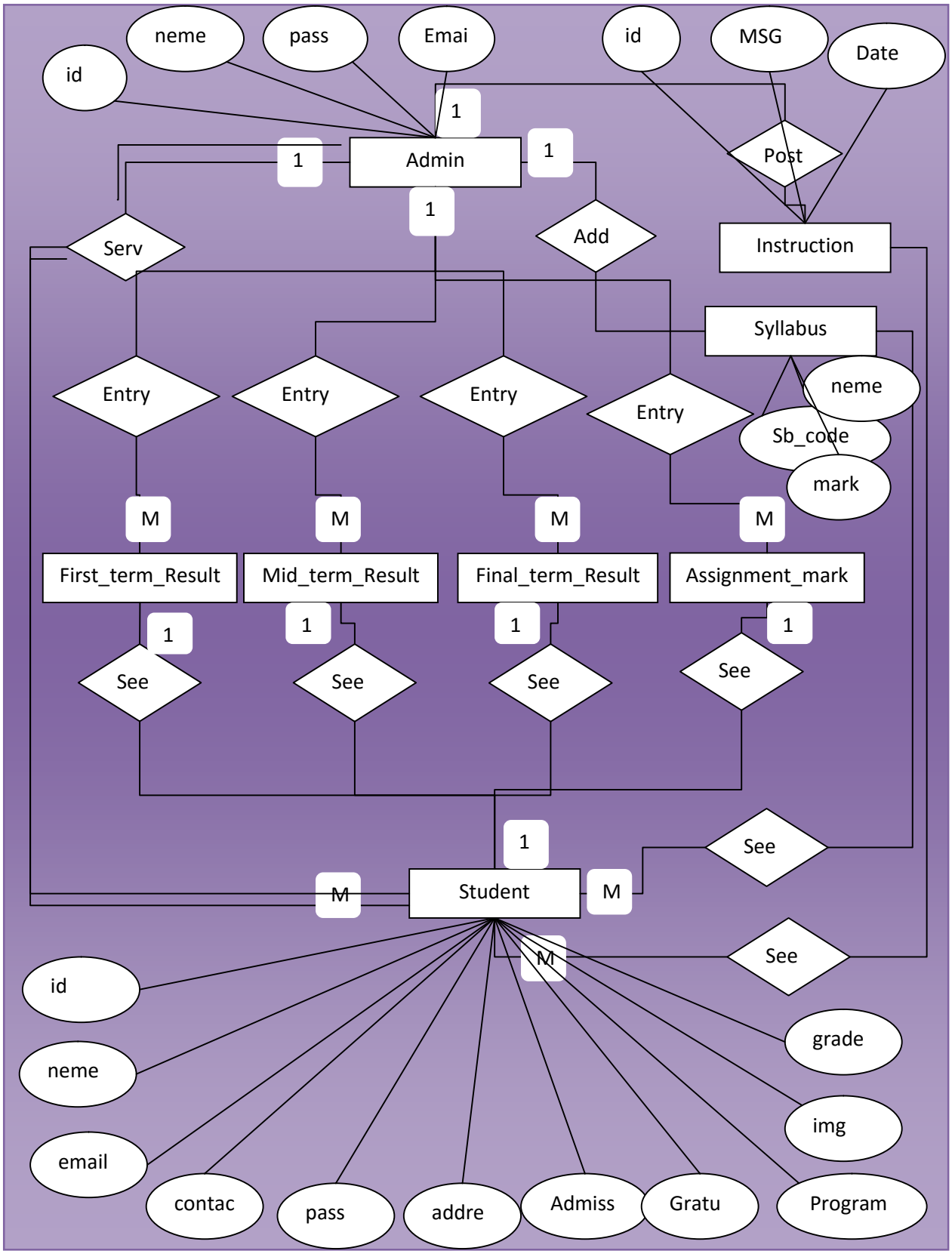


Fig 6.3.2 Sequence Diagram of Online Admission

6.4 ERD: Here is the ER Diagram of the system-



6.4 Data Flow Diagram (DFD)

A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system, modeling its process aspects. A DFD is often used as a preliminary step to create an overview of the system, which can later be elaborated DFDs can also, be used for the visualization of data processing.

A DFD shows what kind of information will be input to and output from the system, where the data will come from and go to, and where the data will be stored. It does not show information about the timing of process or information about whether processes will operate in sequence or in parallel.

Context Level Diagram:

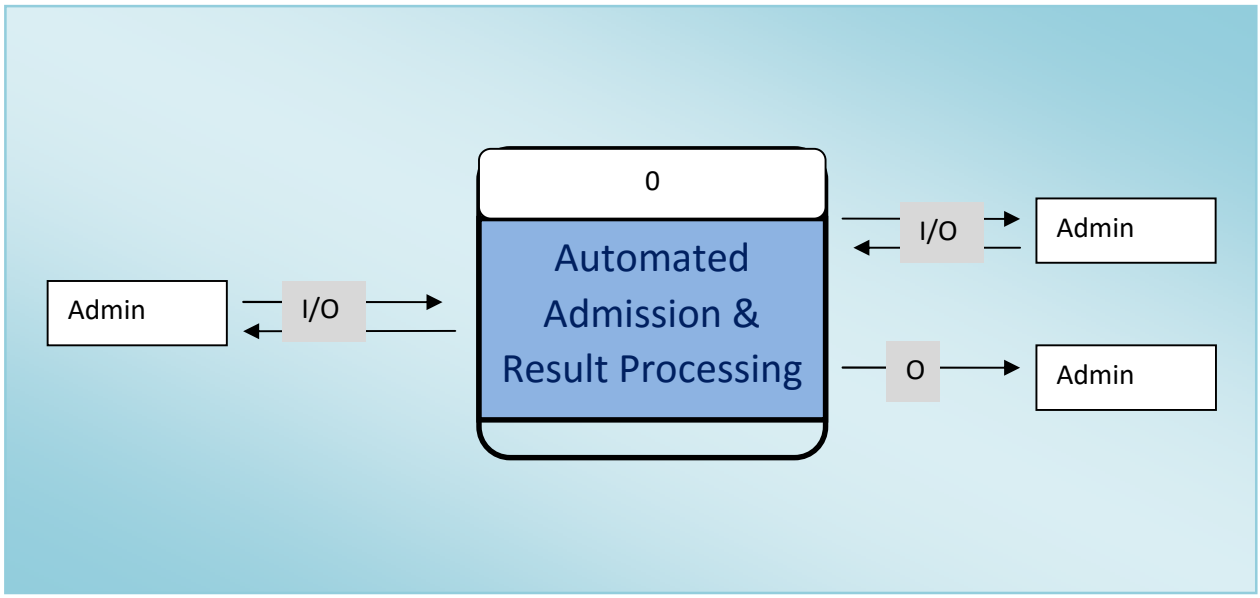


Figure 6.4. Context Level Diagram

Level 1 DFD for the System:

