Web Design and Development
4COSC011W

Report

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Group Number: 01
Student Role: 03

Link(s) to WebSite

URL:

https://w1761915.users.ecs.westminster.ac.uk/

1. Introduction

The website was created using the topic based on Sports and it consists with the Basketball sport. Team members who supported to create this website were,

Student No	Name	IIT Student ID	UOW ID
01	Danuja Silva	2018221	W1761772
02	Thamadie Dulsandi	2018135	W1714900
03	Tharusha Peiris	2018422	W1761915
04	E.J. Homer	2018330	w1761887

The task assigned for each students are as follows,

Task	Student 01	Student 02	Student 03	Student 04
1. Presentation Page	*			
2. Main Page		*		
3. Font Size Change	*			
4. Comments Form		*		
5. Buy Products	*			
6. Diagram				*
7. Quiz			*	
8. View Images				*
9. Student Details			*	
10. External CSS(created)		*		
11. External CSS(10 reused)	*	*	*	*
12. Page Editor	*	*	*	*
13. Logo/Page Editor	*	*	*	*
14. Anchors	*	*	*	*

2. Technical Discussion

Tasks assigned to the second student are described in the previous section. First, let's look at how the quiz page was created.
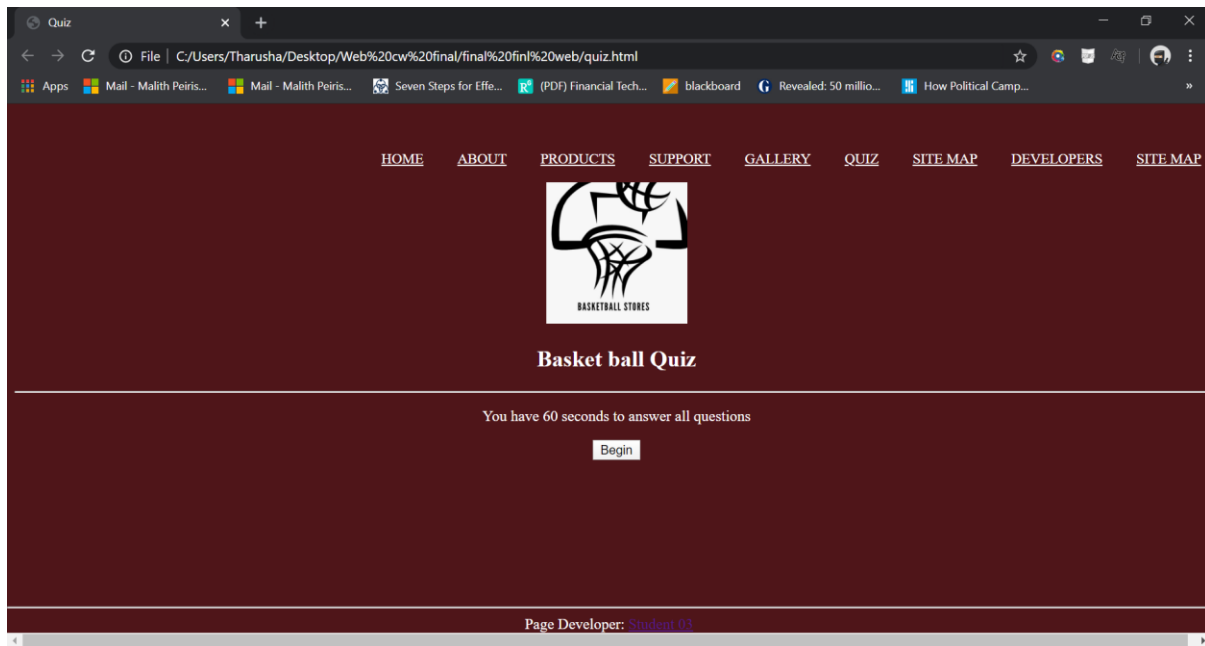

Figure 1Quiz Home Page (GUI)

This Quiz page is basically containing the navigation bar and the website logo which are the most common two properties can be seen in a usual website. When considering the Home page of the quiz, it was created using HTML and CSS.

For the navigation bar all the group members use the same code snippets because through the entire website navigation bar should mostly be same. So, for the content of the Quiz Home Page there were several kinds of section divided by <div> tags. It is easy to identify each sections separately as well as when giving styles for the web pages.

```html
<!Quiz home page content>
<div class="initial-container" id="initialContainer">
    <img src = "img/logo.jpeg">
    <h2>Basket ball Quiz </h2>
    <hr>
    <div>
        <p>You have <span id="timeDisplay"></span> to answer all questions</p>
        <button onclick="startQuiz()">Begin</button>
    </div>
</div>
```

Figure 2 HTML code snippet for Quiz home page Content

According to the above image (Figure 3), class consist with the name "initial-container" was used to style the Quiz home page. CSS code snippet used to style this section can be shown as follow. (Figure 4)

```
48
49     .initial-container {
50     color:white;
51     background:#4f1519;
52     width: 100%;
53     text-align: center;
54     }
55
```

