

**Problem statement:**

Creating a Quiz App with the requirements mentioned in the assignment.

**Solution:**

**Html Code:**

**Index page:**

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Quiz Application</title>
  <link rel="stylesheet" href="quizapp.css">
</head>
<body>
  <!-- main container div -->
  <div class="container">
    <!-- section for welcome note and user details -->
    <section class="userdetails">
      <!-- div for logo -->
      <div class="logo">
        
      </div>
      <!-- div for welcome note -->
      <div class="note">
        <h2>Hello Buddy !</h2>
        <h3>Welcome to General Studies Quiz</h3>
      </div>
      <!-- div for input and instructions -->
      <div class="form">
        <p id="label">Enter Your Name To Start The Quiz</p>
        <form>
          <input type="text" name="username" id="username" placeholder="Enter Your
Name">
          <button id="namebtn" onclick = "loadName()">Enter</button>
        </form>
        <p id="instruct">
          You have 10 seconds to answer each question. <br>
        </p>
      </div>
    </section>
    <hr>
    <!-- section for quiz categories -->
    <section class="category">
      <div class="heading">
        <h3>Select A Category To Start The Quiz</h3>
      </div>
      <!-- div for options -->
      <div class="options">
```

```

        <button id="his" onclick="parent.location='history.html'">Indian
History</button>
        <button id="sci" onclick="parent.location='science.html'">General
Science</button>
        <button id="pol" onclick="parent.location='polity.html'">Indian
Polity</button>
        <button id="geo" onclick="parent.location='geography.html'">Indian
Geography</button>
    </div>
</section>
</div>
<script src="index.js" type="text/javascript"></script>
</body>
</html>

```

**Quiz page – Common code (js file differs for different category) :**

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Polity</title>
    <link rel="stylesheet" href="quizapp.css">
</head>
<body>
    <div class="container">
        <section class="header">
            <h2>Polity</h2>
            <hr>
            <div class="counter">
                <div id="timer">
                    <p>
                        Timer Left : <span id="time"> </span>
                    </p>
                </div>
                <div id="score">
                    <p>
                        Score : <span id="marks">
                            0 </span>
                    </p>
                </div>
            </div>
            <hr>
        </section>
        <section class="question">
            <div class="questnum">
                <p><span id="quest"></span> / 10</p>
            </div>
            <div class="questtext">

            </div>
        </section>

```

```

<section class="answers">
    <button id="a" class="options">Option 1</button>
    <button id="b" class="options">Option 2</button>
    <button id="c" class="options">Option 3</button>
    <button id="d" class="options">Option 4</button>
</section>
<section class="navigate">
    <button class = "active" id="next" onclick="Nextquest()">Next Question</button>
    <button class = "inactive" id="submit" onclick="Submitresult()">Submit</button>
</section>
<section class="results">
    <div class="heading">
        <h2>Congratulations for completing the Quiz !</h2>
    </div>
    <div class="player-name">
        <h2><span> </span></h2> <h3>Your Result is :</h3>
    </div>
    <div class="total-time">
        <h3>Total Time Taken : <span></span> Seconds</h3>
    </div>
    <div class="total-questions">
        <h3>Total Number of Questions : <span></span></h3>
    </div>
    <div class="attempted-questions">
        <h3>Attempted Questions : <span></span></h3>
    </div>
    <div class="correct-answers">
        <h3>Correct : <span></span></h3>
    </div>
    <div class="wrong-answers">
        <h3>Incorrect : <span></span></h3>
    </div>
    <div class="percentage">
        <h3>Percentage : <span></span></h3>
    </div>
    <div class="restart-buttons">
        <button class="restart" onclick="parent.location='polity.html'">Re-attempt
Quiz</button>
        <button class="home" onclick="parent.location='index.html'">Reselect
Categories</button>
    </div>
</section>
</div>
<script src="quizpage_polity.js" type="text/javascript"></script>
</body>
</html>

```

## JS Code:

### Index.js

```
//related to index page

//storing the value locally
var storedName = localStorage.getItem("storedName");
function loadName(){
    var userName = document.getElementById('username').value;
    localStorage.setItem("storedName", userName); //storing username in 'storedName'
}
console.log(storedName); //for reference and debugging
```