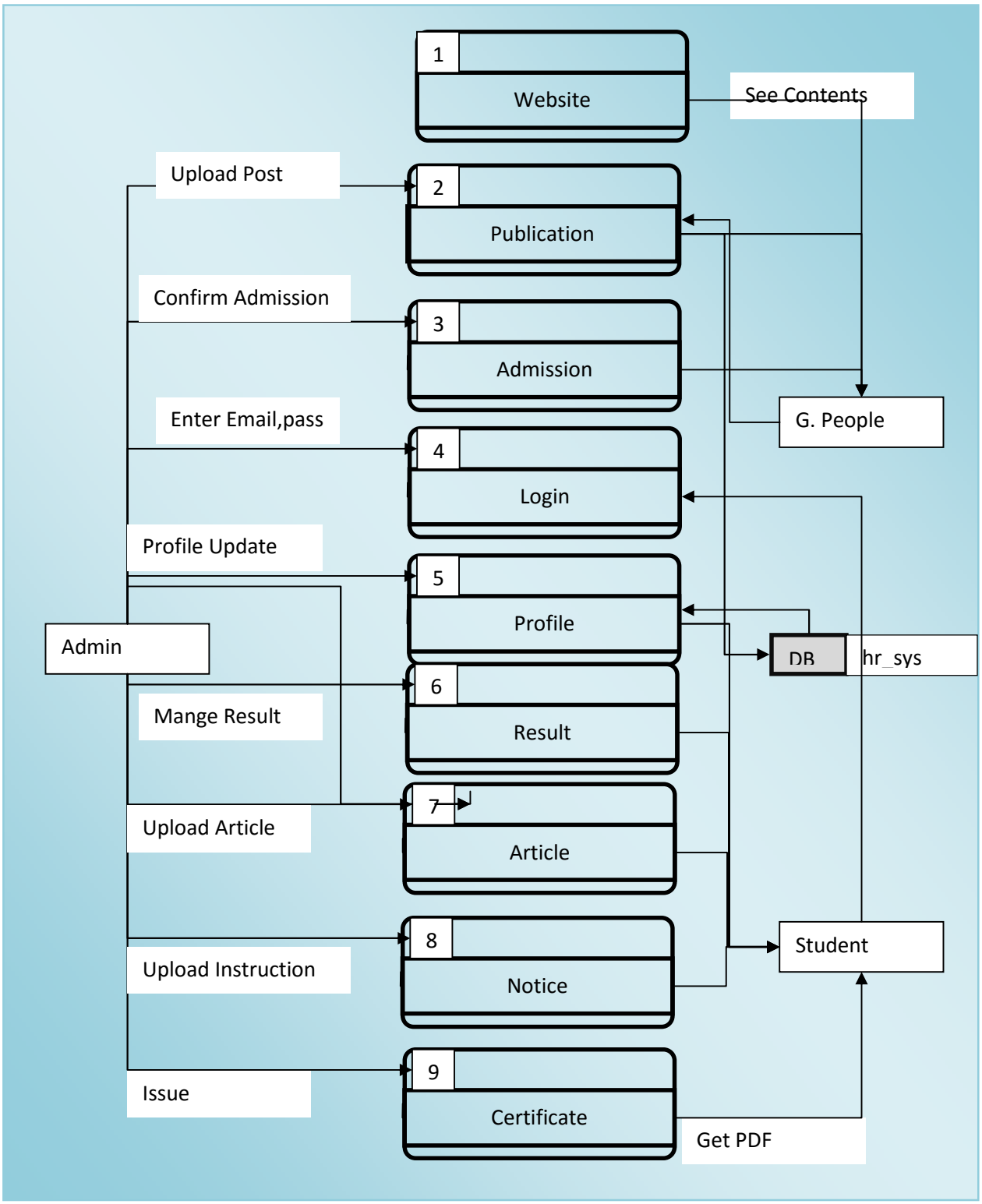


Figure 6.4.1 Level 01 Diagram

Level 2 DFD of Process 1 (Website):

