



Dharmsinh Desai University, Nadiad

Faculty of Technology

Department of Computer Engineering

B. Tech CE Semester- IV

Subject: Software Engineering Principle

Project title: Online Quiz Application

By:

- 1. Dhruval Shah, Roll no:CE118, Id:19CEUON071**
- 2. Kushal Shah, Roll no:CE120, Id:19CEUOS160**

Contents:

1. Introduction	3
2. Software Requirement Specifications	5
3. Design	
3.1 Use Case diagram	7
3.2 Class diagram	8
3.3 Data Flow Diagram	9
3.4 Sequence diagram	11
3.5 Activity diagram	13
4. Implementation Detail	
4.1 Modules	15
4.2 Major Functionality	16
5. Work Flow	17
6. Conclusion	20
7. Limitation and Future extension	21
8. Bibliography	22

Abstract

A quiz is usually a kind of a student assessment in which there are usually multiple-choice Questions that a student needs to answer. Some instructors schedule a daily or weekly quiz for the purpose of having the students review their previous lessons before attending the next class. Quizzes identify gaps in knowledge and highlight any areas that need more revision.

Nowadays with technology playing major role in student's education, online quizzes play a major role for student's self assessment. Online quizzes can be given without an instructor, which saves money and time. Another plus of online quizzes is getting immediate results.

Introduction

Before giving quiz, a new user has to first sign up and login. To sign up one can click on sign up or link to sign up page provided in login page. After log in user will be redirected to the quiz page. Whereas an existing user will have to login before giving quiz.

After logging in questions of the quiz will be displayed to the user's screen. In quiz, each question is a multiple choice question with four options. Out of four options, one option is correct and user can select only one option. All questions are not mandatory to attempt but not attempted questions will be considered as wrong answer. User can submit the quiz only once.

After submitting the quiz user will be redirected to the result page. On the result page, user will be able to view the number of questions that he/she answered correctly as well as total questions and his/her accuracy. User will also be able to see his/her answer, correct answer and solution of each question in the quiz.

Software Requirement Specifications:

Online Quiz Application

1. REGISTRATION OF USER

R.1.1 Sign up a user: Add first time user to the database.

- a. Input: Email id, Phone number, Name, Password
- b. Output: Welcome message will be printed and user will be added in to database.

R.1.2 Login by an existing user: Existing user will login using his/her credentials and its authorization will be done by admin.

- a. Input: User enters his/her credentials
- b. Output: If username and password match the homepage of site application will open up and if entered credentials are wrong then user needs to enter it again.

2. MANAGE USER DETAILS

R.2.1 Add new user: Adding newly registered user information into the database.

- a. Input: User details
- b. Output: User added successfully.

R.2.2 User Statistics: Admin can update statistics of user in database after every question/quiz and user can see its statistics.

- a. Input: User selection
- b. Output: user statistics.

3. MANAGE QUIZ

R.3.1 Creation of a quiz: A faculty of an educational institute (Tuition classes, School) can create a quiz for taking a test.

- a. Input: The user (in this case faculty) will give questions and its options in the default template of site and user also provides start time and end time to his/her created quiz.

- b. Output: The user will get his/her created quiz and its code by which students can access the quiz.

R.3.2 Categories: User can choose questions based on predetermined categories.

- a. Input: User can select a category of questions he/she wants to practice upon.
- b. Output: Questions based on user selected category.

R.3.3 Add Question: Admin can add a new question on the site.

- a. Input: Admin enters new question.
- b. Output: Question will be added in to the database.

R.3.4 Remove Question: Admin can remove a question on the site.

- a. Input: Admin searches the question to be deleted.
- b. Output: Question will be removed in from the database.

R.3.5 Update Question: Admin can update an existing question on site.

- a. Input: Admin searches the question to be updated and enters additional information.
- b. Output: Question will be updated in the database.

4. FEEDBACK

R.4.1 Giving Feedback: User can give feedback and rating point for a particular question as well as whole quiz.

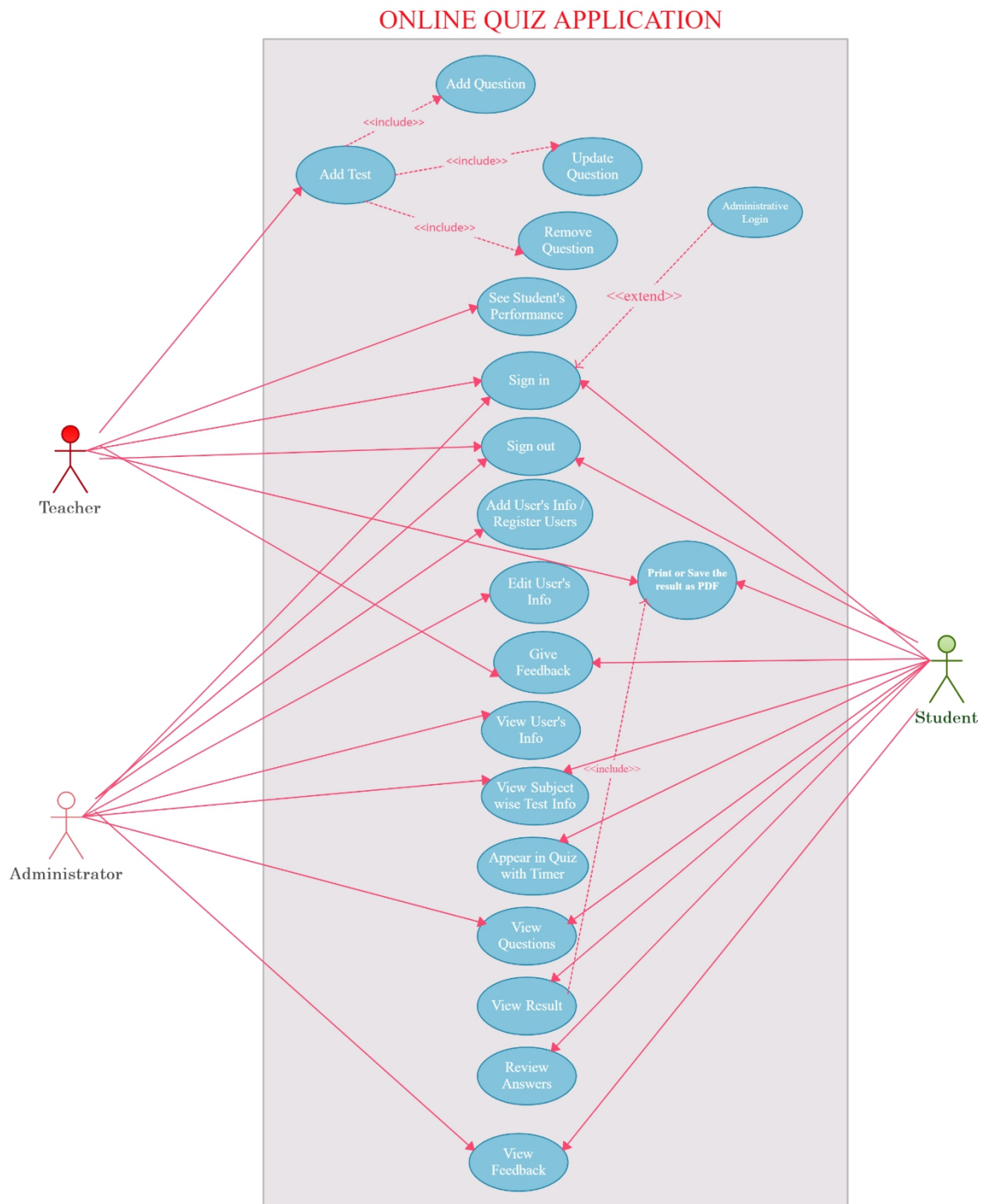
- a. Input: User's Suggestion.
- b. Output: Pop-up message thanking user.