### Common Code (question array is different for different category):

```
//questions-array
const questions = [
{
    serial: 1,
    que: "Which among the following constitutional amendment act, reduced the age of voting from 21 years to 18 years?",
    ans: "61st Amendment Act",
    option: [
        "59th Amendment Act",
        "61st Amendment Act",
        "60th Amendment Act",
        "62nd Amendment Act"
    ]
},
{
    serial: 2,
    que: "The Ninth Schedule was introduced in the Constitution of India during the prime ministership of?",
    ans: "Jawaharlal Nehru",
    option: [
        "Lal Bahadur Shastri",
        "Jawaharlal Nehru",
        "Indira Gandhi",
        "Morarji Desai"
    ]
},
{
    serial: 3,
    que: "What was the exact constitutional status of India on 26th January, 1950?",
    ans: "A Sovereign Democratic Republic",
    option: ["A Democratic Republic",
        "A Sovereign Democratic Republic",
        "A Sovereign Secular Democratic Republic",
        "A Sovereign Socialist Secular Democratic Republic"]
},
{
    serial: 4,
    que: "What does constitutional government mean?",
    ans: "A government limited by the terms of the Constitution",
}
```

```
option: [
  "A representative government of a nation with a federal structure",
  "A government whose Head enjoys nominal powers",
  "A government whose Head enjoys nominal powers",
  "A government limited by the terms of the Constitution"]
},
{
  serial: 5,
  que: " At the national level, which ministry is the nodal agency to ensure effective implementation of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006?",
  ans: "Ministry of Tribal Affairs",
  option: [
    "Ministry of Environment, Forest and Climatic change",
    "Ministry of Panchayati Raj",
    "Ministry of Rural Development",
    "Ministry of Tribal Affairs"]
},
{
  serial: 6,
  que: "Which one of the following in Indian polity is an essential feature that indicates that it is federal in character?",
  ans: "The independence of the judiciary is safeguarded",
  option: [
    "The independence of the judiciary is safeguarded",
    "The Union Legislature has elected representatives from constituent units",
    "The Union cabinet can have elected representatives from regional parties",
    "The Fundamental rights are enforceable by Courts of Law"]
},
{
  serial: 7,
  que: "Which of the following factors constitutes the best safeguard of liberty in a liberal democracy?",
  ans: "Separation of powers",
  option: [
    "A committed judiciary",
    "Centralization of powers",
    "Elected government",
    "Separation of powers"]
},
{
  serial: 8,
  que: "'Right to Privacy' is protected under which Article of the constitution of India?",
  ans: "Article 21",
  option: [
    "Article 15",
    "Article 19",
    "Article 21",
    "Article 29"]
},
{
  serial: 9,
  que: "Which among the following is NOT a fundamental duty of a citizen?",
```

```

    ans: "Respect for the government",
    option: [
      "Respect for the constitution",
      "Respect for the National Flag",
      "Respect for the National Anthem",
      "Respect for the government"]
  },
  {
    serial: 10,
    que: "'Right to vote' can be placed in which among the following categories?",
    ans: "Legal Right",
    option: [
      "Fundamental Right",
      "Constitutional Obligation",
      "Fundamental Duty",
      "Legal Right"]
  }
]

//variables associated with the different div of quiz page
var timer = document.getElementById('timer');
var time = document.getElementById('time');
var score = document.getElementById('score');
var marks = document.getElementById('marks');
var timer = document.getElementById('timer');
var questNum = document.getElementById('quest');
var questText = document.querySelector('.questtext');
var answers = document.querySelectorAll('.answers button');
var optionBtn1 = document.getElementById('a');
var optionBtn2 = document.getElementById('b');
var optionBtn3 = document.getElementById('c');
var optionBtn4 = document.getElementById('d');
var nextBtn = document.getElementById('next');
var submitBtn = document.getElementById('submit');

//all sections of the quiz page
var section1 = document.querySelector(".header");
var section2 = document.querySelector(".question");
var section3 = document.querySelector(".answers");
var section4 = document.querySelector(".navigate");
var section5 = document.querySelector(".results");
section5.style.display = "none"; //hiding the result section when quiz is playing

//variables to control various operations in the quiz
let questionCount = 0; //for increasing question index value
let questionNumberDisplay = 1; // for displaying the question number over the question
var scoreCount = 0; //for incrementing score (correct answer)
var question_attempted = 0; //for counting number of attempted questions
var wrongCount = 0; //for counting wrong answer
var questionLength = questions.length;
var timeCount = 10; //timer for each question
var totalTimeCount = 10 * (questions.length); //timer for full quiz
var totalTimeTaken = 0; //for counting the remaining time or time taken
time.textContent = timeCount; //displaying the initial time on timer

