

# Placement Preparation Website **Software Engineering Project**

---

# 1. Project Description

This website focuses on subjects which are quintessential for placement preparation. We tend to include every important information to elevate your knowledge.

**The three sections are explained below:-**

- **Data Structures and Algorithms:** This section will comprise various data structures and algorithms which are frequently asked in the interviews. A practice and test section will be also provided to check the coding skills of the person. This will be done through an inbuilt compiler.
- **Development Section:** This section has content videos oriented to web development, app development, machine learning, etc.
- **CS Subjects:** CS subjects such as OS, DBMS, CN and OOP are frequently asked in Interviews. This section provides relevant material for the same.

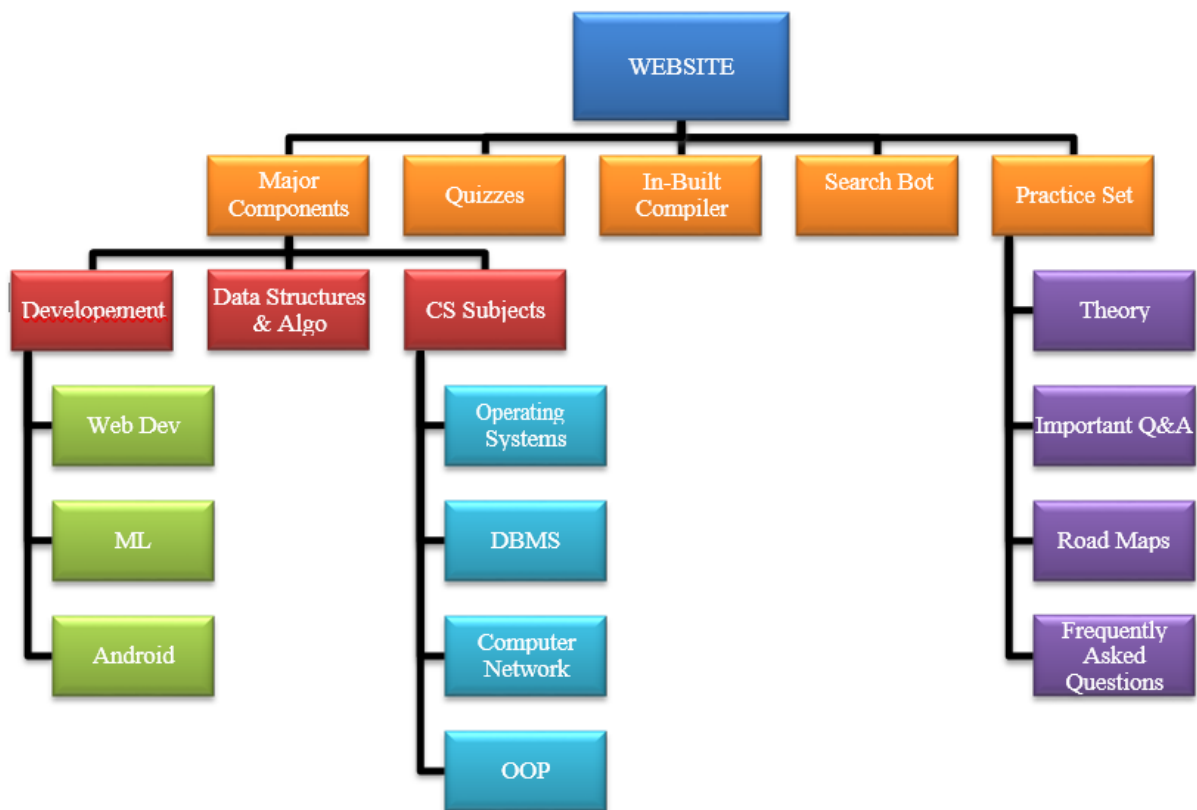
**Additional Features:-**

- **Practice Section:** Questions from past interviews to get yourself prepared for them. Also, comprises all other important tests which are required for placement.  
Apart from this, each section will comprise of Theory (Written and Video Content), Important Questions, Road Map, and FAQ.
- One **SearchBot** has also been provided which will navigate the person through a complete section of the website.
- A student can test himself/herself through **quizzes** provided in each section.
- A special **Built-in compiler** is provided to practice DSA questions. This compiler can work as an in-browser IDE and can be also used for conduction coding contests. The compiler can work in multiple languages like C, C++, Python.
- An **FAQ Section** will also be created where a user can ask questions and connect with people who contribute unique insights and quality answers.