Figure 4 CSS code snippet for Quiz home page Content

According to the image (Figure 3) the id consists with the name "timeDisplay" connects to the time calculating step in the JavaScript part. The "Begin" button displayed in the GUI is next connects with the "startQuiz" function.

```
function startQuiz() {

        var initialContainer = document.getElementById("initialContainer");
        var quizContainer = document.getElementById("quizContainer");
        var questionsContainer = document.getElementById("questionsContainer");

        var questionsHtml = "";

        // generate questions
        for (i = 0; i < questions.length; i++) {
           questionsHtml = questionsHtml + "<p>" + questions[i].question + "</p>";

           for (a = 0; a < questions[i].answers.length; a++) {
              var answerNumber = a + 1;
              questionsHtml = questionsHtml + "<button class='answer_" + i + "'
onClick='answerQuestion(this, " + answerNumber + "," + i + ")'>" + questions[i].answers[a] +
"</button><br><br>";
           }
        }

        questionsContainer.innerHTML = questionsHtml;

        initialContainer.style.display = "none";
        quizContainer.style.display = "block";

        startTimer();
     }
```

Figure 4 startQuiz Function

This "startQuiz" function is used to generate questions and it display the questions with the choices. Also it calls the "startTimer" function.
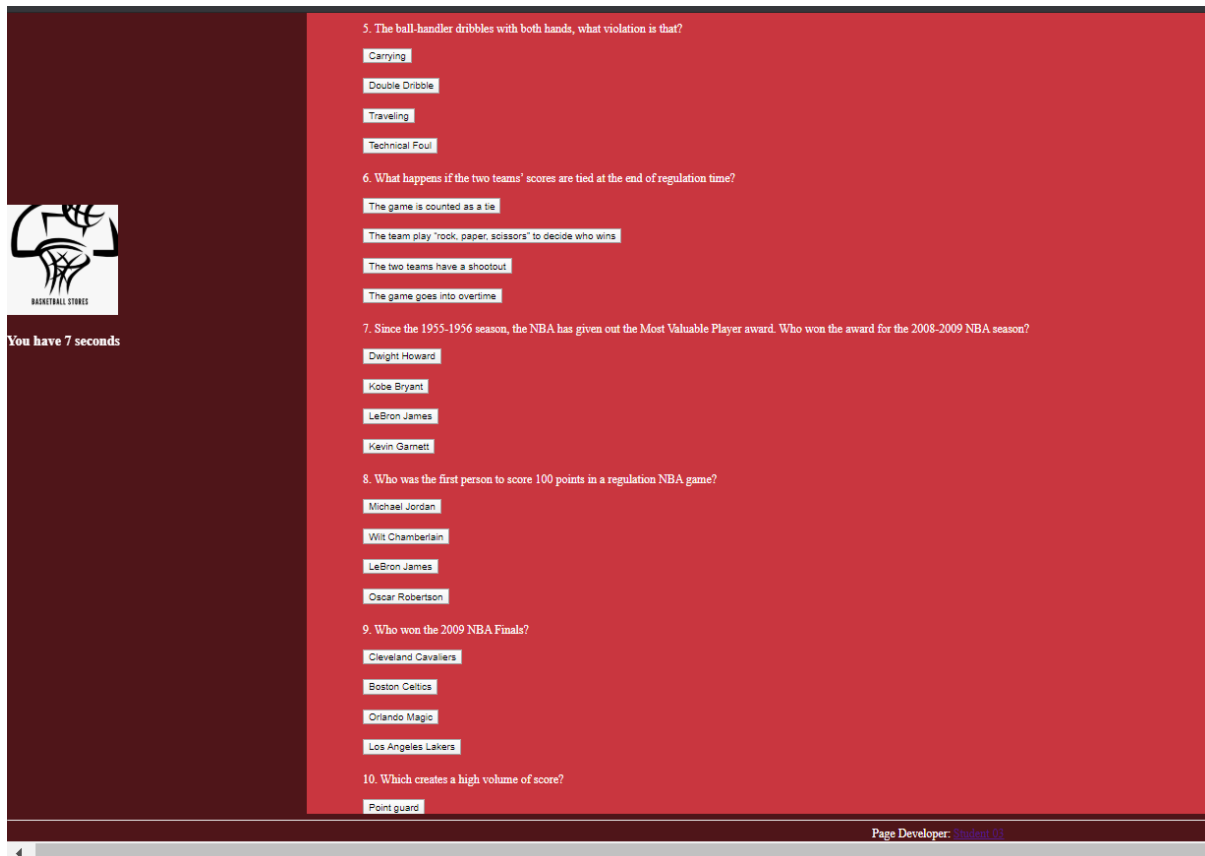
Figure 5 Question Content (GUI))

Above image indicate how the questions were generated and how the timer will work for user interface. After user done with the quiz and after clicks on the see result button or if user cannot answer before the time runs out then it will display the "Result" GUI for the user. (Figure 6 and Figure 7)
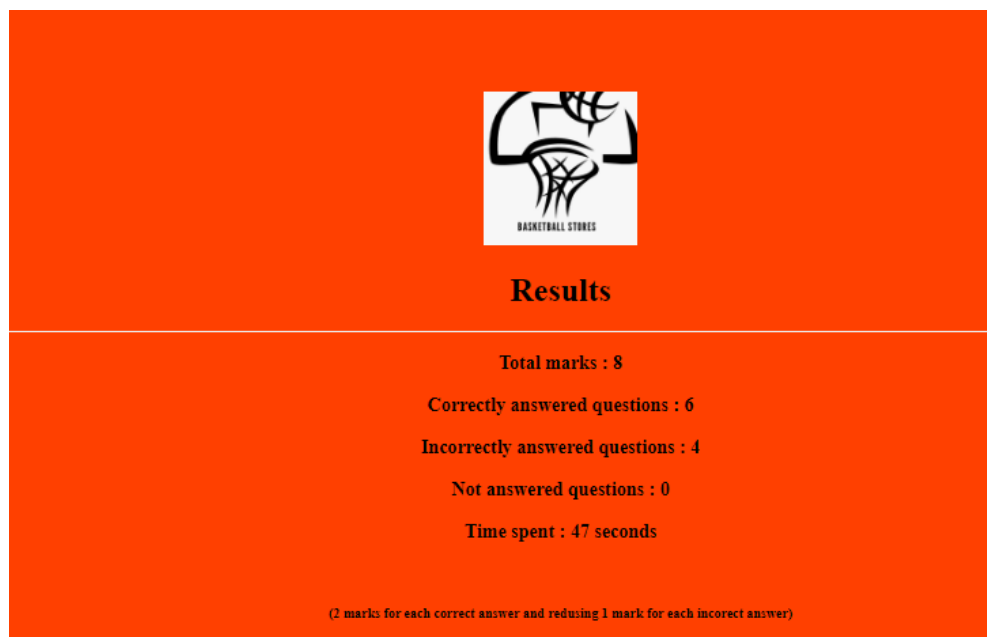