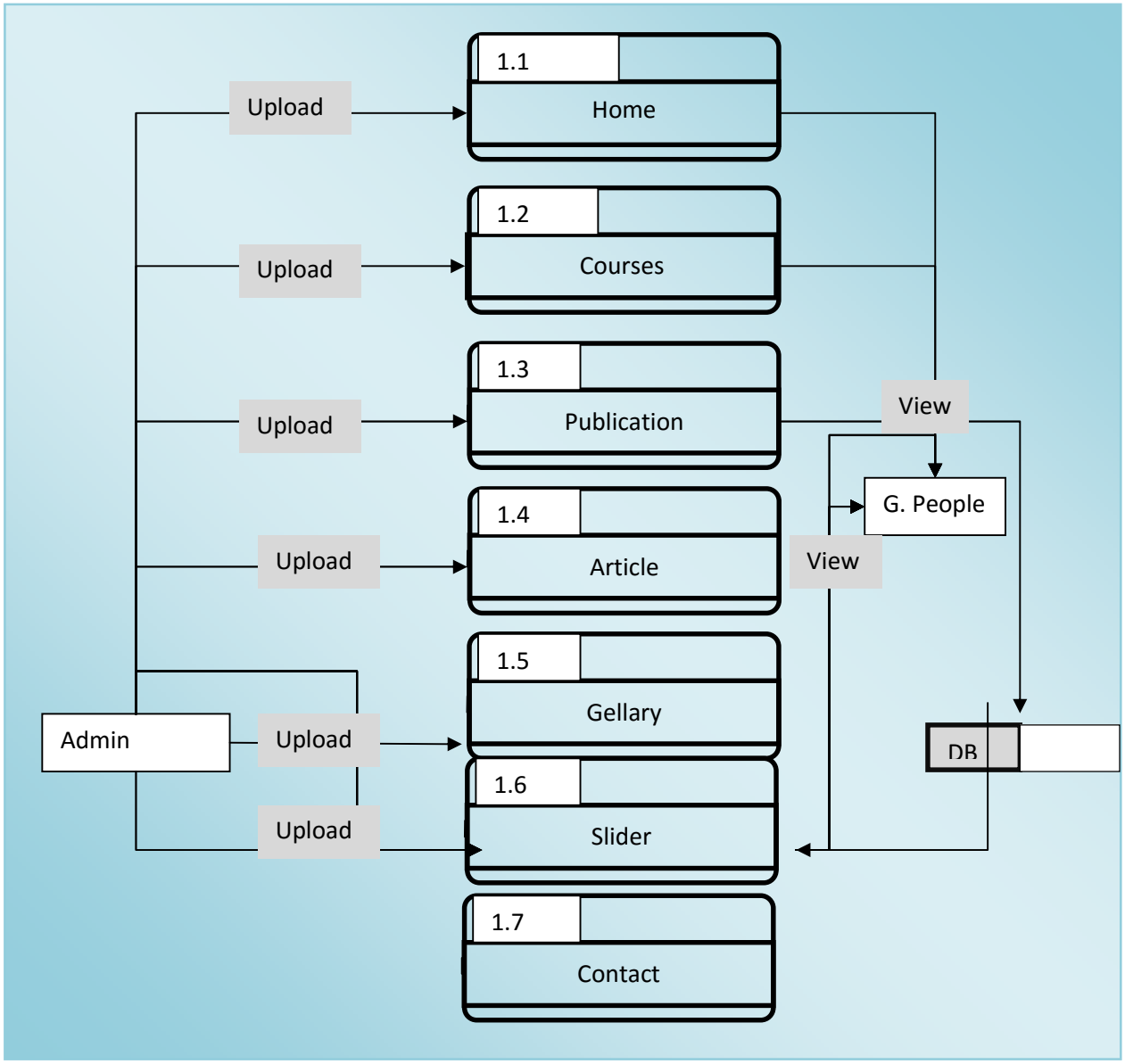


Figure 6.4.2 Level 01 Diagram

Level 2 DFD of Process 2 (Publication):

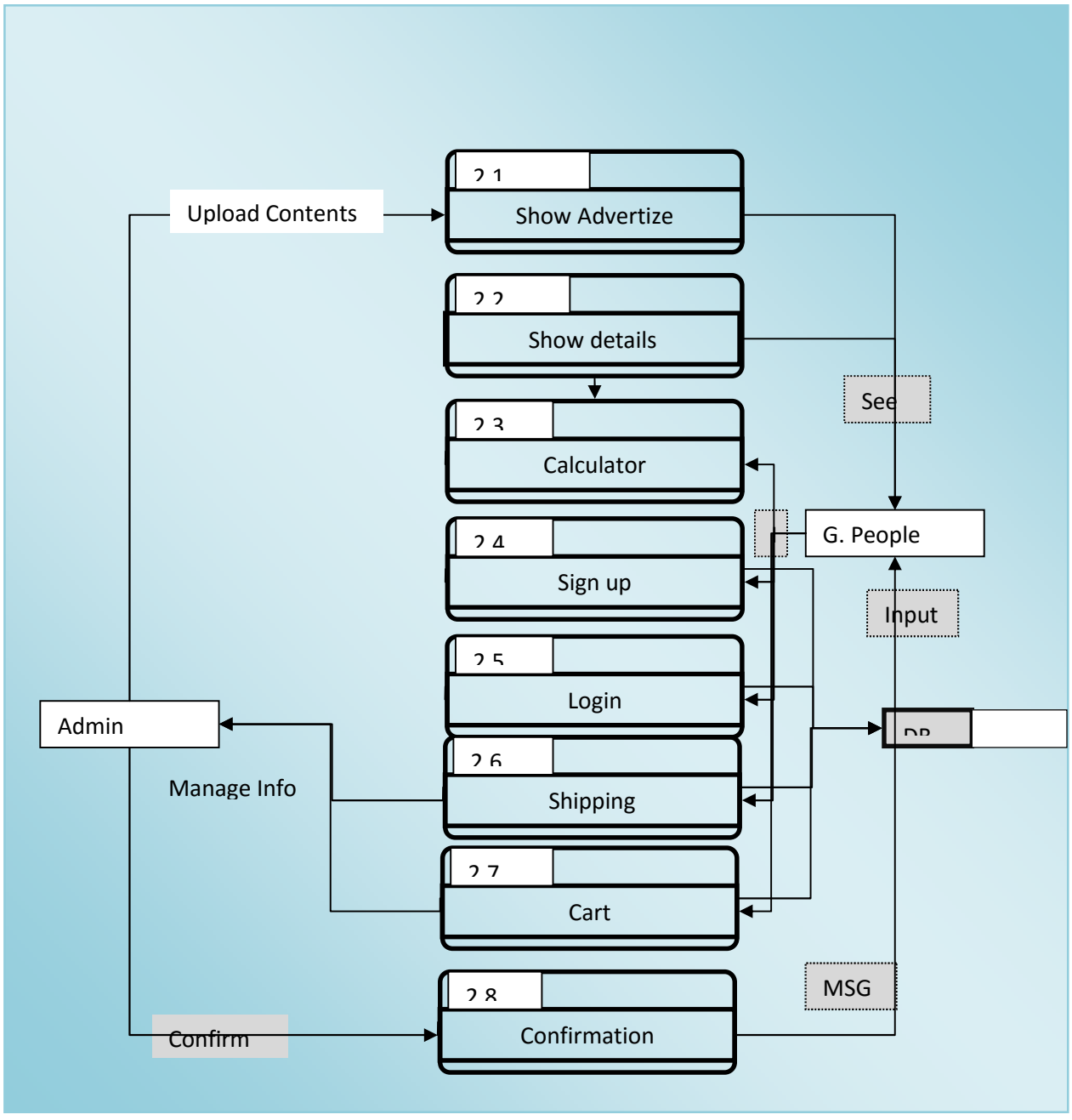


Figure 6.4.3 Level 01 Diagram

Level 2 DFD of Process 3 (Admission):