Special rights will be given to the admin to control the complete website. He can add relevant material for the three sections mentioned above and add into our additional features section. He/she can prepare quizzes, test-series, and coding questions.

### Tentative Additions

- Addition of further CS subjects like – SE, CAO, etc.
- Expanding the development part with additions like – blockchain.



## 2. Specifications & Requirements

1. **Overview:** This document lays out a project plan for the Complete Placement Preparation for students thereby preparing them for the big tech giants like Amazon, Microsoft, Adobe, etc. This website aims to provide all the relevant courses and study materials for complete placement preparation.

### 2. Objectives:

The Following are our primary objectives:

1. Making Students ready with:
    - Data Structures and Algorithms
    - Development Stack
    - CS Subjects
  2. Providing them facility for running their code on an online IDE
  3. Ask their doubts in FAQ Section
- 
3. **Need Of Project:** There is a lot of material available which aims to provide relevant material for placement preparation. However, students are unable to find the needle in the haystack. We aim to provide relevant material and make it a cakewalk with the guided road maps all at one place to assist the students.

### 4. Functionality:

- a. Student can access courses from various fields like:
  - Data Structures and Algorithms
  - Development Section
  - CS Subjects
- b. Students can edit their profile according to their needs.
- c. Students can compile and run their code on an online IDE.
- d. Admin can add/remove Student
- e. Admin can add relevant course material.
- f. Students can ask and answer doubts in the FAQ Section.

### 5. Platform:

It will be launched as a Web-based application

## 6. Goals and Scopes:

- a. The students who are preparing for Tech giants
- b. Student who are aiming to crack Competitive Exams like GATE
- c. Students who wishes to master CS Subjects
- d. Make students freelancers

## 7. Deliverables: We will deliver the following during the course of development:

- Feature specification
- Product design
- Test plan
- Development document
- Source code

## 8. Technical Process: Following languages shall be used by us to develop our application within the stipulated time period:

**Front-end development:** HTML, CSS, JS, Bootstrap

**Back-end development:** Django (A Backend Framework in Python)

## 9. Risk Management:

**Risk Identification:** People are already using paid courses on platforms such as GeeksForGeeks for placement preparation. So, what factors might motivate them into joining us?

**Risk Mitigation :** Even though majority of students are users of platforms such as GFG and websites like w3 school, our website will emerge to have an edge with striking features including : -

1. Material will be accurate, focused and concentrated, unlike websites like GFG which seldom confuse their users with many irrelevant articles.
2. Our all courses accessible free of cost
3. Detailed roadmaps will be provided by us

### 3. Feasibility Study

#### 1. Economic Feasibility

Being a web app based complete preparation website will have an associated hosting cost. Since the system doesn't consist of any multimedia data transfer, bandwidth required for the operation of this application is very low. The system will follow the freeware software standards. No cost will be charged from the potential customers.

#### 2. Technical Feasibility

Placement Preparation Website is a complete web-based application. The main technologies and tools that are associated are: -

- HTML
- CSS
- JavaScript, Bootstrap
- DJANGO
- AWS EC2 Instance (VM for hosting)

Each of the technologies are freely available and the technical skills required are manageable. Time limitations of the product development and the ease of implementing using these technologies are synchronized.

Initially the web site will be hosted in a free web hosting space, but for later implementations it will be hosted in a paid web hosting space with a sufficient bandwidth. Bandwidth required in this application is very low, since it doesn't incorporate any multimedia aspect.

From these it's clear that the project is technically feasible.



### 3. Resource & Time

Resource feasibility Resources that are required for the OES project includes,

- Programming device (Laptop)
- Hosting space (freely available)
- Programming tools (freely available)
- Programming individuals

So it's clear that the project has the required resource feasibility.