Figure 6 Result Page (Summary Content)

Figure 7 User Performance

Process statement of this website is it contain a multiple choice quiz about Basketball Sport. When user click on the Begin button in the quiz home page, then the questions with choices appearing in the user interface with a timer. After time stops or if user click on the see result button then the result page with the summary of user performance will be generated. In the user performance section, it will display the correct answer in green and incorrect answer in red whenever user selected a wrong answer. The user will get 2 marks for each correct answer and reduce their marks by 1 for each incorrect answer. If the user score more than 10 marks, then the background color will change to red or else it will change to green.

```
<style>
    /*Navigation bar styling */
    .container{
    height: 75px;
    background-color:
#4f1519;
    background-size: cover;
    width: 100%;
    z-index: 90;
    position: relative;
    overflow: hidden;
    }
    /* ---- Navigation ---- */
    .main-nav{
    float: left;
    margin-left: 330px;
    max-width: 1000px;
    }
```

```
.main-nav a{
    text-align: center;
    font-size: .95em;
    color: white;
    opacity: 1;
    text-transform: uppercase;
    padding: 5px 5px;
    transition: 0.4s ease;
    }
    .main-nav a:hover {
    opacity: .5;
    }
    .main-nav li {
    display: inline-block;
    margin-left: 15px;
    margin-top: 25px;
    }
```

```
#body{
    background:#4f1519;
    width:100%;}
    header{position:fixed;
    top:20;
    left:0;}
    .initial-container {
    color:white;
    background:#4f1519;
    width: 100%;
    text-align: center;}
img{width:150px;
    hight:150px;
    position:relative; top:0;
center:2}
    .quiz-container {
    color:white;
    display: none;
    margin: 5% 16%;
    padding: 2% 3%;
    background:#c9363f;
    }
```

7

```css
.results-container {
     display: none;
     text-align: center;
     padding: 5% 8%;
     }
     .see-results-button {
     margin-top: 20px;
     font-size: 15px;
     background-color: cornflowerblue;
     }
     #questionsSummaryContainer {
     color:white;
     background-color: #4f1519;
     padding: 4% 2%;
     }
     .correct-answer-button {
     background-color: #4dff4d;
     }
 .incorrect-answer-button {
     background-color: #ff6666;
     }
     #timer{
     text-align:right;
     color:white;
     }
     #questionsContainer p{
     margin-top: 5px;
     }
     #questionsContainer button{
     margin-right: 4px;
     }
 footer{
     color:white;
     background:#4f1519;
     width:100%;
     text-align:center;
     position:fixed;
     bottom:0;
     left:0;
     }
     </style>
```

Figure 8 Quiz CSS Code

HTML code segment used to create the Quiz can be figured as below. (Figure 9)
JavaScript code segment used to create the Quiz is shown in the Figure 10.

```
<!Navigation bar>
    <div class="container" id="container">
      <ul class="main-nav">
        <li><a href="main.html" id="home"><i class="fa fa-fw fa-home"></i>Home</a></li>
        <li><a href="main.html"><i class="fa fa-user" style="padding-right:
7px"></i>About</a></li>
        <li><a href="#.html"><i class="fa fa-edit" id="last" style="padding-right:
7px"></i>Products</a></li>
        <li><a href="CommentForm.html"><i class="fa fa-fw fa-envelope" style="padding-right:
7px"></i>Support</a></li>
        <li><a href="Gallery.html"><i class="fa fa-image" style="padding-right:
7px"></i>Gallery</a></li>
        <li><a href="quiz.html"><i class="fa fa-edit" id="last" style="padding-right:
7px"></i>Quiz</a></li>
        <li><a href="sitemap.html"><i class="fa fa-image" style="padding-right: 7px"></i>site
map</a></li>
        <li><a href="#developers-heading"><i class="fa fa-edit" id="last" style="padding-right:
7px"></i>Developers</a></li>
        <li><a href="sitemap.html"><i class="fa fa-image" style="padding-right: 7px"></i>site
map</a></li>
      </ul>
    </div>
    <!Quiz home page content>
    <div class="initial-container" id="initialContainer">
      <img src = "img/logo.jpeg">
      <h2>Basket ball Quiz </h2>
      <hr>
      <div>
        <p>You have <span id="timeDisplay"></span> to answer all questions</p>
        <button onclick="startQuiz()">Begin</button>
      </div>
    </div>
    <!Second page with question content>
    <div class="quiz-container" id="quizContainer">
      <header>
        <img src = "img/logo.jpeg">
        <h3 id="timer"></h3>
      </header>
      <div id="questionsContainer"></div>
      <button class="see-results-button" onclick="displayResults()">See Results</button>
    </div>
    <!Third page with resultand sumary page content>
    <div class="results-container" id="resultsContainer">
      <img src = "img/logo.jpeg">
      <h1>Results</h1>
      <hr />
      <div id="marksContainer"></div>
      <div id="questionsSummaryContainer"></div>
    </div>
    <!Page Developer details content for every page>
    <footer>
      <hr>
      Page Developer: <a href = "Student3.html">Student 03</a>
    </footer>
```