R.4.2 View feedback: User can view the rating of a particular quiz.

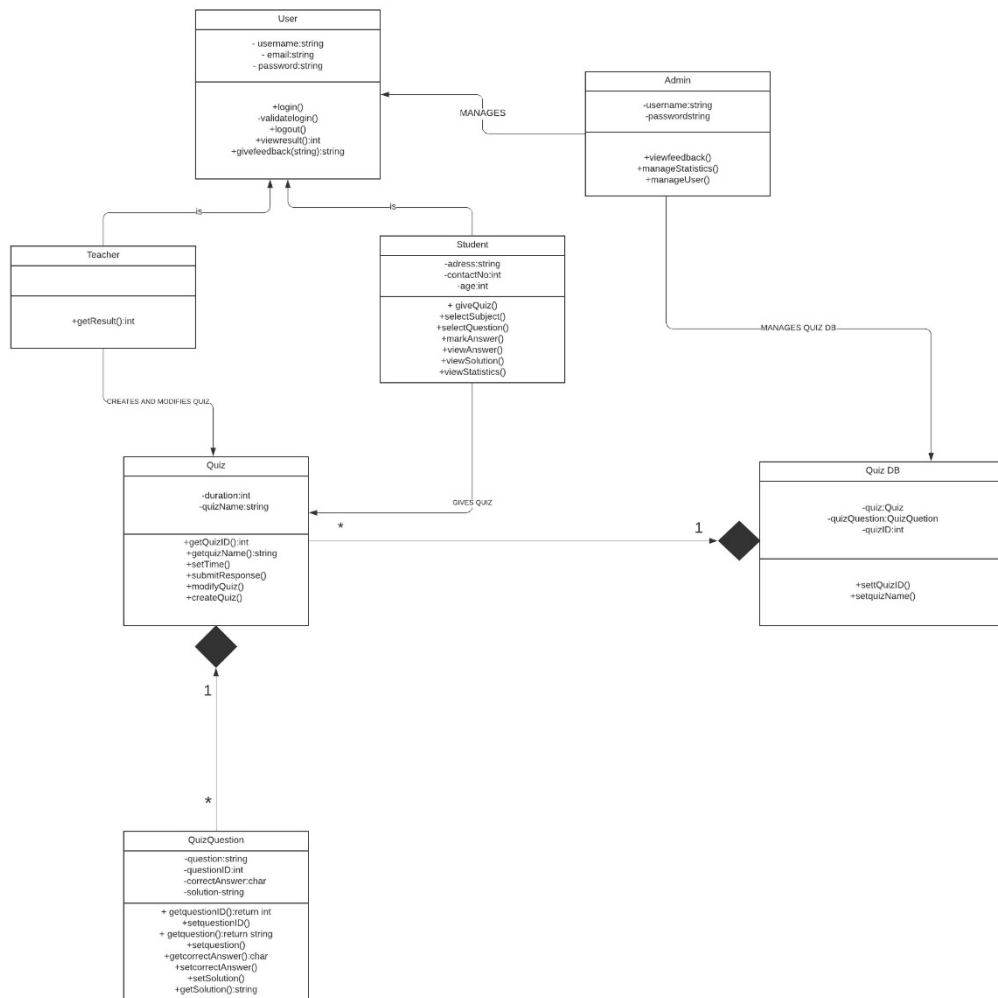
- a. Input: Searching a category of quiz.
- b. Output: Display the rating.