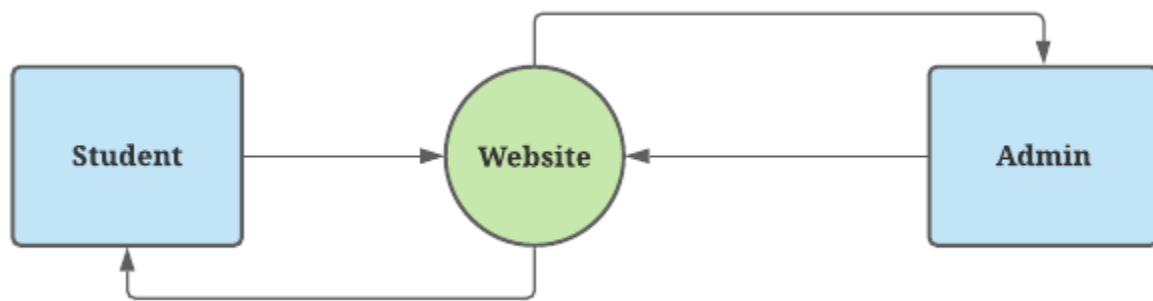
### 4. Legal Feasibility

1. All Material provided by us does not contain any copyright. They are either available from open source or prepared by us.
2. This website is MIT Licensed. (i.e., Open-source Software)
3. Website Domain is a legal right property

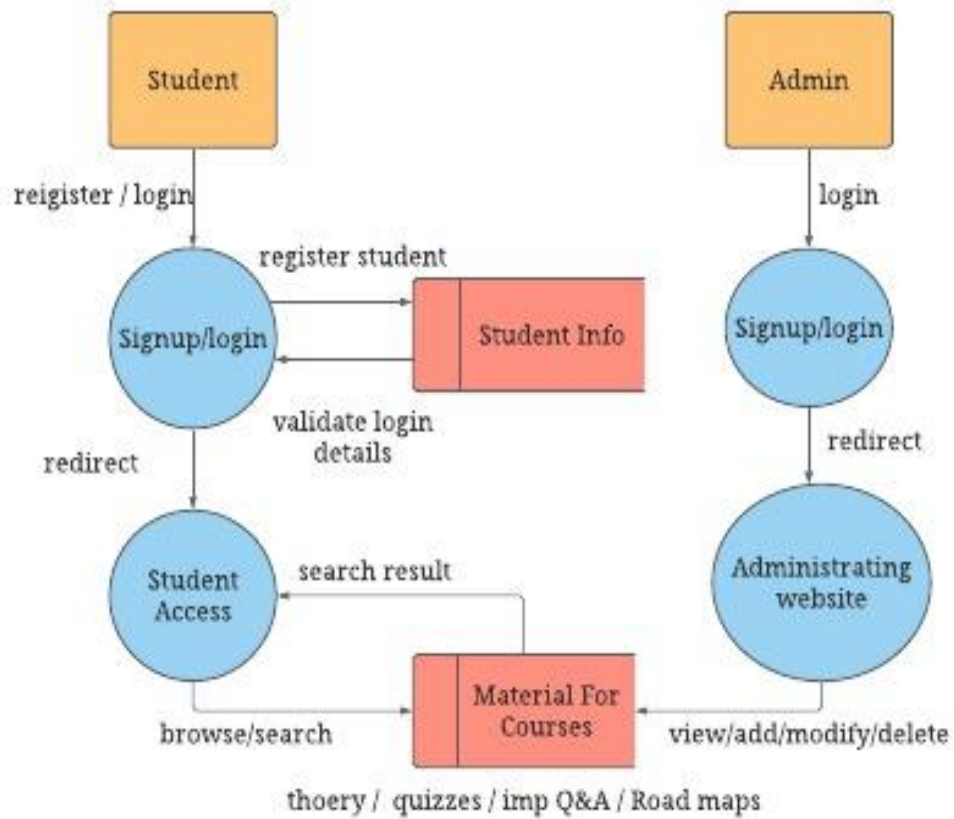
So it's evident that the project has the required resource feasibility.