Figure 9 Quiz HTML Code

```
<script>
      var quizTime = 60000;
      var spentSeconds = 0;
      var interval;

      document.getElementById("timeDisplay").innerHTML = quizTime / 1000 + ' seconds';

      var questions = [
        {
            question: "1.        The only essential equipment of Basketball game is?",
            answers: ["Towel and bottle of water", "Shoes and shirt", "Table and board", "Ball and
court"],
            correctAnaswer: 4,
            selectedAnswer: null
        },
        {
            question: "2.        Who is the fastest player of the basketball team?",
            answers: ["Rebounder", "Point guard", "Shooting guard", "Blocker"],
            correctAnaswer: 2,
            selectedAnswer: null
        },
        {
            question: "3.        Where do you go, if you get fouled in the act of shooting?",
            answers: ["The Bench", "Three-Point Line", "Free Throw Line", "Half Court Line"],
            correctAnaswer: 3,
            selectedAnswer: null
        },
        {
            question: "4.        ball-handler takes three steps without dribbling, what violation did he
commit?",
            answers: ["Travelling", "Goaltending", "Double Dribble", "Carrying"],
            correctAnaswer: 1,
            selectedAnswer: null
        },
{
            question: "5.        The ball-handler dribbles with both hands, what violation is that?",
            answers: ["Carrying", "Double Dribble", "Traveling", "Technical Foul"],
            correctAnaswer: 2,
            selectedAnswer: null
        },
        {
            question: "6.        What happens if the two teams' scores are tied at the end of regulation
time?",
            answers: ["The game is counted as a tie", "The team play "rock, paper, scissors" to decide
who wins", "The two teams have a shootout", "The game goes into overtime"],
            correctAnaswer: 4,
            selectedAnswer: null
        },
```

```
{
        question: "7.        Since the 1955-1956 season, the NBA has given out the Most Valuable
Player award. Who won the award for the 2008-2009 NBA season?",
        answers: ["Dwight Howard", "Kobe Bryant", "LeBron James", "Kevin Garnett"],
        correctAnaswer: 3,
        selectedAnswer: null
    },
    {
        question: "8.        Who was the first person to score 100 points in a regulation NBA game?",
        answers: ["Michael Jordan", "Wilt Chamberlain", "LeBron James", "Oscar Robertson"],
        correctAnaswer: 2,
        selectedAnswer: null
    },
    {
        question: "9.        Who won the 2009 NBA Finals?",
        answers: ["Cleveland Cavaliers", "Boston Celtics", "Orlando Magic", "Los Angeles Lakers"],
        correctAnaswer: 4,
        selectedAnswer: null
    },
    {
        question: "10.        Which creates a high volume of score?",
        answers: ["Point guard", "Shooting guard", "Libero", "Blocker"],
        correctAnaswer: 2,
        selectedAnswer: null
    },
];

function startQuiz() {

    var initialContainer = document.getElementById("initialContainer");
    var quizContainer = document.getElementById("quizContainer");
    var questionsContainer = document.getElementById("questionsContainer");

    var questionsHtml = "";

    // generate questions
    for (i = 0; i < questions.length; i++) {
        questionsHtml = questionsHtml + "<p>" + questions[i].question + "</p>";

        for (a = 0; a < questions[i].answers.length; a++) {
            var answerNumber = a + 1;
            questionsHtml = questionsHtml + "<button class='answer_" + i + "'
onClick='answerQuestion(this, " + answerNumber + "," + i + ")'>" + questions[i].answers[a] +
"</button><br><br>";
        }
    }
```

```
questionsContainer.innerHTML = questionsHtml;

        initialContainer.style.display = "none";
        quizContainer.style.display = "block";

        startTimer();
    }

    function startTimer() {
        var quizTimeInSeconds = quizTime / 1000;

        interval = setInterval(function () {
            spentSeconds = spentSeconds + 1;

            document.getElementById("timer").innerHTML = 'You have ' +(quizTimeInSeconds -
spentSeconds) + ' seconds';

            if (spentSeconds == quizTimeInSeconds) {
                displayResults();
            }
        }, 1000);
    }

    function displayResults() {
        clearInterval(interval);
        var quizContainer = document.getElementById("quizContainer");
        var resultsContainer = document.getElementById("resultsContainer");
        var marksContainer = document.getElementById("marksContainer");
        var questionsSummaryContainer = document.getElementById("questionsSummaryContainer");


        var marks = 0;
        var correctAnswers = 0;
        var incorrectAnswers = 0;
        var notAnsweredQuestions = 0;

        for (i = 0; i < questions.length; i++) {

            if (questions[i].correctAnaswer == questions[i].selectedAnswer) {
                marks = marks + 2;
                correctAnswers = correctAnswers + 1;
            } else if (questions[i].selectedAnswer == null) {
                notAnsweredQuestions = notAnsweredQuestions + 1;
            } else {
                marks = marks - 1;
                incorrectAnswers = incorrectAnswers + 1;
            }
        }
```

```
var resultsHtml = "<h3> Total marks : " + marks + "</h3>" +
        "<h3> Correctly answered questions : " + correctAnswers + "</h3>" +
        "<h3> Incorrectly answered questions : " + incorrectAnswers + "</h3>" +
        "<h3> Not answered questions : " + notAnsweredQuestions + "</h3>" +
        "<h3> Time spent : " + spentSeconds + " seconds</h3>"+"<br>"+
    "<h5> (2 marks for each correct answer and redusing 1 mark for each incorect answer)";


    marksContainer.innerHTML = resultsHtml;

    var questionsSummaryHtml = "";

    // generate questions summary
    for (i = 0; i < questions.length; i++) {
        questionsSummaryHtml = questionsSummaryHtml + "<p>" + questions[i].question +
"</p>";

        for (a = 0; a < questions[i].answers.length; a++) {
            var answerNumber = a + 1;
            if (answerNumber == questions[i].correctAnaswer) {
                questionsSummaryHtml = questionsSummaryHtml + "<button class='correct-answer-
button' >" + questions[i].answers[a] + "</button><br><br>";
            } else if (answerNumber == questions[i].selectedAnswer) {
                questionsSummaryHtml = questionsSummaryHtml + "<button class='incorrect-
answer-button' >" + questions[i].answers[a] + "</button><br><br>";
            } else {
                questionsSummaryHtml = questionsSummaryHtml + "<button>" +
questions[i].answers[a] + "</button><br><br>";
            }

        }
    }

    questionsSummaryContainer.innerHTML = questionsSummaryHtml;


    quizContainer.style.display = "none";
    resultsContainer.style.display = "block";

    if (marks < 10) {
        document.getElementById("body").style.backgroundColor = "#ff4000";
    } else {
        document.getElementById("body").style.backgroundColor = "#33ff33";
    }
}
```

```
function answerQuestion(element, answerNumber, questionIndex) {
        var answerButtons = document.getElementsByClassName("answer_" +
questionIndex);

        for (a = 0; a < answerButtons.length; a++) {
            answerButtons[a].style.backgroundColor = "white";
        }

        element.style.backgroundColor = "yellow";
        questions[questionIndex].selectedAnswer = answerNumber;
    }


    </script>
```