```

```

var interval; //variable for starting the interval

//function to display the questions
function displayQuiz(index){
    questText.innerText = questions[index].que;
    optionBtn1.innerText = questions[index].option[0];
    optionBtn2.innerText = questions[index].option[1];
    optionBtn3.innerText = questions[index].option[2];
    optionBtn4.innerText = questions[index].option[3];
    questNum.innerText = questionNumberDisplay;
    //loop when options are clicked
    for(var j = 0; j < answers.length; j++){
        answers[j].setAttribute("onclick", "checkAnswer(this)")
    }
}

//definition of function when next button is clicked
function Nextquest(){
    clearInterval(interval); /*stopping the interval in case
    next button clicked without attempting the question*/

    questionCount++; //increment of questions
    timeCount = 10; //reseting the timer

    //reseting the background colour of buttons
    optionBtn1.style.backgroundColor = 'white';
    optionBtn2.style.backgroundColor = 'white';
    optionBtn3.style.backgroundColor = 'white';
    optionBtn4.style.backgroundColor = 'white';

    //displaying the timer
    time.textContent = timeCount;
    startTimer(timeCount); //restarting the timer
    questionNumberDisplay++; //increasing the question number display

    //reactivating the buttons
    optionBtn1.disabled = false;
    optionBtn2.disabled = false;
    optionBtn3.disabled = false;
    optionBtn4.disabled = false;

    //checking for last question
    if(questions.length>questionCount){
        displayQuiz(questionCount);
    }else{
        console.log("exam over");
    }
    /*on last question activating the submit button
    and deactivating the next button*/

    if(questions.length==questionCount+1){
        submitBtn.classList.remove("inactive");
        submitBtn.classList.add("active");
        nextBtn.classList.add("inactive");
    }
}

```

```

        nextBtn.classList.remove("active");
    }
}
//definition of function to check the correct answer
function checkAnswer(answer){
    clearInterval(interval); //stopping the timer when an option selected
    question_attempted++; //counting the attempted question
    //disabling the buttons
    optionBtn1.disabled = true;
    optionBtn2.disabled = true;
    optionBtn3.disabled = true;
    optionBtn4.disabled = true;

    //variables for user input and actual correct answer from array
    let user_answer = answer.innerText;
    let correct_answer = questions[questionCount].ans;

    //checking if the question is correct
    if(user_answer == correct_answer){
        console.log("Correct");
        scoreCount++; //adding score
        console.log(scoreCount);
        answer.style.backgroundColor='#22F28A'; //showing the button color
    }else{
        wrongCount++; //adding wrong answer
        console.log("Wrong: " + wrongCount);
        answer.style.backgroundColor='#F22279';
    }
}
//displaying the score in the marks span
marks.innerHTML = scoreCount;
console.log("Attempted: " + question_attempted);
}

//definition of timer function
function startTimer(timeCount){
    interval = setInterval(function(){
        time.textContent = timeCount; //displaying timer
        timeCount--; //decrement in timer for each question
        totalTimeCount--; //decrement in time for overall quiz
        /*calculating the time taken*/
        totalTimeTaken = ((10*(questions.length)) - (totalTimeCount));
        //printing on console for reference and enquiry
        console.log(totalTimeTaken);
        console.log(totalTimeCount);
        console.log(timeCount);

        //when time is in single digit
        if(timeCount < 10){
            time.textContent = "0" + timeCount;
        }
        //when time is up
        if(timeCount == 0){
            clearInterval(interval);
            time.textContent = "Time Up !";
        }
    }, 1000);
}