# DATA FLOW DIAGRAM

## LEVEL 0

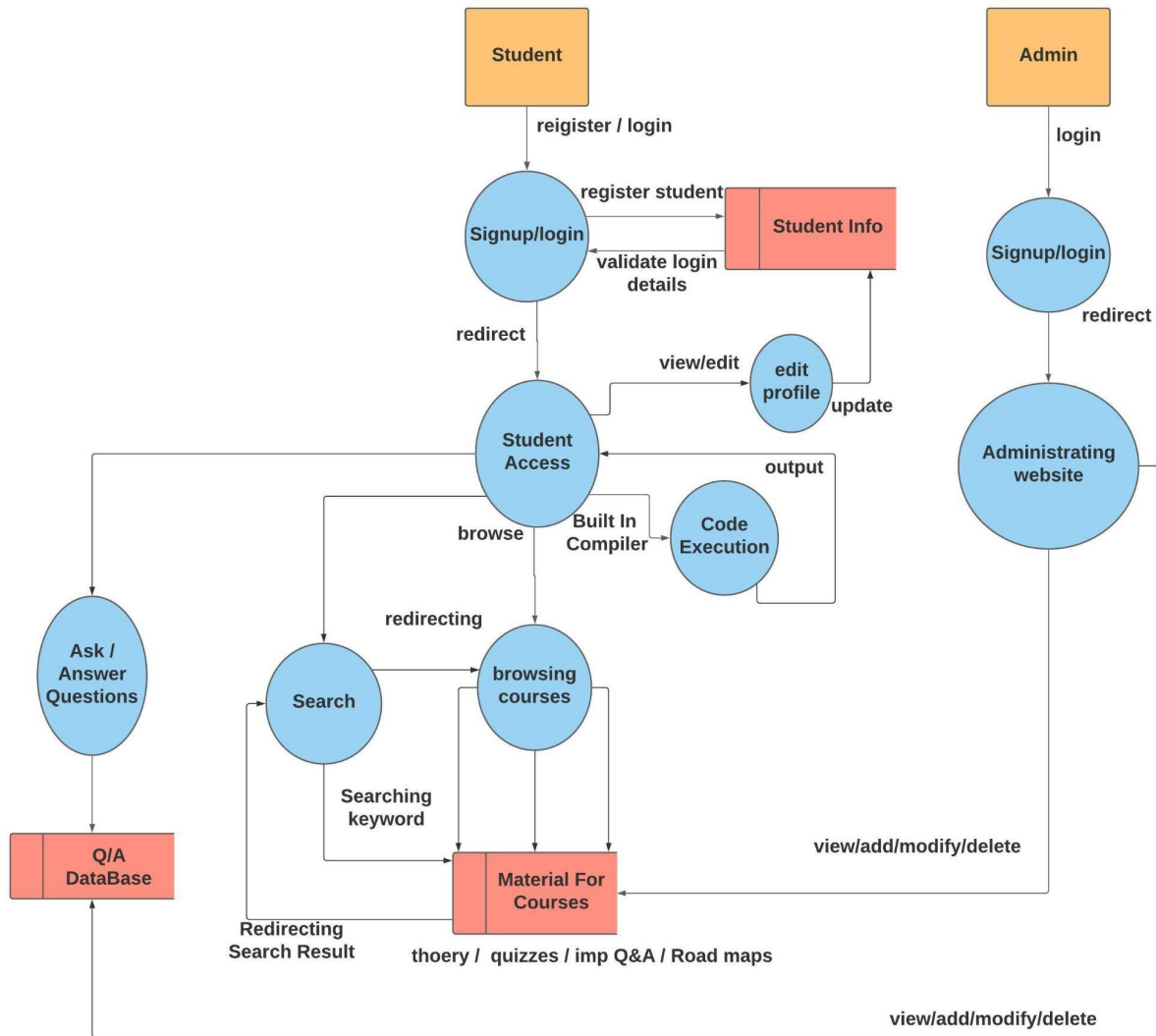


## LEVEL 1