Figure 10 Quiz JavaScript Code

Now let's, have a look on how the student Details in the main page will looks like.
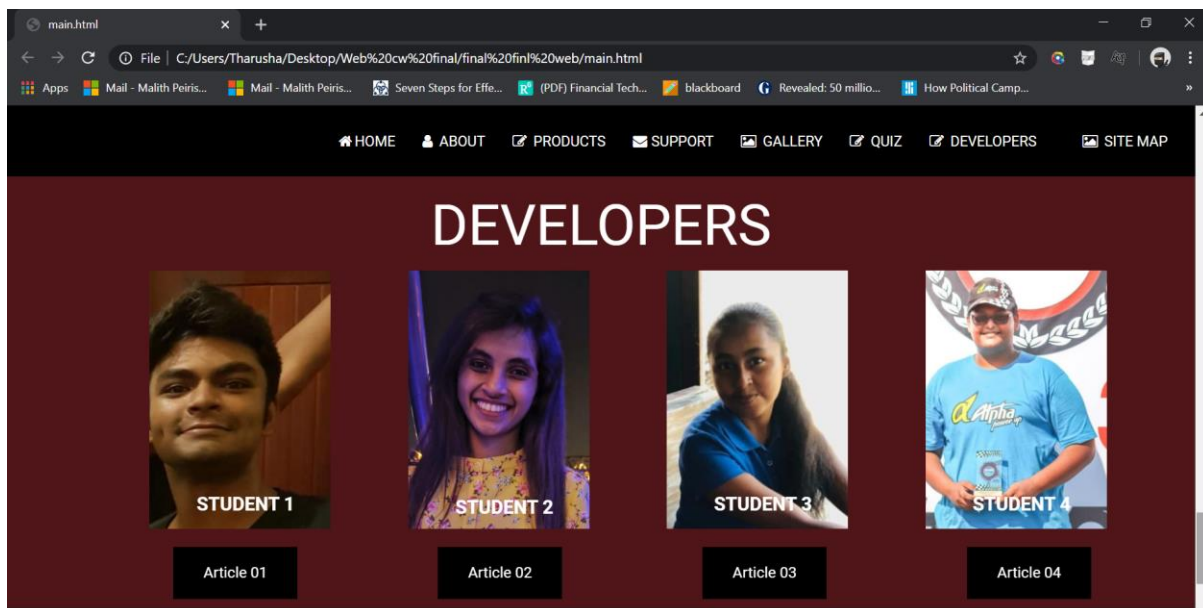
Figure 11 Student Details

While considering the student details page it was mostly created by using CSS. As previously mentioned for this student detail page it also consists with <div> tags which helps to separate sections.