Design:

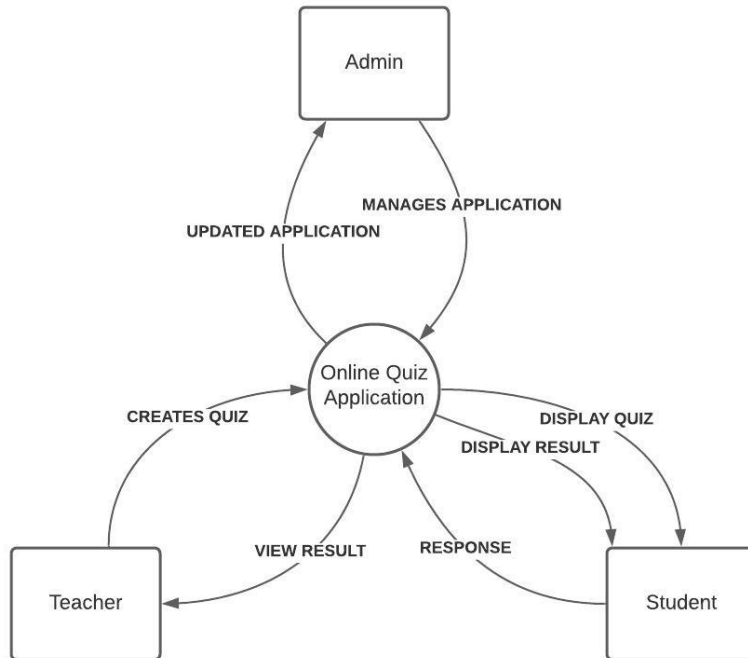
Use case diagram



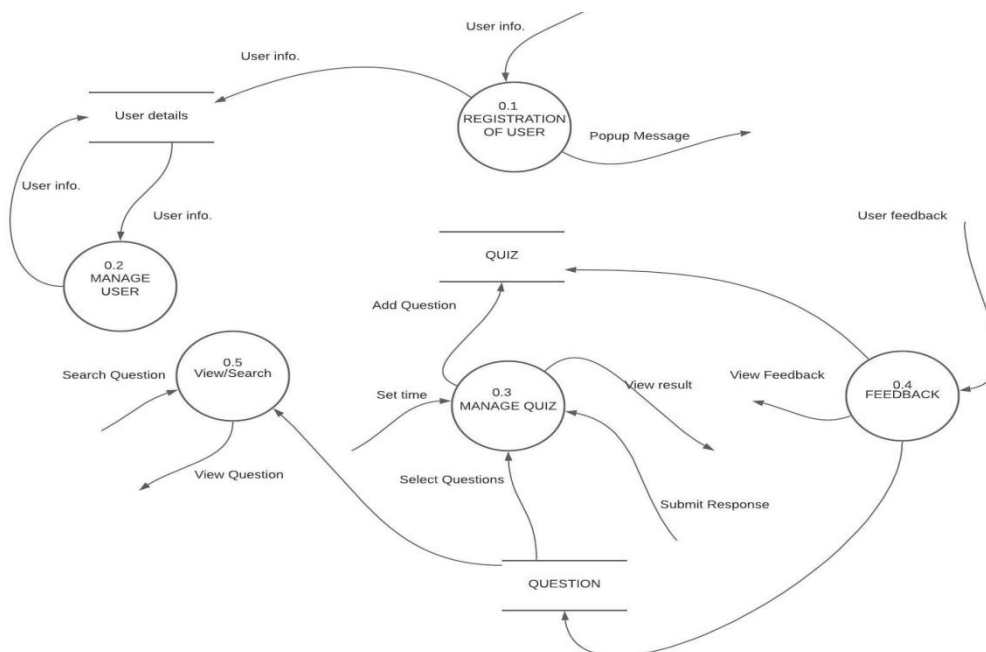
Class diagram



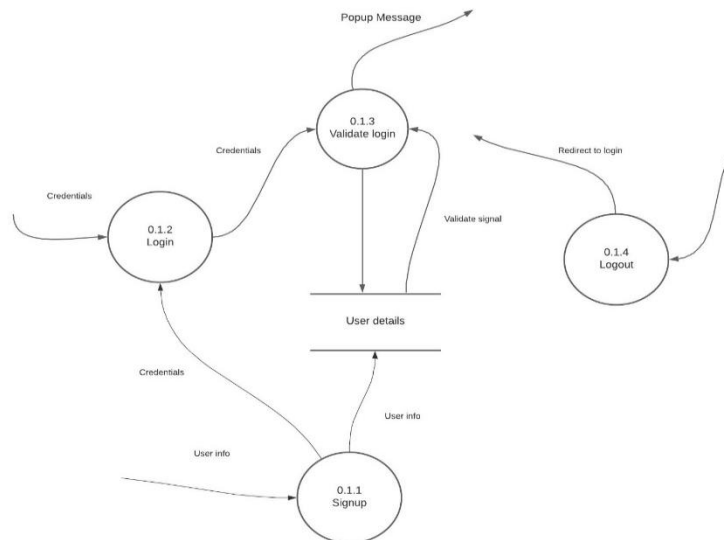
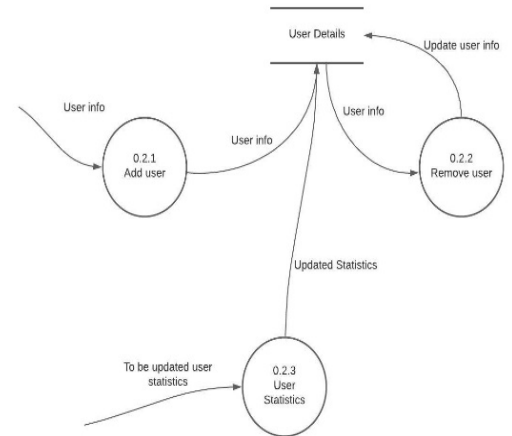
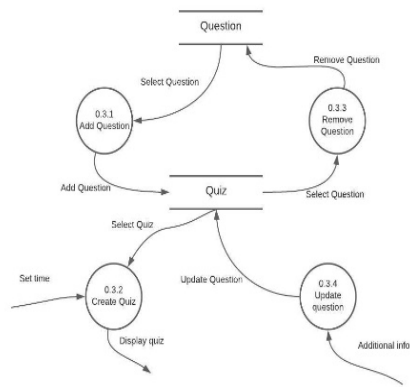
Level 0:



Level 1:

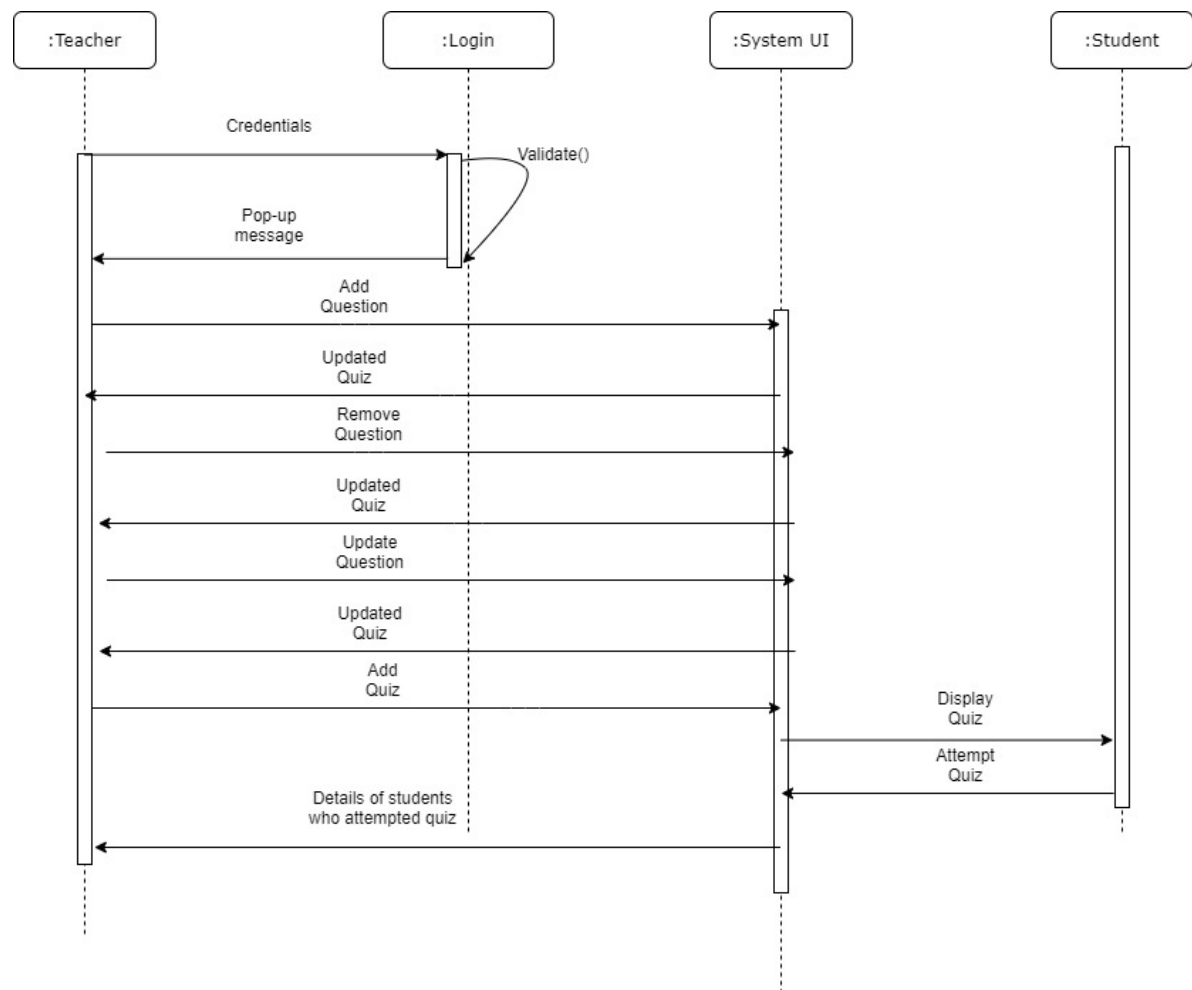


Level 2:

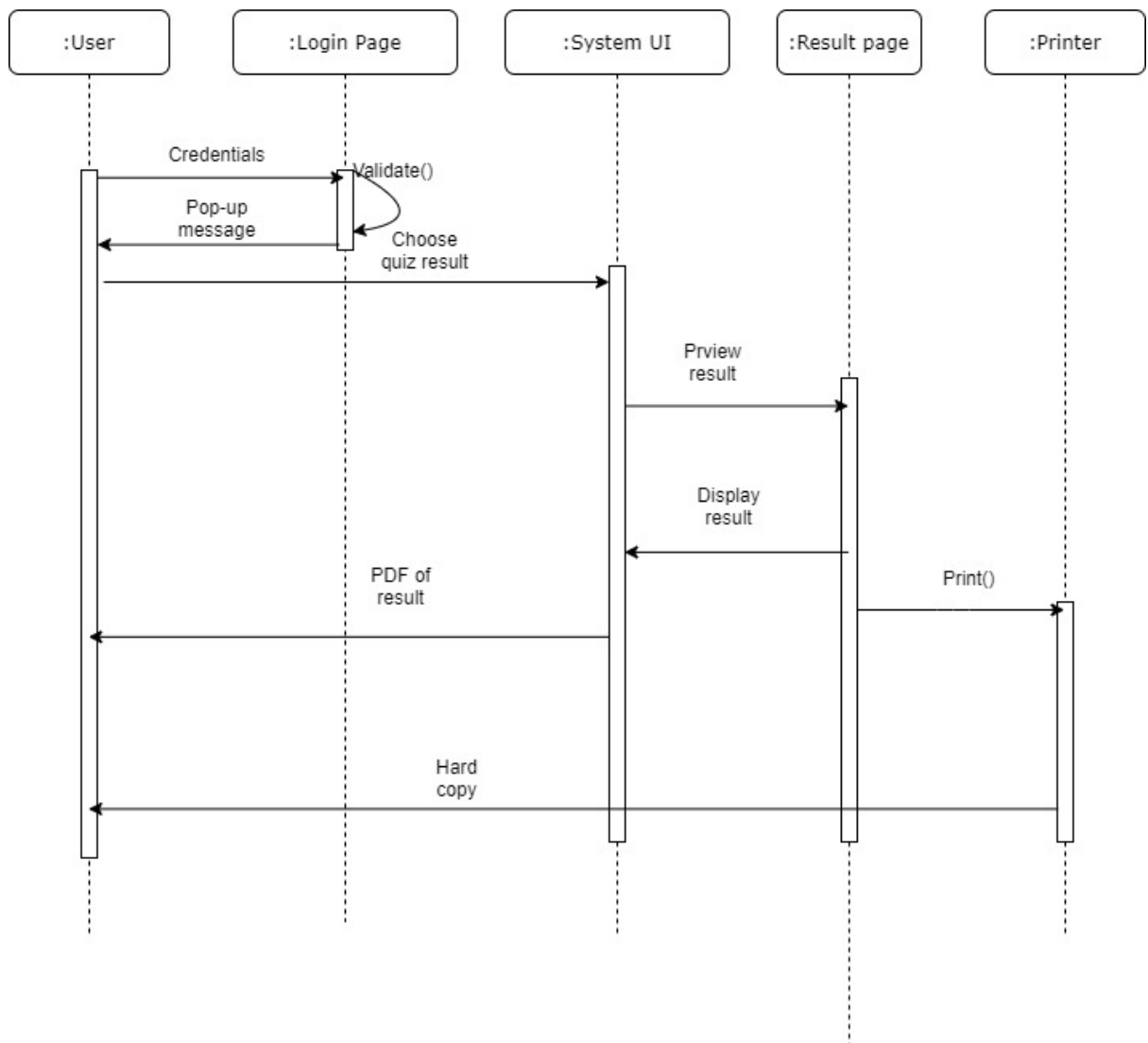


Sequence Diagrams:

1) Add Quiz

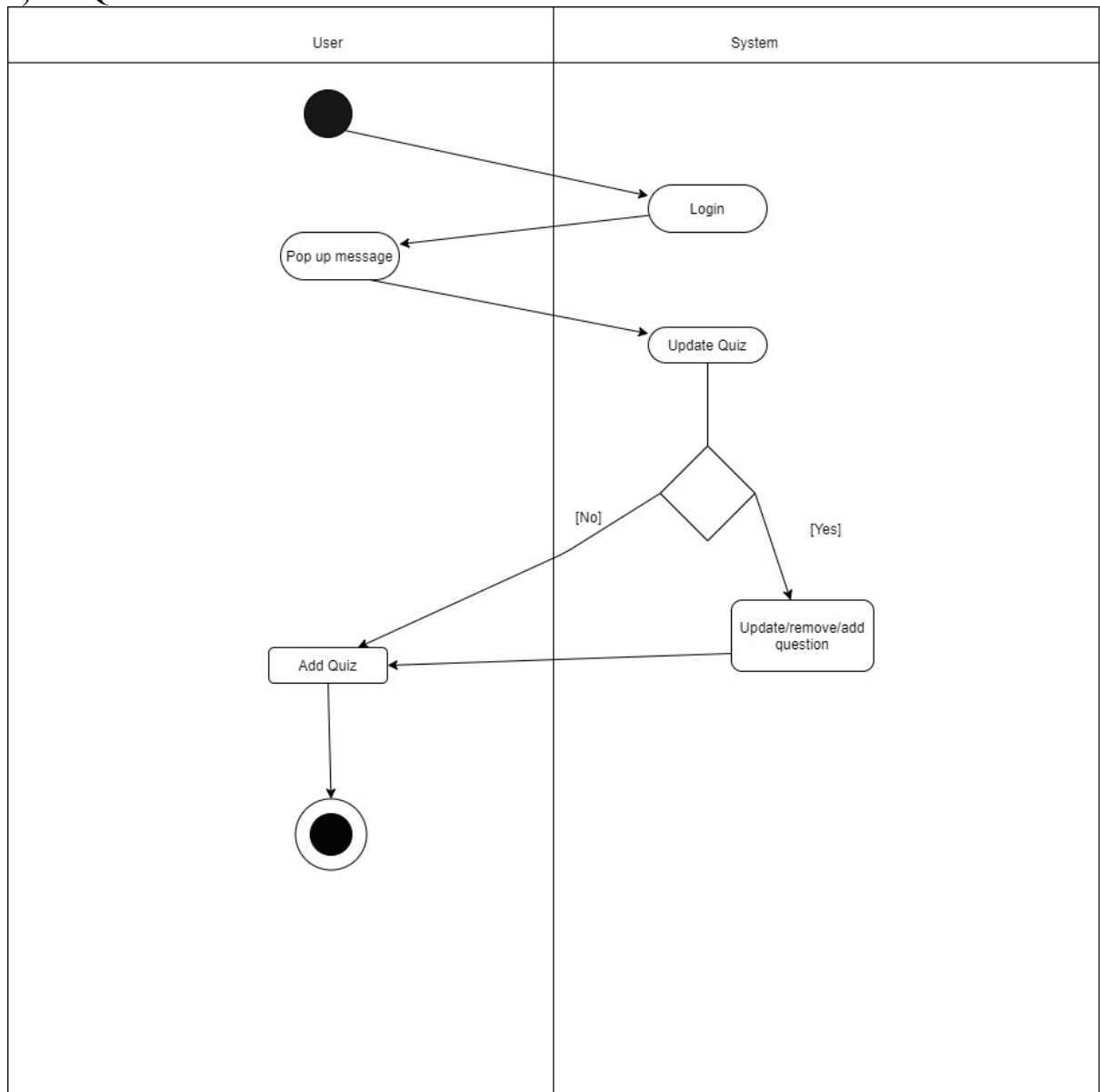


2) View Result

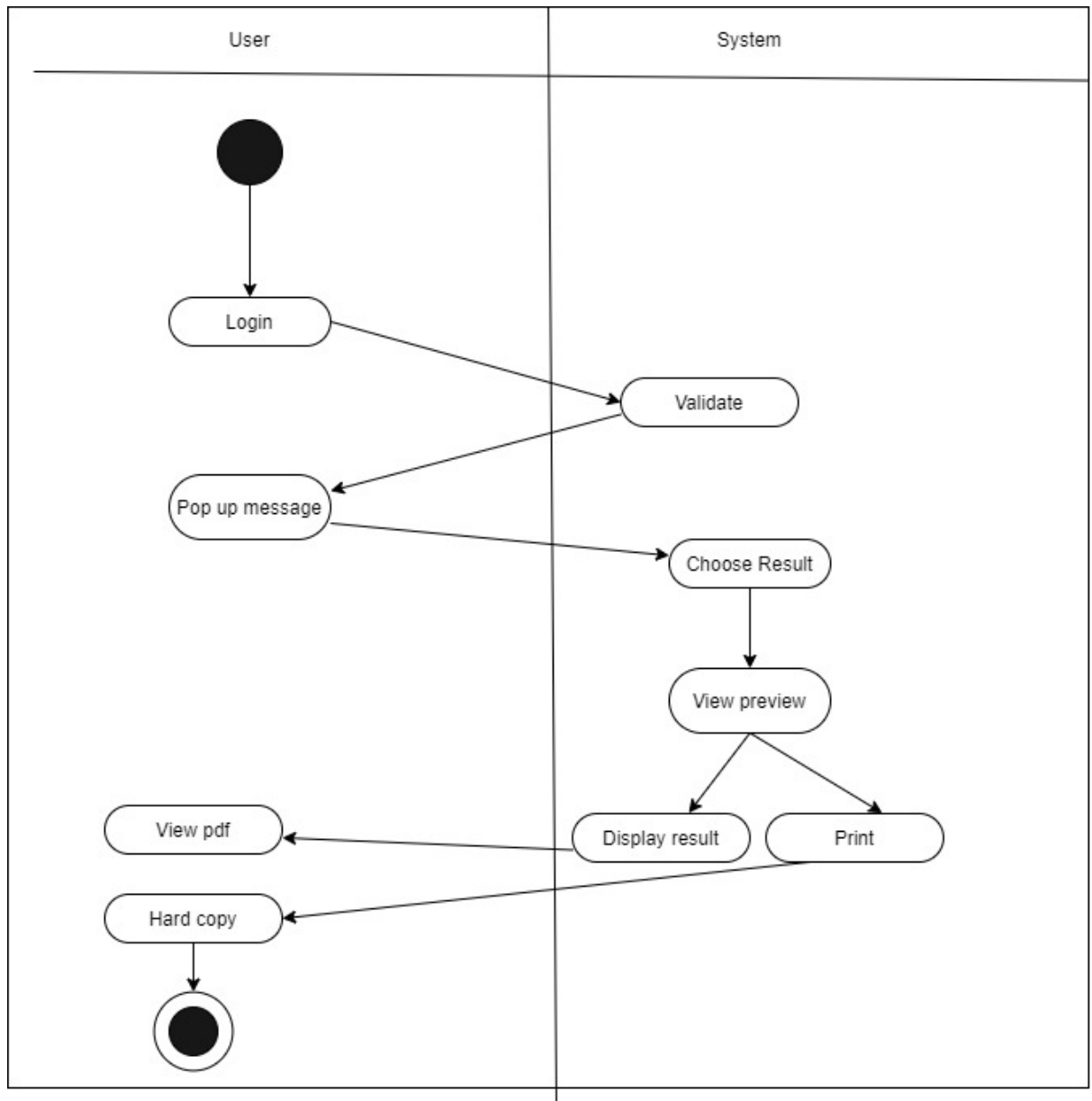


Activity Diagrams

1)Add Quiz



2)View Result



Implementation Detail:

1) Modules:

- a) Manage user: Admin can add user and modify user details.
Admin can update statistics of user in database after every quiz and user can see its statistics.
- b) Manage quiz: Admin creates questions for the quiz in database. Admin can also add/remove/update question in quiz.
- c) Authentication: Sign up function adds new user to the database.
Existing user will have to login using his/her credentials to give the quiz and its authorization will be done by admin.
If the credentials entered are incorrect user will be redirected to invalid login page.

2) Major functionalities

- A) Give quiz: After logging in questions of the quiz will be displayed to the user's screen. In quiz, each question is a multiple choice question with four options. Out of four options, one option is correct and user can select only one option.
- B) Result : After submitting the quiz user will be redirected to the result page. On the result page, user will be able to view the number of questions that he/she answered correctly as well as total questions and his/her accuracy.
- C) Solution: User will also be able to see his/her answer, correct answer and solution of each question in the quiz.

Workflow/layout:

← → 127.0.0.1:8000/quizdb/addstudentinfo/

Apps YouTube Meet - CE Departm...

Sign Up

kushal14

kushal121019@gmail.com

.....

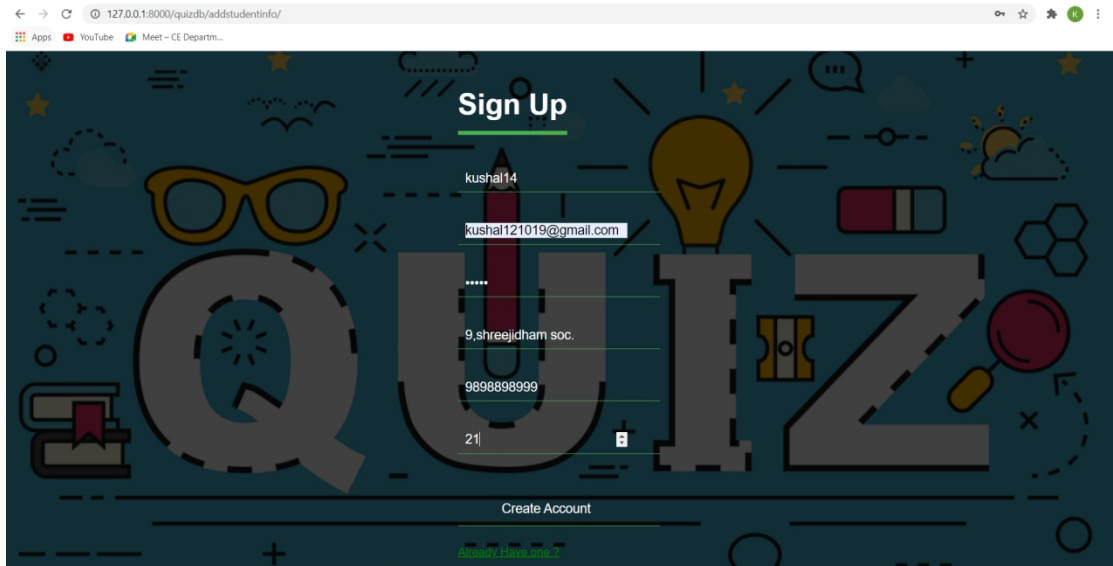
9.shreejitham soc.