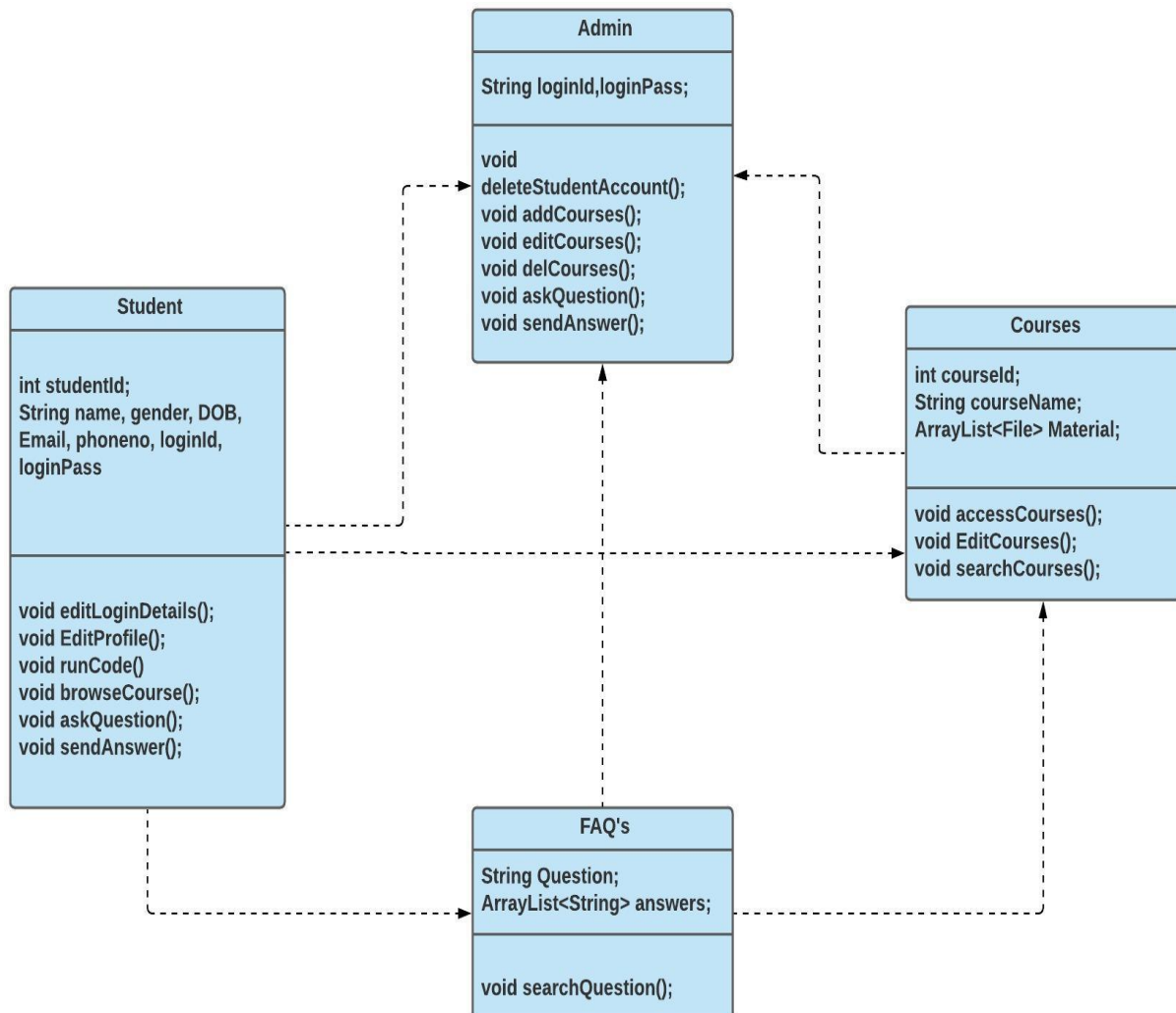




## LEVEL 2

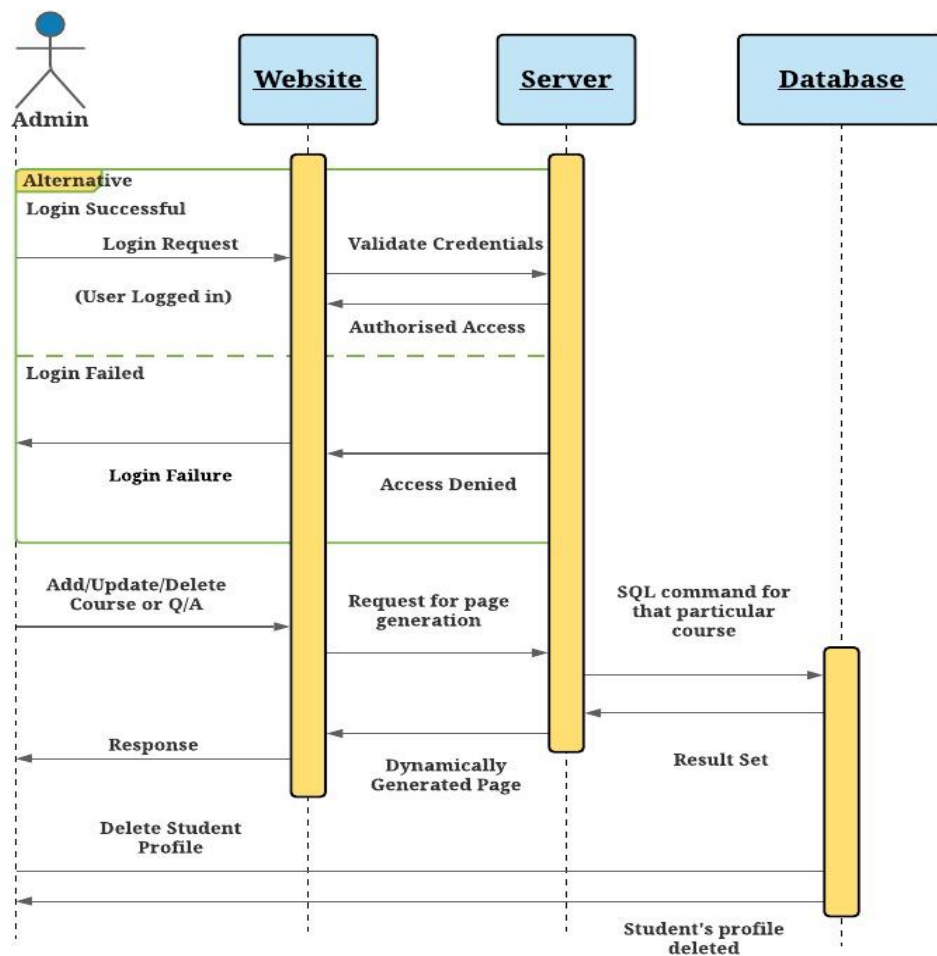


# CLASS MODEL