Figure 12 student Details HTML code segment

CSS used to style the above mentioned student details web page are as follow.

```
569  .container4 .box1 .content h2{
570      color:#fff;
571      transition:0.5s;
572      text-transform:uppercase;
573      margin-bottom:2px;
574      font-size:20px;
575      transform:translateY(200px);
576  }
577  .container4 .box1:hover .content h2{
578      transform:translateY(0);
579      transition-delay:0.6s;
580  }
581  .container4 .box1 .content p{
582      color:#fff;
583      transform:translateY(200px);
584      transition:0.5s;
585      font-size:14px;
586  }
587  .container4 .box1:hover .content p{
588      transform:translateY(0);
589      transition-delay:0.7s;
590  }
591  #MoreInfo{
592      color:black;
593  }
```

Here, when user moves the mouse over one of the student picture, the details of that member is hovering with that image. The details shown by the effect are: Student No (1,2,3 or 4), Name, IIT Student ID, UOW ID and a button with the text" For More Info" which take user to the page editor page which created by all the four members. Also the articles made by each student also displaying when the "Article" button was clicked.

Next let's review the Page Editor page which consists with student name, role and the task allocated for the students.
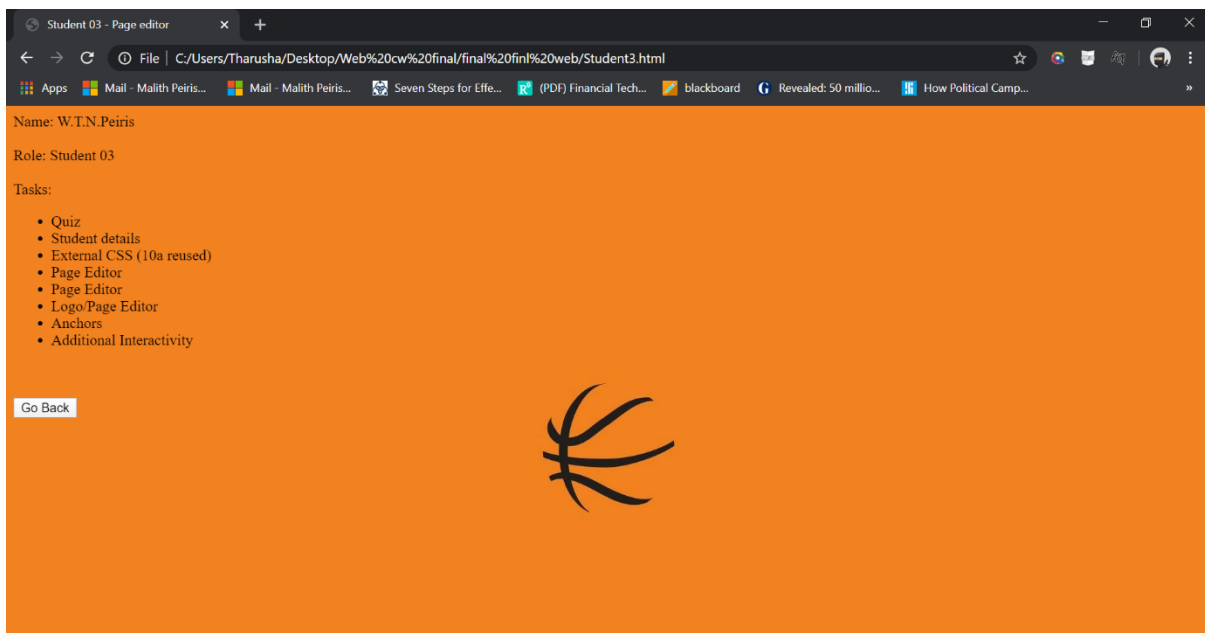

Figure 13Page Editor(Student 3)

This page editor page is done with using basic HTML knowledge. It includes an unordered list to show the tasks which allocated for the student 03.and when the go back button clicked by the user it will go to the history page (previous page).

16

3. Discussion of UI and application of UX principles

Entire web site was created using the font colour "#4f1519" which gives a maroon colour to the background. First when making the website all the member's in group number 01 had chosen Black and white for the theme colour. By the end of creating website all of the students thought to change background to a light colour but considering the other websites with Basketball Sport, all of the members agree on the maroon background is fine. (Figure 14)

So for the quiz also maroon background was chosen because of it's the theme colour of the web site.

When considering the header of the Quiz main page if user wants to navigate to another section of the website user can easily navigate through the navigation bar.

If user wants to find the editor of the quiz page, then he/she can easily find the editor by following the link at the footer of the page.

This webpage initially targeted the adults who do like Basketball sports. So, by examining the targeted audience the quiz page was designed with questions which can be easily answered by the people who knows about basketball sport.

Figure 14 Website Main Page

When reviewing the developer section as well as the other sections created in the main page gives the symmetrical balance to the website. Because the content of the main page is arranged on either side of the center of a composition in an equally weighted mode.

3.1 Information architecture

a. Design

implementing a site map and linking the quiz page and developers section in main page is done in this website. So when user needs help with navigating it will help the user to link from one section to another.

b. Code to achieve good Information architecture

The Subject / Topic based structure is used for this website. Because user can navigate through this website as long as they preferred to this website. And the structural theme used for the website is WEB structure because when user select quiz page when he was in the main page and after he navigate to the quiz page if he wants to move on to the comment page user can easily access the navigation through the navigation bar. So it's easy when allowing user to follow their interest in a unique pattern rather than navigating to the main page again and again.

