Coding Assignment

Problem Statement:

Design and implement a Question Paper Generator application

Explanation:

The application must store a number of questions in a Question Store. A question can have the following attributes {question, subject, topic, difficulty, marks}

The Question paper Generator should look for questions in the Question Store and then generate the question paper based on the total marks and the distribution of marks based on *Difficulty.*

Problem Solution:

Step-1 Data Base Setup:

Table-1 questions

Column Name	DataType
id	INT Primary-Key
question	TEXT
subject	VARCHAR
topic	VARCHAR
difficulty	VARCHAR
marks	INT

Step-2 Project Structure:

```
QuestionPaperGenerator
        -public
                -addQuestion.html
                -addQuestion.js
                -generateQuestion.html
                -generateQuestion.js
                -index.html
                -showQuestions.html
                -showQuestions.js
        -routes
```

```
                -config.js

                -queries.js

        -app.js

        -questions.js
```

Step-3: Data Base Configuration (config.js)

In config.js file change the values like host, user, password, and database accordingly.

Step-4: Performing CURD Operations(queries.js)

addQuestion inserts a new question into the Questions table,

showQuestionsBtySubject retrieves questions based on the subject,

generateQuestionPaper will generate a question paper.

Step-5 Create Routes (questions.js)

The **add** route is a **POST** request that expects question data in the request body and adds the question using the **addQuestion** function.

The **show** route is a **GET** request that expects the subject as a query parameter and retrieves questions using the **showQuestionsBySubject** function.

The **generate** route is a **POST** request that expects the subject, totalMarks, and difficultyDistribution in the request body and generates a question paper using the **generateQuestionPaper** function.

Step-6 : Express App(app.js)

app.js: This is the main server file, where I have configured the Express server, set up routes, and handle requests.

Step-7: Fontend (index.html, addQuestion.html, generateQuestion.html,showQuestions.html)