DIAGRAM

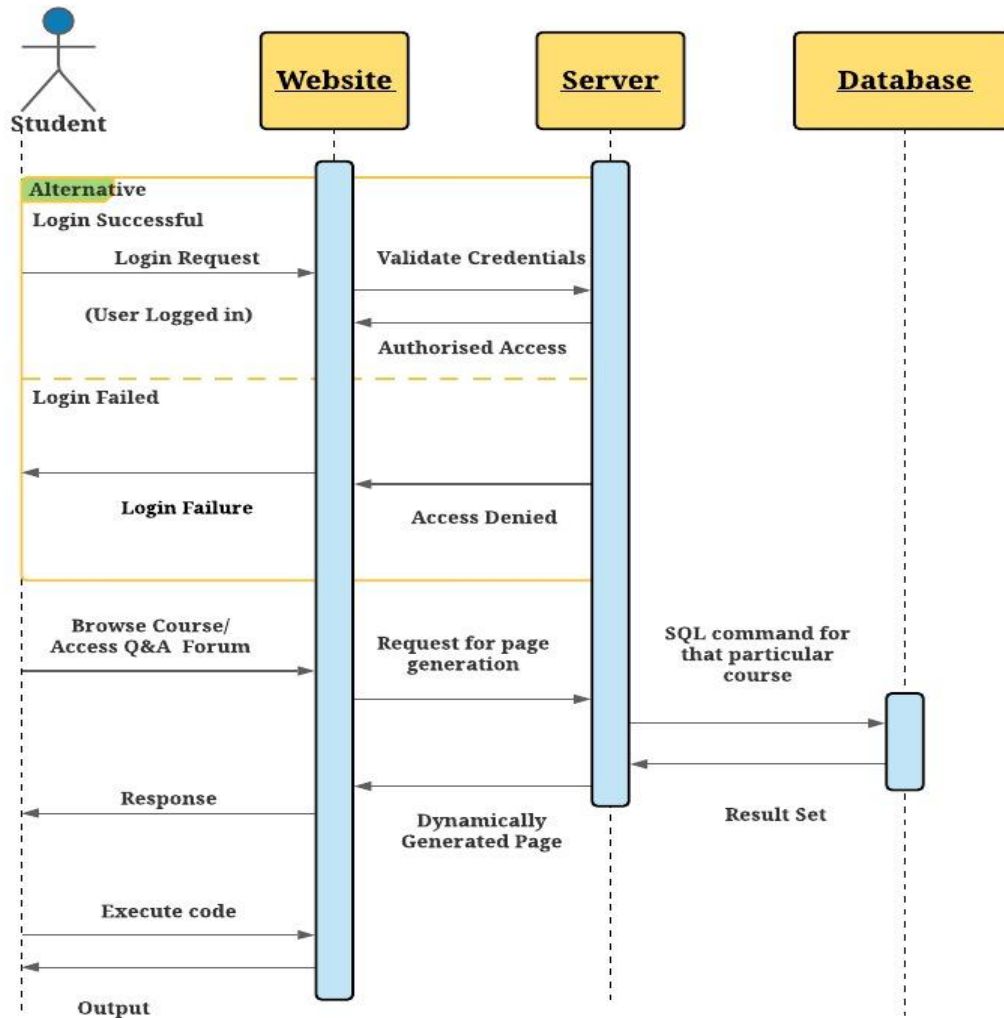


# SEQUENCE DIAGRAM

## ADMIN

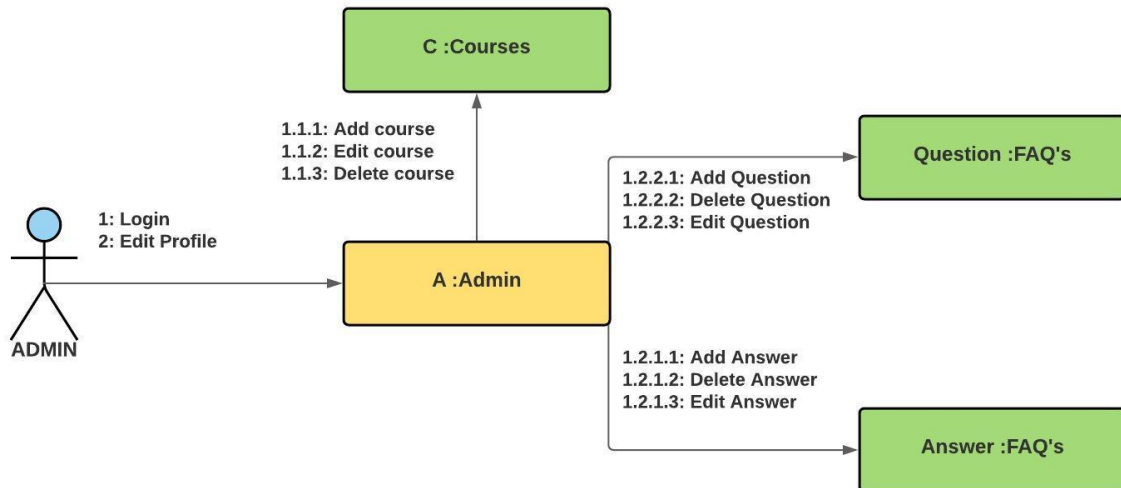