3.2 Colour balance/composition/graphics/consistency

a. Design

According to the targeted audience and considering other websites of Basketball Sports, group 01 selected a dark background colour for the website. So for the quiz page and also for the developer section in the main page it was used the #4f1519 colour which looks like maroon for the website. The text colour assume for web page is white because when it comes to a dark background the text colour should be light. For Developers section it was used a light pink mixed blue colour to the hovering image. Because from that user can see the image of the developer as well as the details.

b. Code to achieve good colour balance & ensure consistency

CSS code for the Developers section

```
.container4{
          display: flex;
  width: 100%;
  box-sizing: border-box;
  height: 50vh;
  background-color:#4f1519;
}
.container4 .box1{
        position:relative;
        padding-left:20%;
        width:275px;
        height:275px;
        overflow:hidden;
        transition:0.5s;
}
.container4 .box1:hover{
        z-index:1;
        transform:scale(1.25);
        box1-shadow:0 25px 40px rgba(0,0,0,.5);
}
.container4 .box1 .imgbox1{
        position:absolute;
        top:0;
        left:0;
        width:70%;
        height:190%;
}
.container4 .box1 .imgbox1:before{
        content:'';
        position:absolute;
        top:0;
        left:0;
        width:100%;
        height:100%;
        z-index:1;
        background:linear-gradient(180deg,#ff00ff,#000066);
        mix-blend-mode:multiply;
        opacity:0;
```

```
        transition:0.5s;
}
.container4 .box1:hover .imgbox1:before{
        opacity:1;
}
.container4 .box1 .imgbox1 img{
        position:absolute;
        top:0;
        left:0;
        width:100%;
        height:100%;
        object-fit:cover;
}
.container4 .box1 .content{
        position:absolute;
        top:0;
        left:0;
        width:100%;
        height:100%;
        z-index:2;
        display:flex;
        padding:50px;
        align-items:flex-end;
}
.container4 .box1 .content h2{
        color:#fff;
        transition:0.5s;
        text-transform:uppercase;
        margin-bottom:2px;
        font-size:20px;
        transform:translateY(200px);
}
.container4 .box1:hover .content h2{
        transform:translateY(0);
        transition-delay:0.6s;
}
.container4 .box1 .content p{
        color:#fff;
        transform:translateY(200px);
        transition:0.5s;
        font-size:14px;
}
.container4 .box1:hover .content p{
        transform:translateY(0);
        transition-delay:0.7s;
}
#MoreInfo{
        color:black;
}
```

c. Colour contrast test results

3.3 Typography / consistency

a. Design

For the result page in the quiz, the heading with "Results" <h1> font size is used because it's the main heading for that page. And for the marks content it was used the <h3> font size is used. To express how the marks was given, the marking strategy was shown by using <h5> font size. The smallest (h5 font size) is used because that content is not necessary but it will be useful for some of the users.

b. Code to achieve good typography / consistency

CSS code for the quiz result page:

```css
.results-container {
    display: none;
    text-align: center;
    padding: 5% 8%;
    }
#questionsSummaryContainer {
    color:white;
    background-color: #4f1519;
    padding: 4% 2%;
    }
    .correct-answer-button {
    background-color: #4dff4d;
    }
    .incorrect-answer-button {
    background-color: #ff6666;
    }
    #timer{
    text-align:right;
    color:white;
    }
    #questionsContainer p{
    margin-top: 5px;
    }
    #questionsContainer button{
    margin-right: 4px;
    }
```

```html
<!Third page with resultand sumary page content>
    <div class="results-container" id="resultsContainer">
    <img src = "img/logo.jpeg">
    <h1>Results</h1>
    <hr />
    <div id="marksContainer"></div>
    <div id="questionsSummaryContainer"></div>
    </div>
```

```javascript
var resultsHtml = "<h3> Total marks : " + marks + "</h3>" +
        "<h3> Correctly answered questions : " + correctAnswers + "</h3>" +
        "<h3> Incorrectly answered questions : " + incorrectAnswers + "</h3>" +
        "<h3> Not answered questions : " + notAnsweredQuestions + "</h3>" +
        "<h3> Time spent : " + spentSeconds + " seconds</h3>"+"<br>"+
    "<h5> (2 marks for each correct answer and redusing 1 mark for each incorect answer)";
```

3.4 Gestalt principles grouping
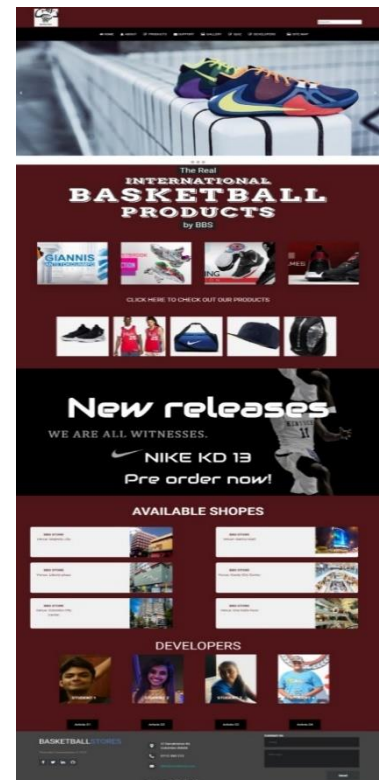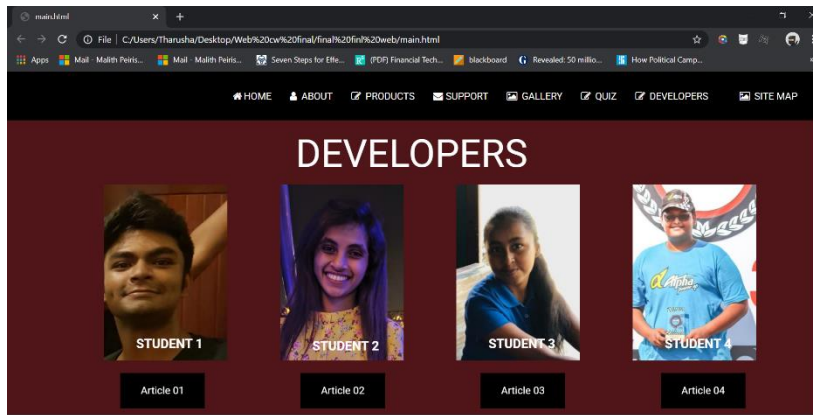
Figure 15 Gestalt Principle

According to the website created, images with products and the places where available shops and also the developers are repeatedly in the same style by having the semantical balance of the images and the related buttons and icons are enclosing the content of similar type.