9898898999

21

Create Account

Already have an account?

A screenshot of a web browser showing a 'Sign Up' form for a 'Quiz' application. The background is dark blue with various educational icons like a lightbulb, glasses, a pencil, a book, and a magnifying glass. The form fields are outlined in green. The username 'kushal14' is entered in the first field. The email 'kushal121019@gmail.com' is entered in the second field. The password is masked with dots in the third field. The address '9.shreejitham soc.' is entered in the fourth field. The phone number '9898898999' is entered in the fifth field. The age '21' is entered in the sixth field. Below the form is a 'Create Account' button and a link 'Already have an account?'.

← → 127.0.0.1:8000/loginmodule/login/

Apps YouTube Meet - CE Departm...

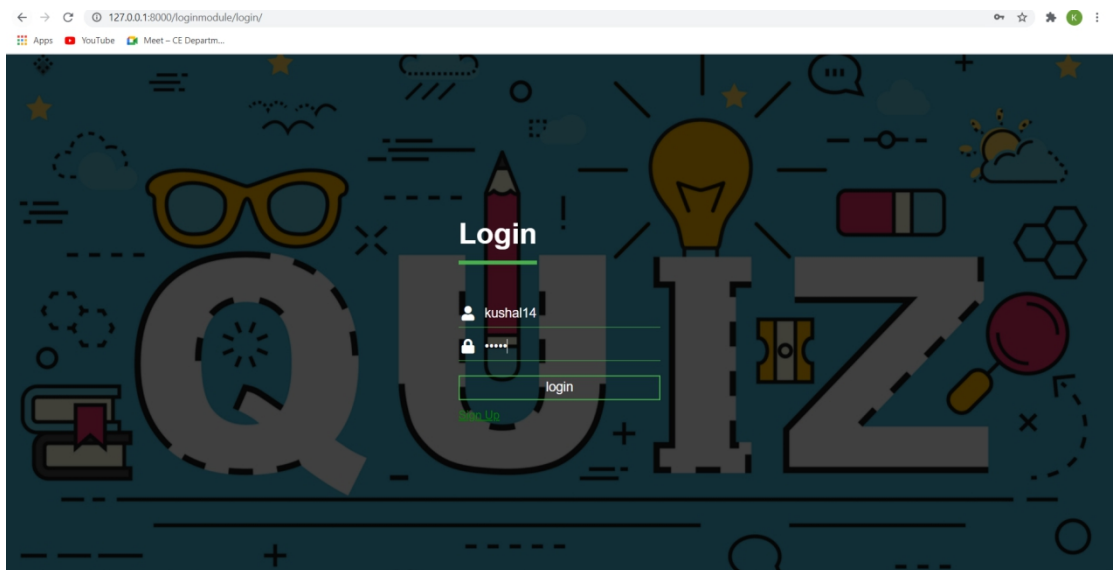
Login

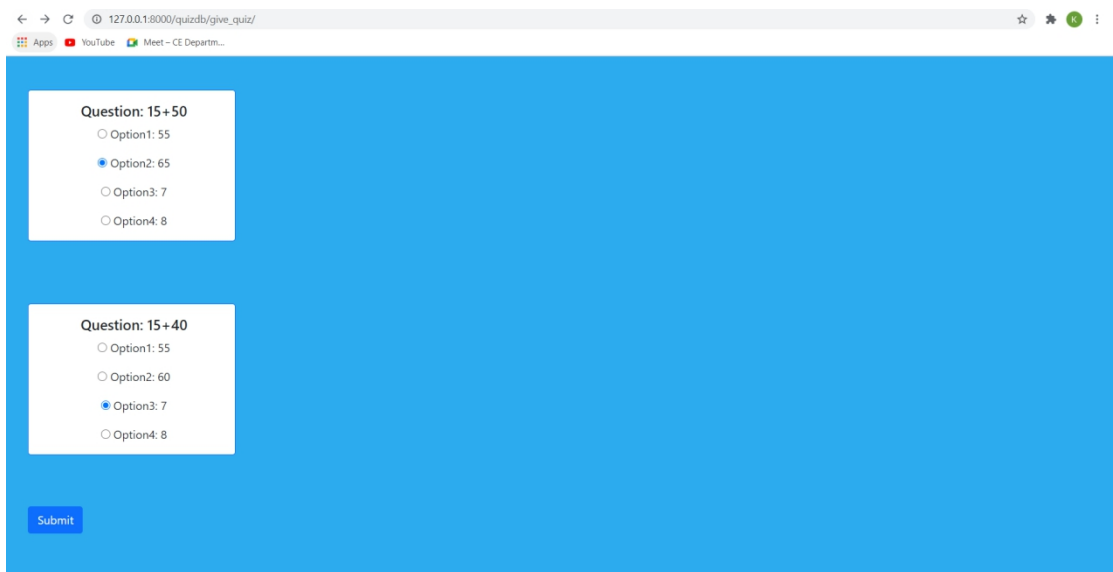
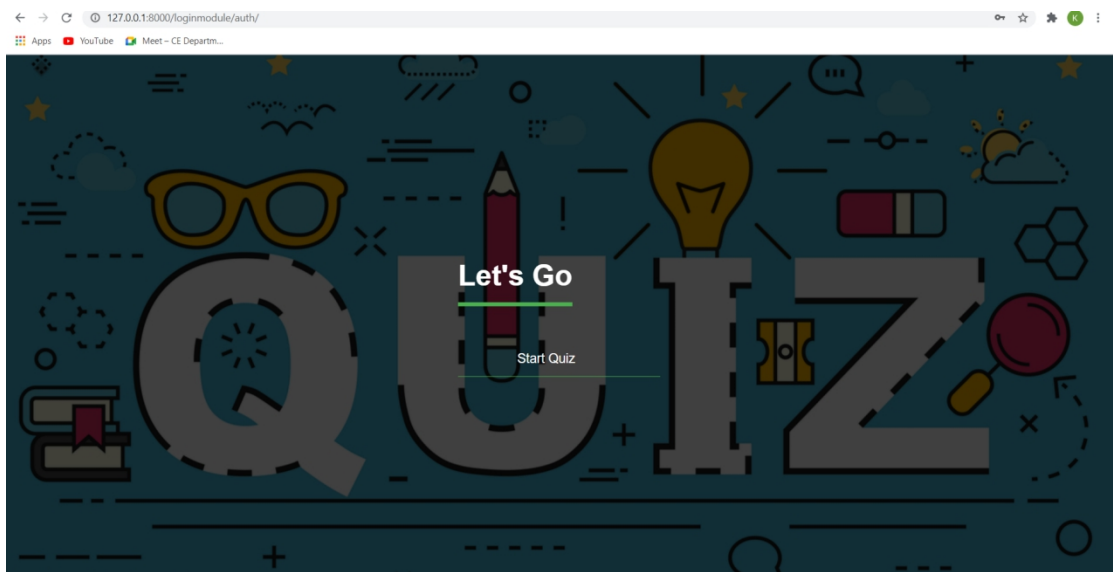
kushal14