# STUDENT

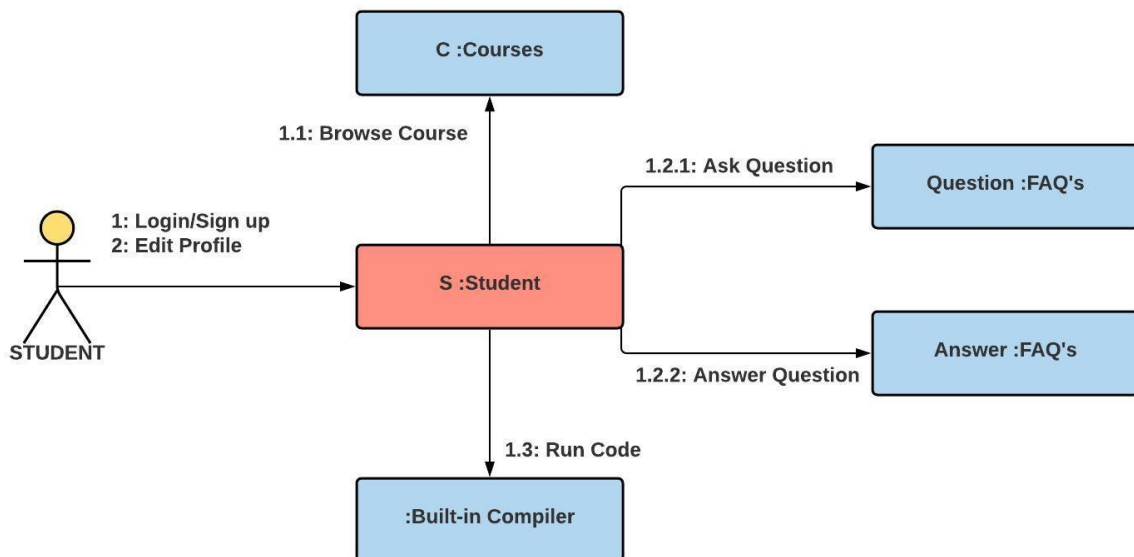


# COLLABORATION DIAGRAM