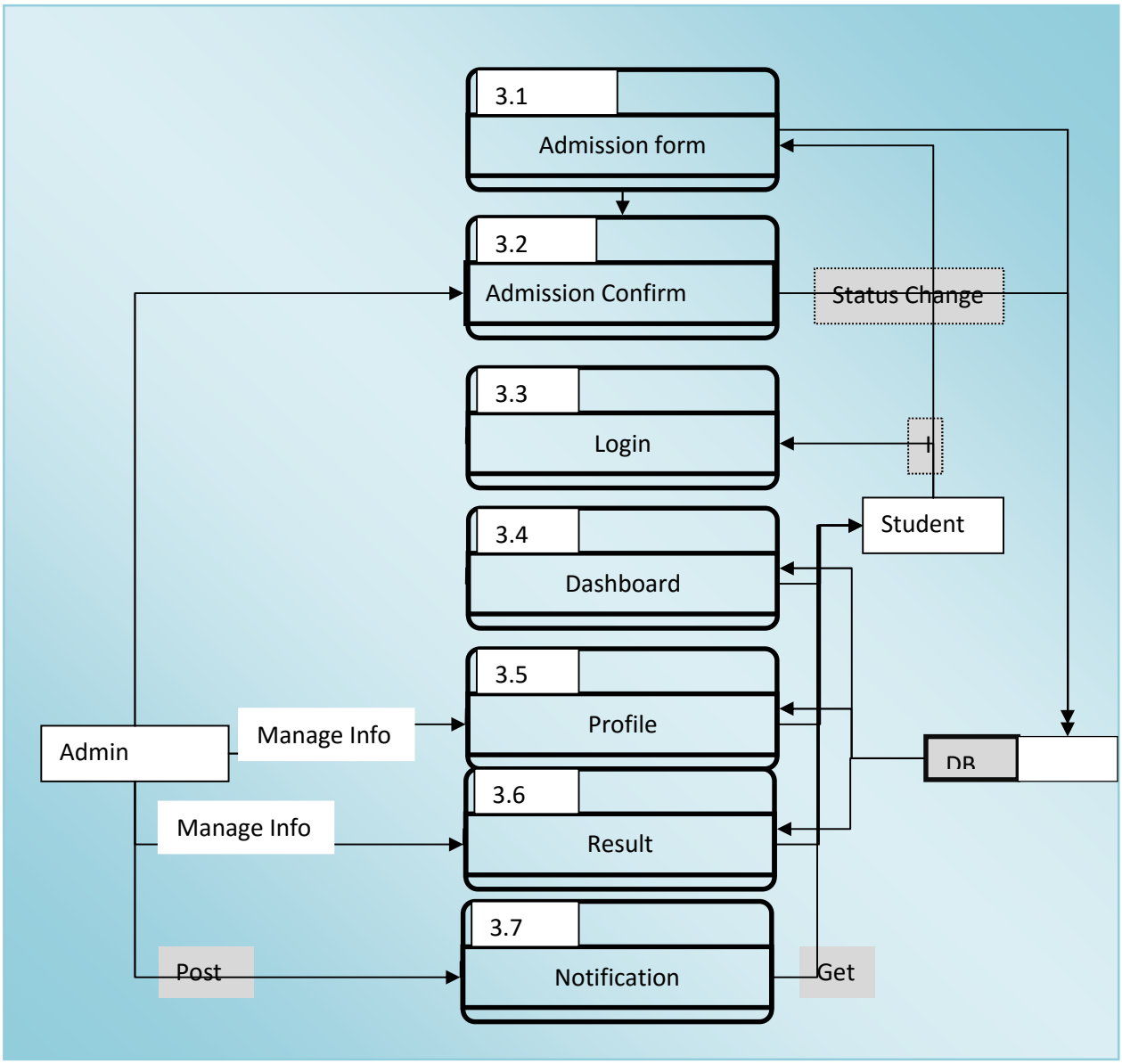


Figure 6.4.4 Level 01 Diagram

Level 2 DFD of Process 6 (Result):