In index.html consists 3 buttons

Add Question-> Add question to database

Input: Question, Subject, Topic, Difficulty, Marks

Show Questions->Shows the questions available in that particular subject

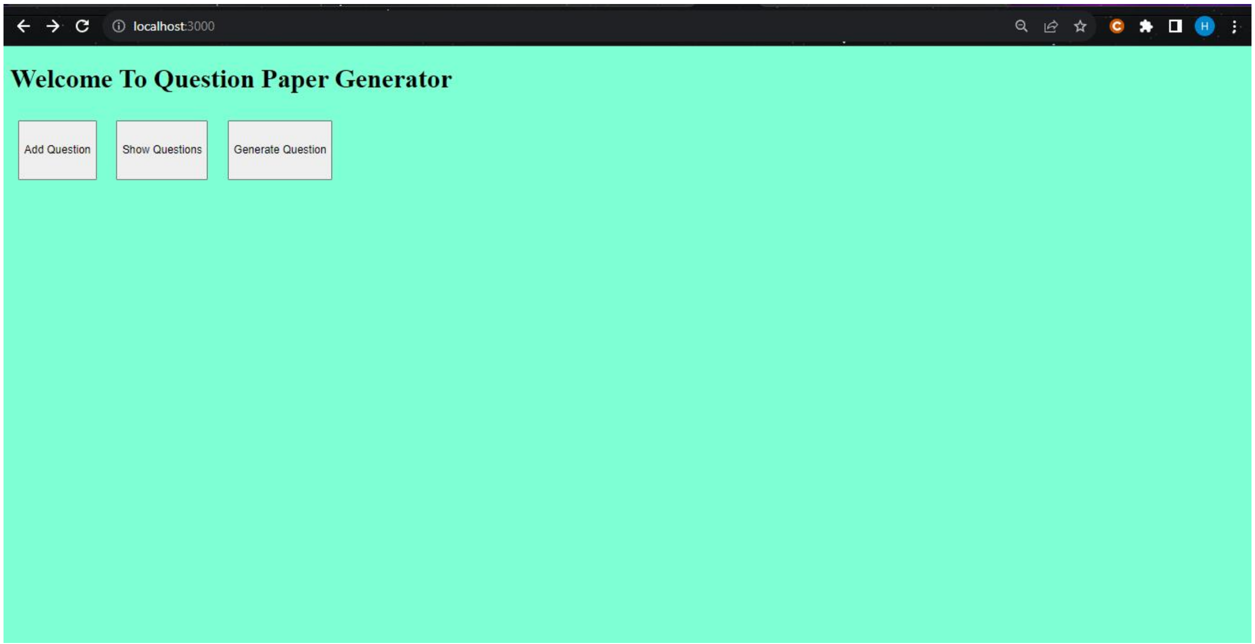
Input: Subject

Generate Questions-> where it will generate question based on the requirements

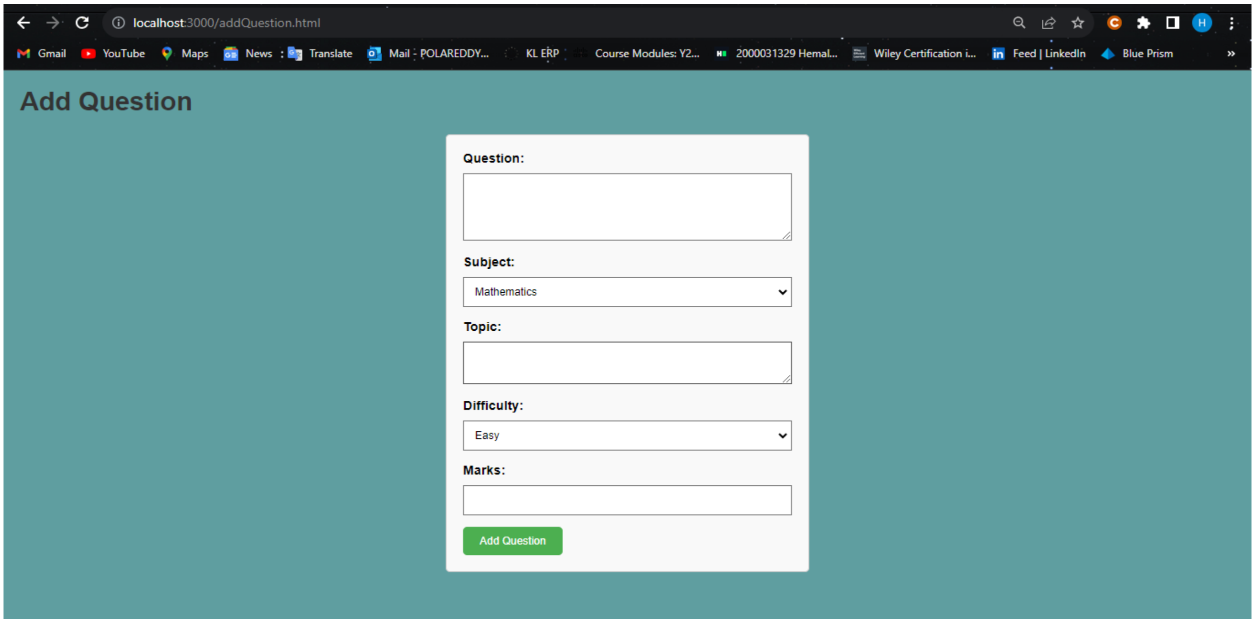
Input: Subject, EasyMarks, <MediumMarks, HardMarks

We can see the questions or we can download the questions.

Outputs:



Welcome To Question Paper Generator



Add Question

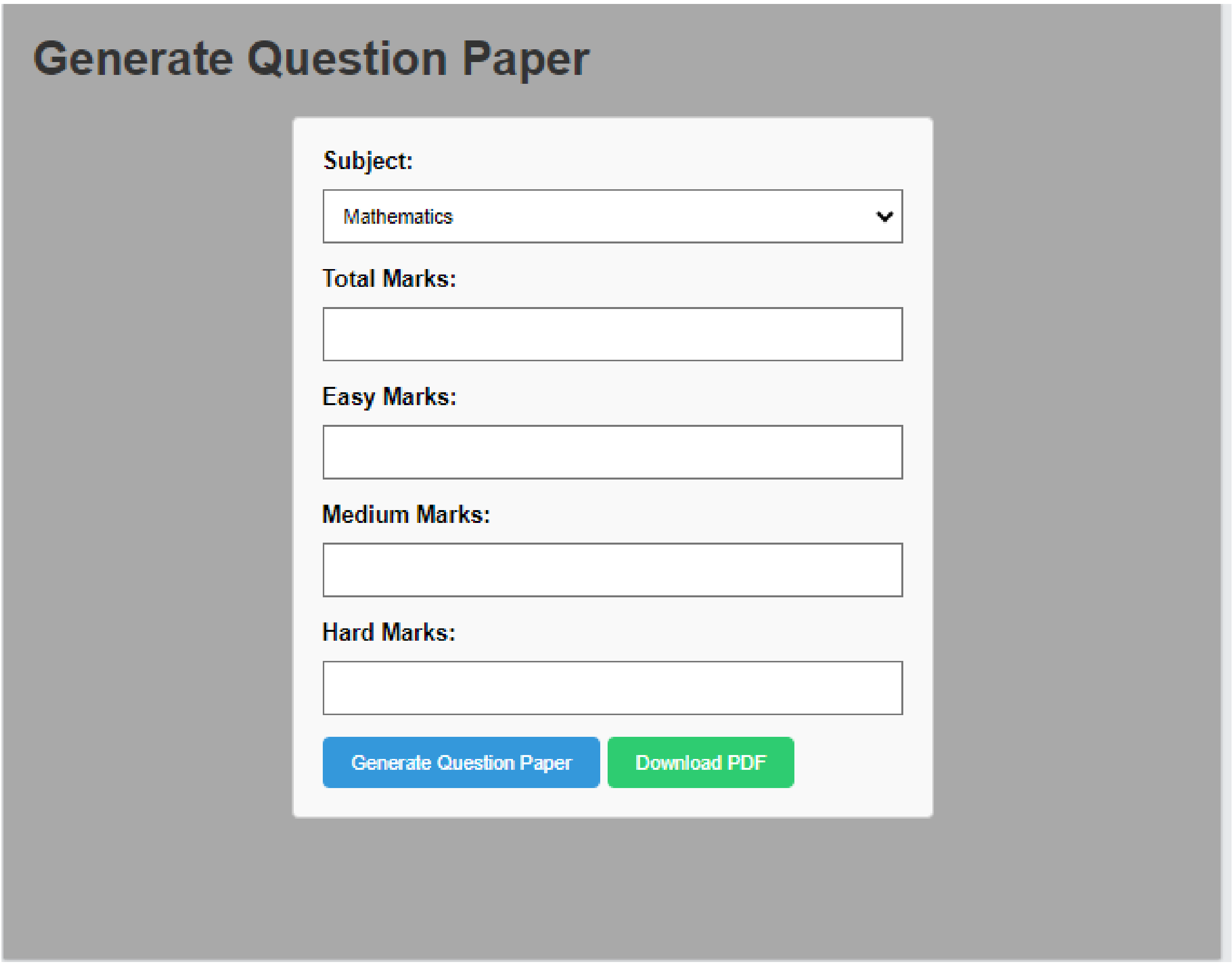
Question:

Subject: Mathematics

Topic:

Difficulty: Easy

Marks:



Generate Question Paper

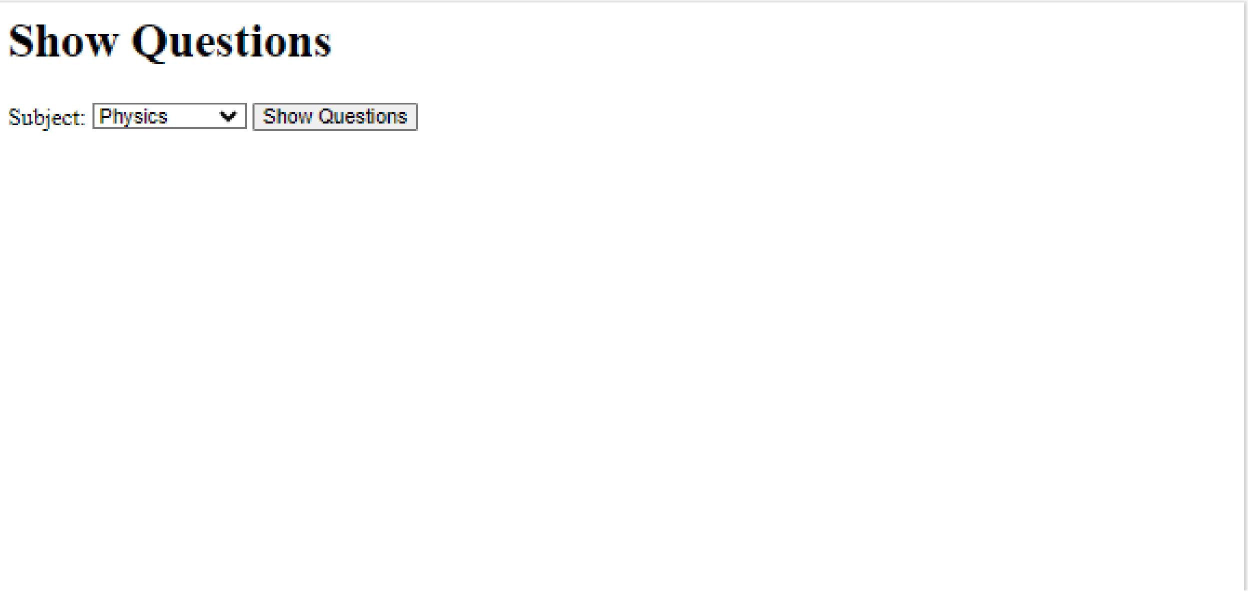
Subject: Mathematics

Total Marks:

Easy Marks:

Medium Marks:

Hard Marks:



Show Questions

Subject: Physics