```



```

        //disabling buttons
        optionBtn1.disabled = true;
        optionBtn2.disabled = true;
        optionBtn3.disabled = true;
        optionBtn4.disabled = true;
    }
    //when total time is exhausted
    if(totalTimeCount==(10*(questions.length))){
        clearInterval(interval);
    }
}, 1000);
}
//initiation of page
if (questionCount == 0){
    displayQuiz(0);
}
//initiation of timer function
startTimer(timeCount);

//-----related to result page -----
var playerName = document.querySelector(".player-name span");
var totalTime = document.querySelector(".total-time span");
var totalQuestions = document.querySelector(".total-questions span");
var attemptedQuestions = document.querySelector(".attempted-questions span");
var correctQuestions = document.querySelector(".correct-answers span");
var incorrectQuestions = document.querySelector(".wrong-answers span");
var percentage = document.querySelector(".percentage span");

//function definition when submit button is clicked
function Submitresult(){
    /*adding and removing the required classlist
    to deactivate the sections.
    only section 5 (result) section is activated to display results*/
    section1.classList.add("inactive")
    section1.classList.remove("header");
    section2.classList.add("inactive")
    section2.classList.remove("question");
    section3.classList.add("inactive")
    section3.classList.remove("answers");
    section4.classList.add("inactive")
    section4.classList.remove("navigate");
    //displaying the result section
    section5.style.display = "flex";
    //displaying the required values on result page
    playerName.innerHTML = localStorage.getItem("storedName");
    totalTime.innerHTML = totalTimeTaken;
    attemptedQuestions.innerHTML = question_attempted;
    correctQuestions.innerHTML = scoreCount;
    incorrectQuestions.innerHTML = wrongCount;
    totalQuestions.innerHTML = questionLength;
    percentage.innerHTML = ((scoreCount/questionLength)*100);
}

```

## CSS Code:

```
/* fonts import */
@import
url('https://fonts.googleapis.com/css2?family=Montserrat:wght@100;400&display=swap');

/* universal resetting */
* {
  margin: 0;
  padding: 0;
  box-sizing: border-box;
}

body {
  background-color: rgb(71, 69, 64);
  font-family: 'Montserrat', sans-serif;
}

/* style for main container */
.container {
  display: flex;
  flex-direction: column;
  justify-content: center;
  margin: auto;
  width: 50%;
  background-color: #D21DDB;
  padding: 2em;
  margin-top: 1em;
  gap: 2em;
  box-shadow: 0px 2px 8px 0px black;
  border-radius: 0.5em;
  color: aliceblue;
  height: max-content;
  font-size: 1em;
}

/* styling for user section */
.userdetails {
  display: flex;
  flex-direction: column;
  margin: auto;
  align-items: center;
  text-align: center;
  gap: 0.5em;
}

.userdetails .note {
  display: flex;
  flex-direction: column;
  gap: 0.5em;
}

/* logo style */
.logo img {
```

```
    width: 5em;
    height: 5em;
}

/* styling for form */
.form {
    display: flex;
    flex-direction: column;
    gap: 1em;
}

/* style of label paragraph */
.form #label {
    margin-top: 1em;
}

/* styling for the form inside form class */
.form form {
    display: flex;
    justify-content: space-around;
    gap: 0.5em;
}

/* styling for input and button tag */
.form input,
button {
    font-family: 'Montserrat', sans-serif;
    font-size: 1em;
    padding: 0.8em;
    border-radius: 0.2em;
    border: solid;
    border-style: none;
}

.form button:hover {
    cursor: pointer;
    background-color: #F5CBF0;
}

/* specific styling of text field */
#username {
    width: 80%;
}

/* styling for quiz categories */
.category {
    display: flex;
    flex-direction: column;
    gap: 0.5em;
    margin: auto;
    align-items: center;
}

.category .heading {
```

```

    margin-bottom: 0.5em;
}

/* styling for options */
.options {
    display: grid;
    grid-template-columns: auto auto;
    gap: 1em;
}

/* styling for option buttons */
.options button {
    padding: 0.8em;
    width: 200px;
    font-family: 'Montserrat', sans-serif;
    font-size: 1em;
    border: solid;
    border-style: none;
}

.options button:hover {
    cursor: pointer;
    background-color: #F5CBF0;
}

/* ----- quiz page styling >> ----- */
/* Heading */
.header {
    display: flex;
    flex-direction: column;
    gap: 1em;
    justify-content: center;
}

.header h1,
h2,
h3,
h4,
h5,
h6 {
    text-align: center;
}

/* style for counter div */
.counter {
    display: flex;
    justify-content: space-between;
}

.counter p {
    font-weight: bold;
}

/* style for question div */