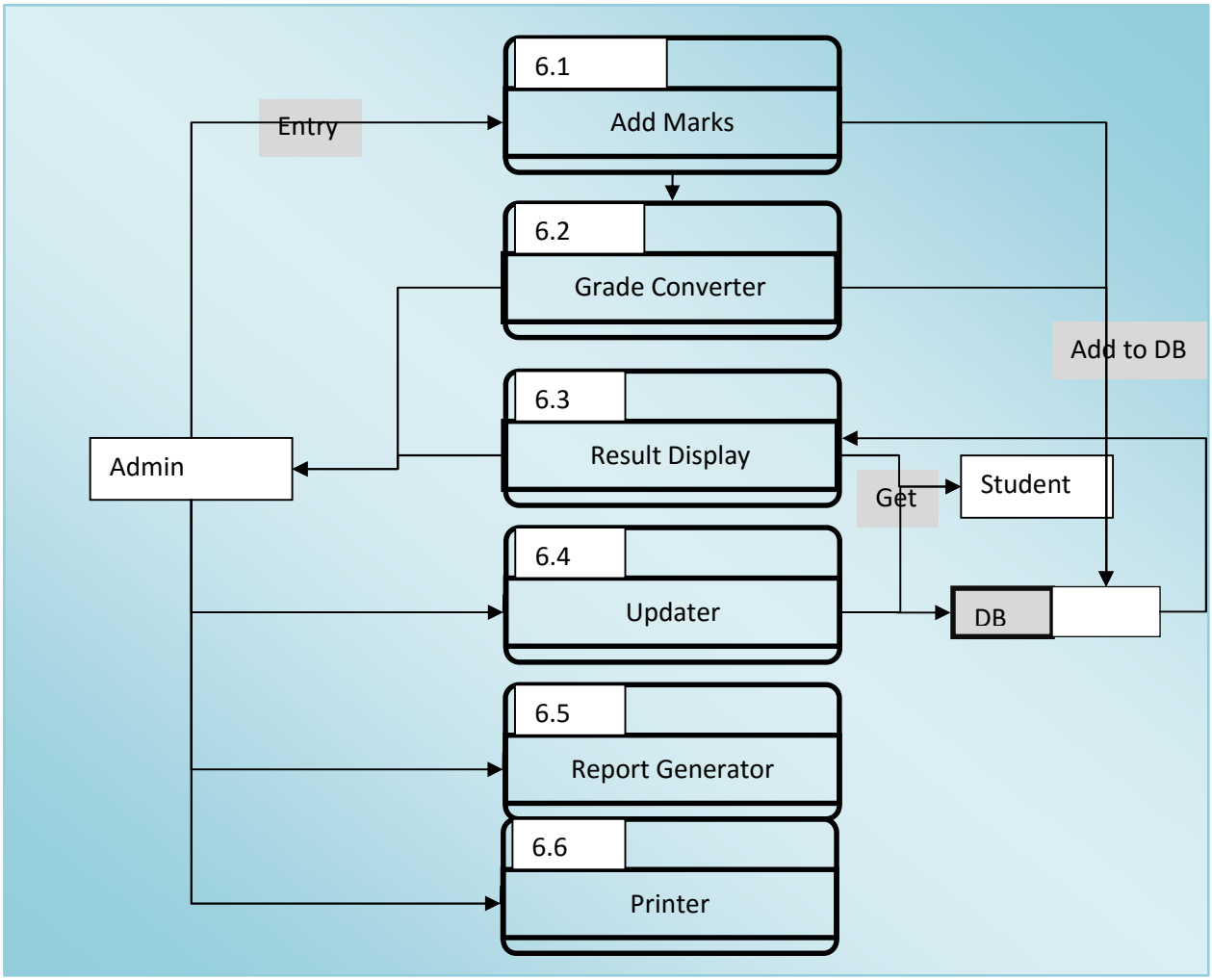


Figure 6.4.5 Level 01 Diagram

Level 2 DFD of Process 1 (Article):

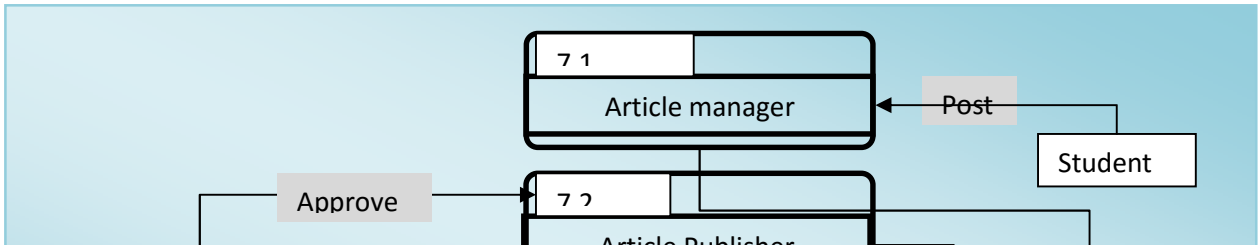


Figure 6.4.6 Level 01 Diagram

Level 2 DFD of Process 1 (Website):

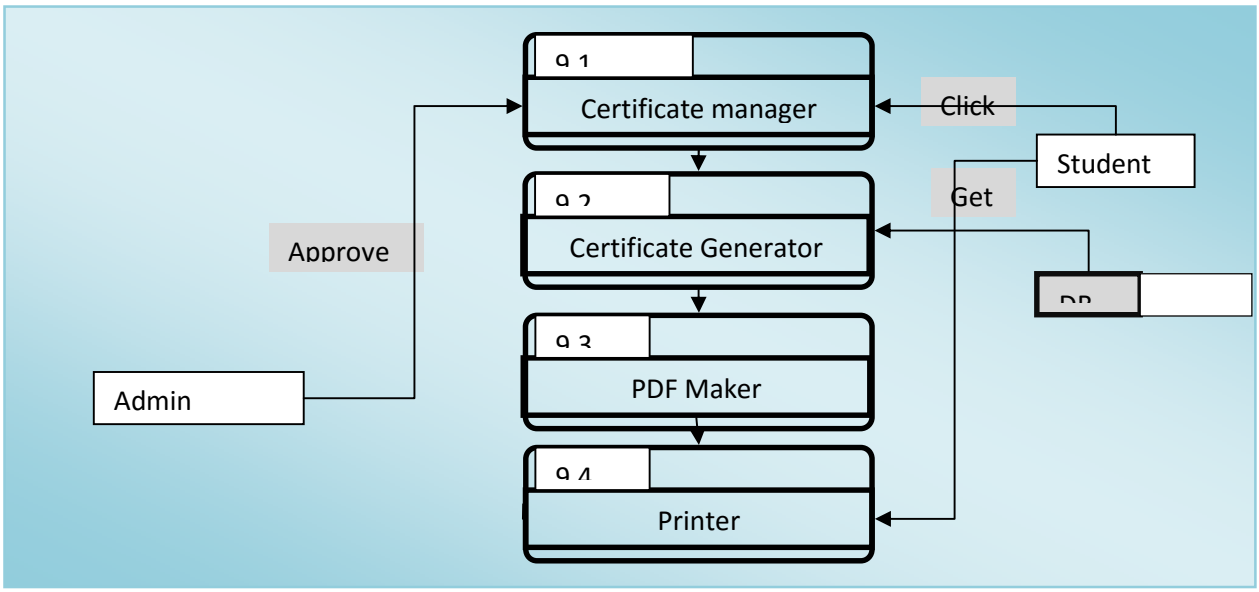


Figure 6.4.7 Level 01 Diagram

6.7 CRC:

CRC means class responsibility collaborator.