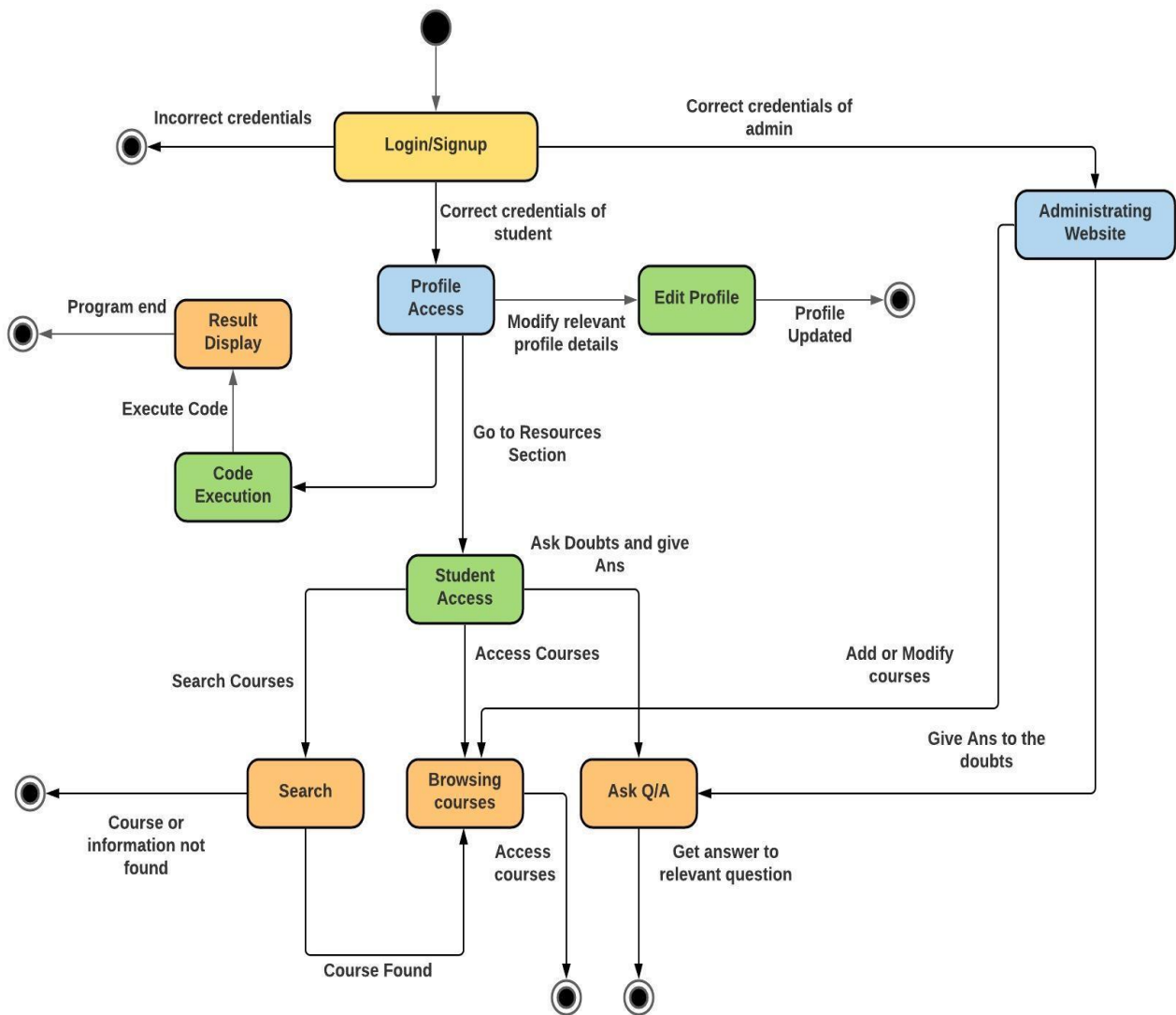
## ADMIN



## STUDENT



# STATE DIAGRAM



# USE CASE DIAGRAM