```

```
.question {
  display: flex;
  flex-direction: column;
  justify-items: center;
  text-align: center;
  gap: 1em;
}

/* styling for displaying the question number */
.questnum {
  display: flex;
  justify-content: center;
  background-color: aliceblue;
  color: black;
  border-radius: 0.2em;
  width: 15%;
  margin: auto;
  padding: 0.8em;
}

/* style for div to display question */
.questtext {
  background-color: white;
  color: black;
  padding: 1em;
  border-radius: 0.2em;
  height: 12vh;
}

/* styling of answers/options div */
.answers {
  display: grid;
  grid-template-columns: auto auto;
  gap: 2em;
}

/* styling of the options button */
.answers button {
  font-family: 'Montserrat', sans-serif;
  padding: 0.8em;
  text-align: center;
  border: solid;
  border-style: none;
  background-color: white;
  cursor: pointer;
  height: 11vh;
  align-content: center;
}

.answers button:hover {
  background-color: #F5CBF0;
}

/* styling for navigating div for next/submit button */
```

```
.navigate {
  display: flex;
  justify-content: center;
  text-align: center;
}

/* styling of next and submit button */
.navigate button {
  font-family: 'Montserrat', sans-serif;
  padding: 0.5em;
  width: 10em;
  border: solid;
  border-style: none;
}

.navigate button:hover {
  cursor: pointer;
  background-color: #F5CBF0;
}

/* setting for inactive class */
.inactive {
  display: none;
}

/* setting for active class */
.active {
  display: block;
}

/* Result page styles */
/* styling for results section */
.results {
  display: flex;
  flex-direction: column;
  justify-content: center;
  gap: 1em;
}

/* results heading note */
.results .heading {
  display: block;
  padding: 1em;
  background-color: aliceblue;
  color: black;
}

/* styling for the player name */
.player-name {
  display: flex;
  flex-direction: column;
  gap: 0.5em;
}

/* styling for the other divs to display other variables */
.total-time,
.total-questions,
```

```
.attempted-questions,
.correct-answers,
.wrong-answers,
.percentage {
    display: flex;
    justify-content: space-between;
    padding-left: 1.5em;
}
/* styling for the span inside all child divs of results */
.player-name span,
.total-time span,
.total-questions span,
.attempted-questions span,
.correct-answers span,
.wrong-answers span,
.percentage span{
    color: #FFF126;
    font-size: 1.5em;
}
/* styling for div having restart buttons */
.restart-buttons{
    display: flex;
    justify-content: center;
    gap: 1em;
}
.restart-buttons button{
    font-family: 'Montserrat', sans-serif;
    padding: 0.5em;
    width: 12em;
    border: solid;
    border-style: none;
}
.restart-buttons button:hover{
    cursor: pointer;
    background-color: #F5CBF0;
}

/* responsive setting */
@media only screen and (max-width: 950px){
    body{
        font-family: 'Montserrat', sans-serif;
        font-size: 1em;
    }
    .container {
        width: 90%;
    }
    .questtext{
        font-size: 0.8em;
        height: 15vh;
    }
    .questnum{
        font-size: 0.8em;
        width: 30%;
    }
}
```