Class Name : Admin Class Type : Role Class Characteristic : Tangible	
Responsibility • Verify all accounts • Create new accounts • Update all accounts • Delete accounts	

Class Name : Student Class Type : Role Class Characteristic : Tangible	
Responsibility • Add new student • Update student • View all student list • Delete student	

Class Name : Admission Class Type : Role Class Characteristic : Tangible	
Responsibility • Fill up online Admission form • Confirm by admin • Getting email notification with login passwod	

Class Name : Result Class Type : Role Class Characteristic : Tangible	
Responsibility • Admin can upload Result • Student can see result • Calculate Grade • Report Generate	

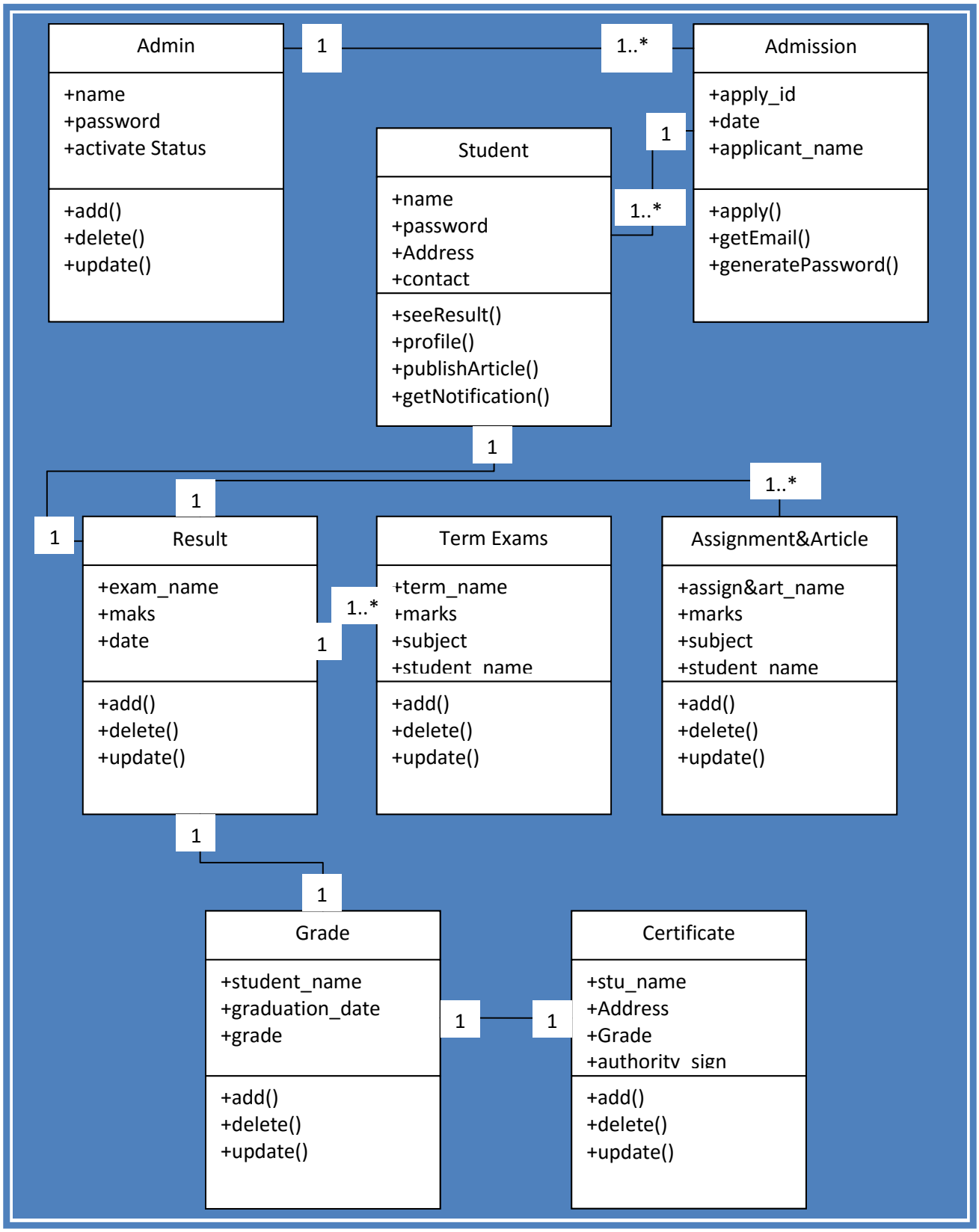
Class Name : Grade Class Type : Role Class Characteristic : Tangible	
Responsibility • Admin can upload Result • Student can see result • Calculate Grade • Report Generate	

Class Name : ExamsMarks Class Type : Role Class Characteristic : Tangible	
Responsibility • Admin can Entry marks • Student can see result • Calculate Grade • Report Generate	

Class Name : Assignment &article Class Type : Role Class Characteristic : Tangible	
Responsibility • Admin can upload Result • Student can see result • Calculate Grade • Report Generate	

Class Name : Certificate Class Type : Role Class Characteristic : Tangible	
Responsibility • Admin can upload Result • Student can see result • Calculate Grade • Report Generate	