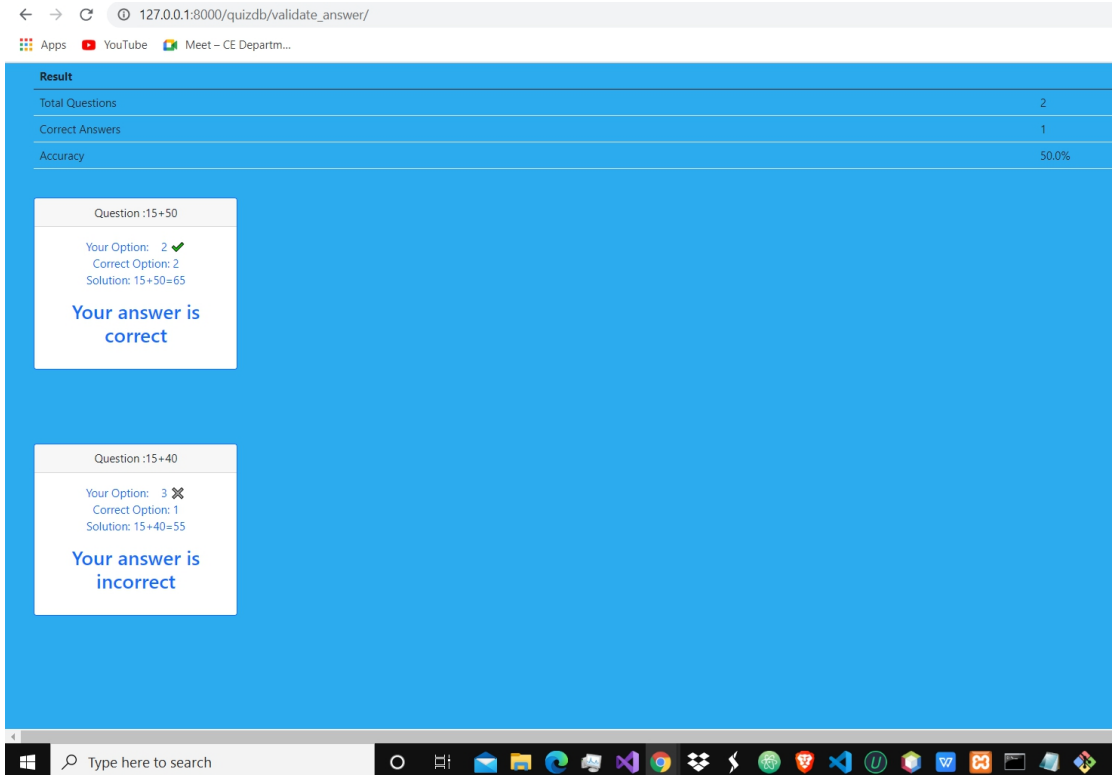
.....

login

Auto Login

A screenshot of a web browser showing a 'Login' form for the same 'Quiz' application. The background is the same dark blue with educational icons. The form fields are outlined in green. The username 'kushal14' is entered in the first field. The password is masked with dots in the second field. Below the password field is a 'login' button. At the bottom of the form is a checkbox labeled 'Auto Login'.





Conclusion:

Hence in this system we have successfully implemented functionalities for managing users, managing questions via admin and registration, give quiz functionality for students(user). Students can assess themselves by using this system. After the implementation of system, testing was performed on the system to determine the bugs in the system to check if the implemented functionalities are correctly implemented.

Limitation:

- 1) Student will not be able to find question on all subjects and all topics.
- 2) Teacher can not create quiz.
- 3) Student will not be able to clear his/her doubt if he/she has one.
- 4) There will be no multiple select questions.

Future Extensions:

- 1) There will be multiple select questions.
- 2) Teacher can create quiz with unique quiz code.
- 3) Categories will be added.
- 4) User can give feedback to a particular quiz as well as question.
- 5) Teacher can set duration for a particular quiz.

Bibliography

References/resources used for developing project:

<https://getbootstrap.com/docs/5.0/getting-started/introduction/>

<https://www.geeksforgeeks.org/django-crud-create-retrieve-update-delete-function-based-views/>

<https://docs.djangoproject.com/en/3.1/topics/db/queries/>

<https://docs.djangoproject.com/en/3.1/ref/contrib/auth/>

https://youtu.be/_uQrJ0TkZlc