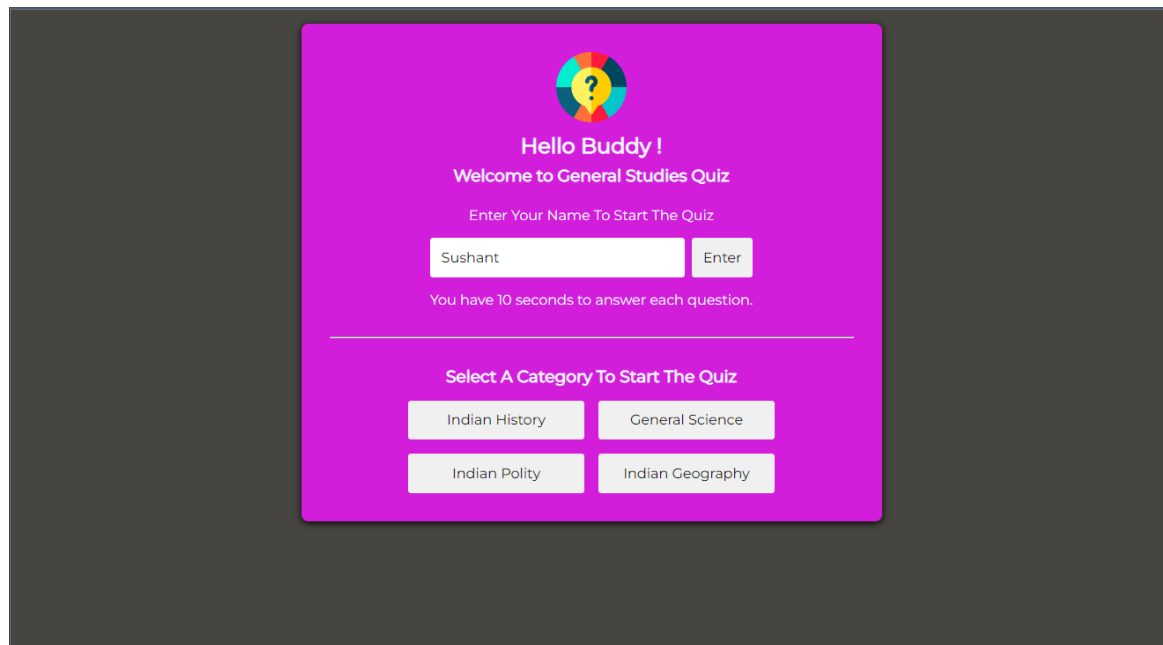
```

.answers button{
  font-size: 0.8em;
  height: 15vh;
}
.results{
  font-size: 0.8em;
}
}

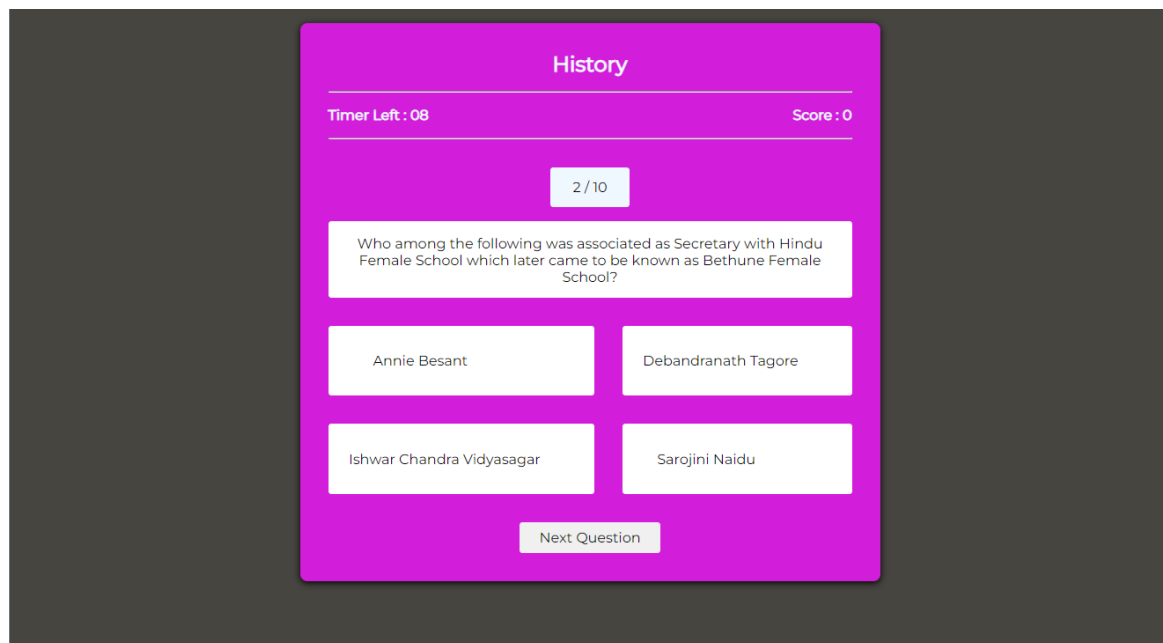
```

## Output:

### Index Page (Home page) :



### Quiz Page :





Result :

Congratulations for completing the Quiz !

Sushant

Your Result is :

Total Time Taken : 22 Seconds

Total Number of Questions : 10

Attempted Questions : 5

Correct : 3

Incorrect : 2

Percentage : 30

Re-attempt Quiz

Reselect Categories