6.8 Class Diagram:



Interface Design

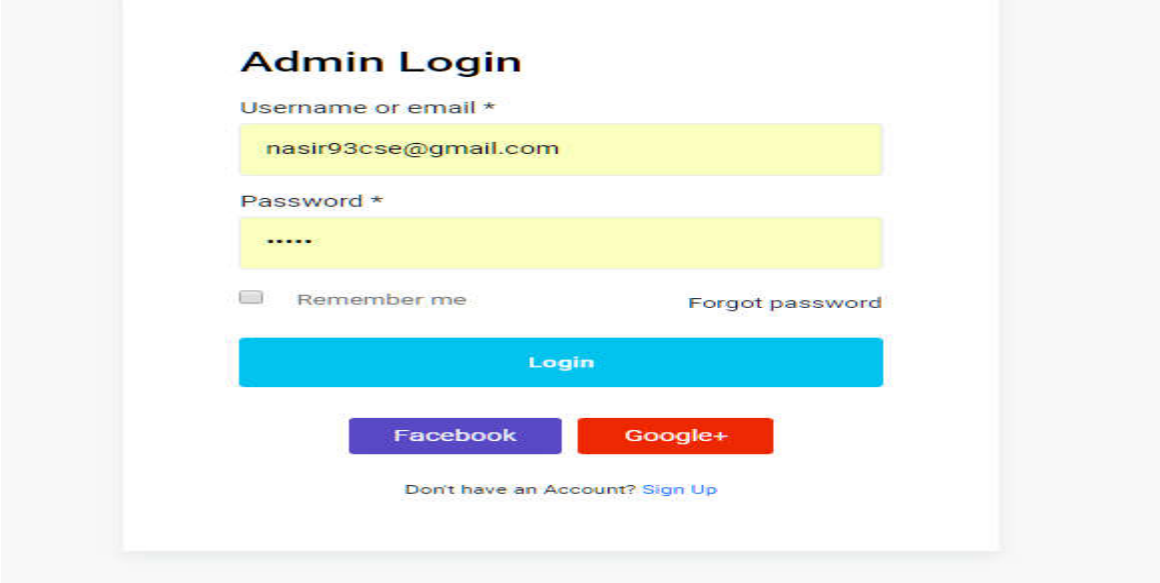


Figure: Login Panel for Admin and Student

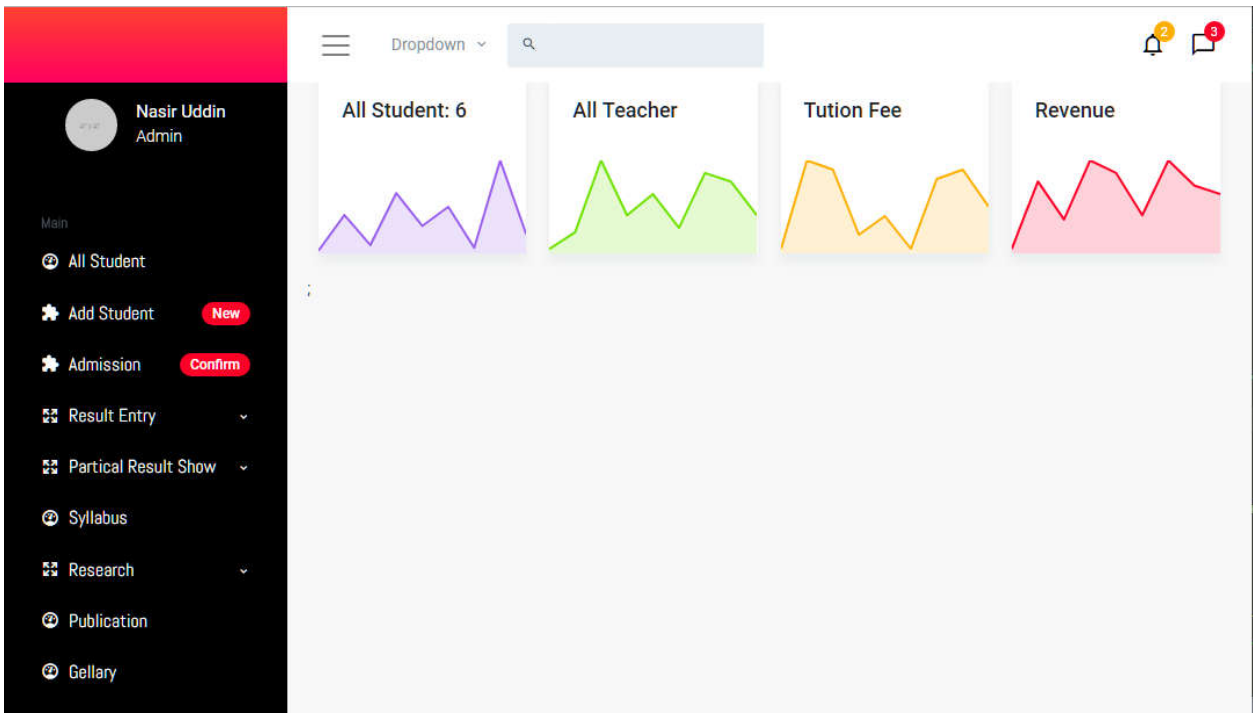


Figure: Admin Panel and options

Data table

Show 5 entries

Search:

St_ID	St_Name	Program	Phone	Address	Image	Actions
1	Nasir	Iftah	01707568468	Kishoregonj		View Edit Delete
3	Nurul	Iftah	01707568468	Kishoregonj		View Edit Delete

Figure: All Student list and details

Student Profile

Info

Nurul

3

nurul93cse@gmail.com

01707568468

International University Of Business Agreculture and Technology

About

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Veniam consectetur ex quod.

Figure: Student Profile with details

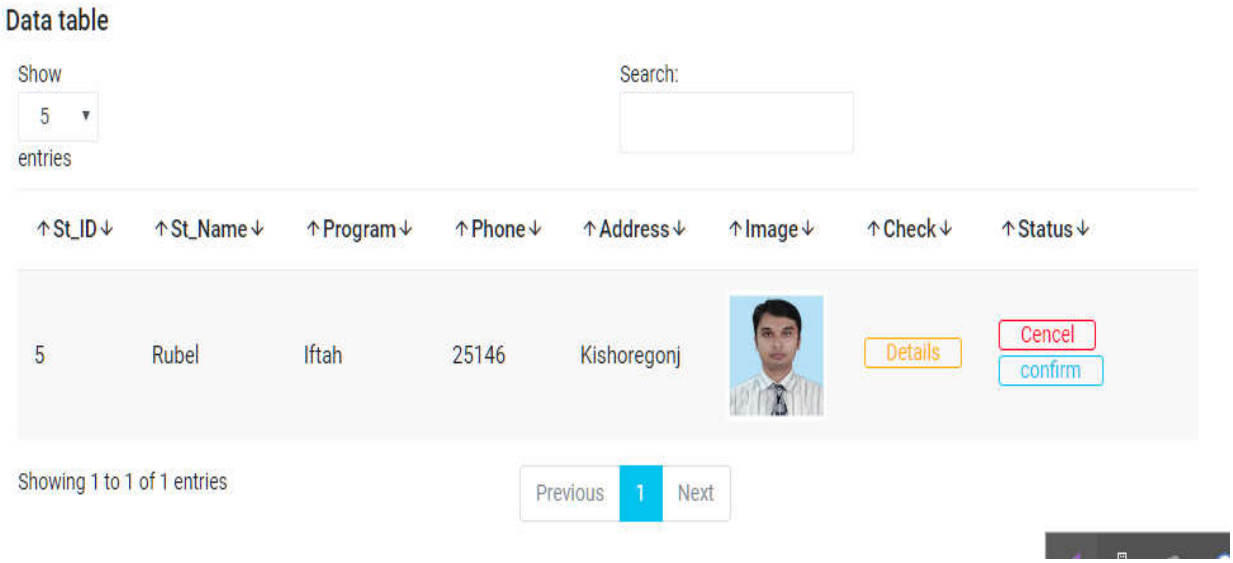


Figure: Admission confirmation list

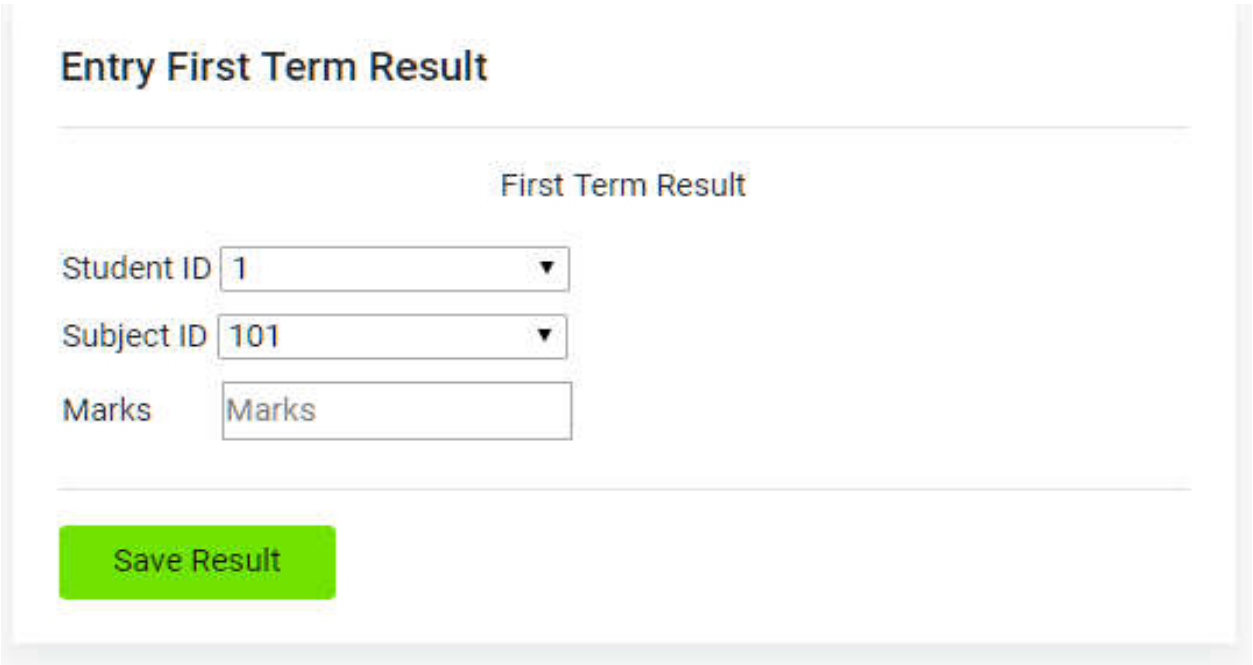


Figure: Result Entry for particular Student

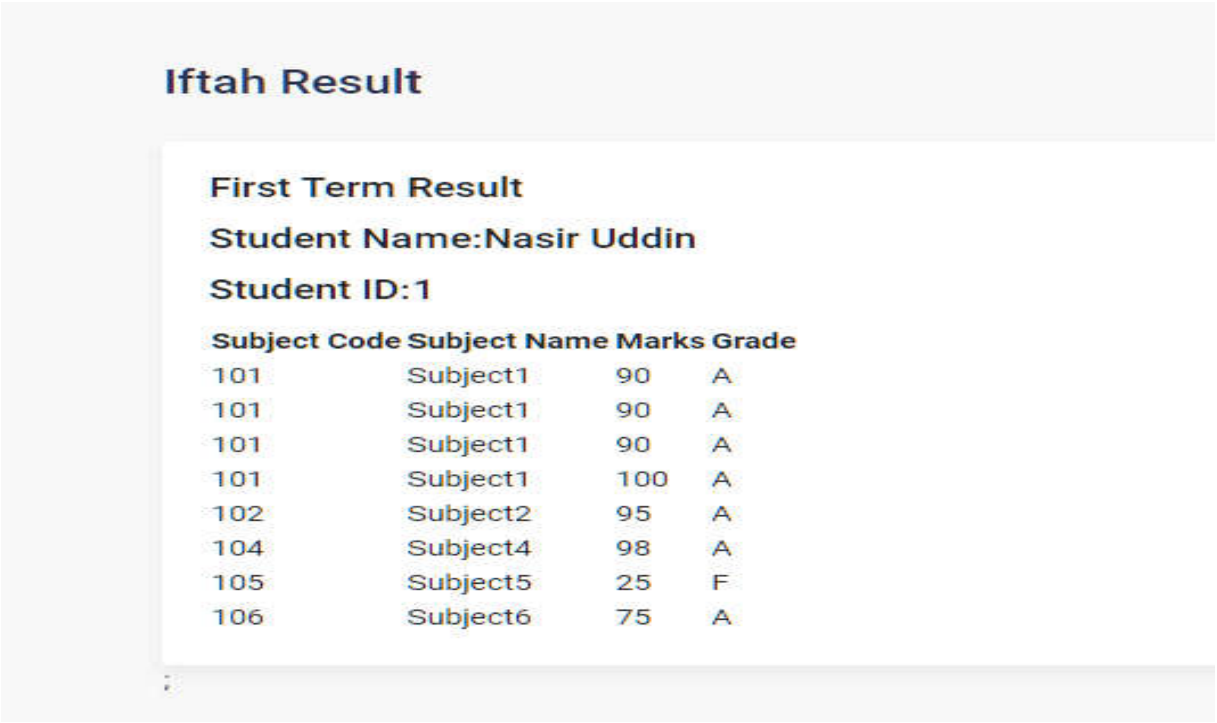


Figure: See Result for particular Student