By reviewing Developers content or the whole main page of the website, it clearly shows that the content of this website has aligned the Titles in a wonderful manner. Also leaving spaces horizontally between every section as shown in the Figure 15. The space between the article buttons and the student images interact with each of them respectively.

Considering the content of the webpage the closure used in the heading Available shop and the Developers.

Continuation can be described by the images of the group members because the boxes contain the images are repeated for four times as well as the article buttons.

3.5 Accessibility (graphics/forms)

a. Graphical elements - Design/Code
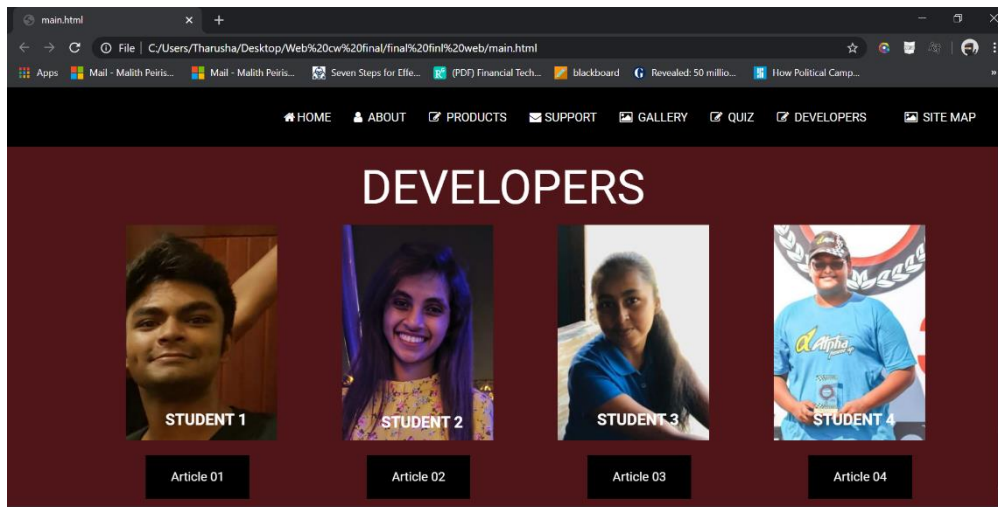
b. Form completion - Design/Code

```
<div class="container4">
            <div class="box1" style="margin-left:12%">
                <div class="imgbox1">
                        <img src="Danuja.jpg">
                </div>
                <div class="content">
                        <div>
                                <h2>Student 1</h2>
                                <br>
                                <p>Name: Danuja Silva <br><br> UOW ID: w1761772
<br><br> IIT ID: 2018221<br>

                                <input type="button" value="For More Info"
onclick="newDoc1()" id="MoreInfo">
                                </p>
                        </div>
                </div>
            </div>
            <div class="box1">
                <div class="imgbox1">
                        <img src="Thamadi.jpg">
                </div>
                <div class="content">
                        <div>
                                <h2>Student 2</h2>
                                <p>Name: K.A.T.D.Gunawardena  <br><br> UOW ID:
w1714900  <br><br> IIT ID: 2018135<br>

                                <input type="button" value="For More Info"
onclick="newDoc2()" id="MoreInfo">

                                </p>

                        </div>

                </div>
```

23

```
                                </div>
                                <div class="box1">
                                        <div class="imgbox1">
                                                <img src="Tharusha.jpg">
                                        </div>
                                        <div class="content">
                                                <div>
                                                        <h2>Student 3</h2>
                                                        <br>
                                                        <p>Name: W.T.N.Peiris<br><br> UOW ID: w1761915
<br><br> IIT ID: 2018422<br>

                                                        <input type="button" value="For More Info"
onclick="newDoc3()" id="MoreInfo">
                                                        </p>
                                                </div>
                                        </div>
                                </div>
                                <div class="box1">
                                        <div class="imgbox1">
                                                <img src="Jonathan.jpg">
                                        </div>
                                        <div class="content">
                                                <div>
                                                        <h2>Student 4</h2>
                                                        <br>
                                                        <p>Name: E.J.Homer <br><br> UOW ID: w1761887
<br><br> IIT ID: 2018330<br>

                                                        <input type="button" value="For More Info"
onclick="newDoc4()" id="MoreInfo">
                                                        </p>
                                                </div>
                                        </div>
                                </div>
                        </div>
                </div>
```

3.6 Error prevention and recovery

a. Design

when designing the web page, it gives errors such as the content wants to place is not placed in the correct place.

b. Code to address error prevention and recovery

Used comments when the code segment couldn't identify. And also used meaningful naming conventions.

4   Janet

According to the Janet principles a website should not contain anything offensive. This webpage is related to a sport website which contain basketball. Also it does not contain anything offensive. It

only having images which is truly related to the basketball category and the images of the group members.

5 Conclusions

The website quiz and the student detail section helped to improve my knowledge on HTML, CSS and JAVA SCRIPT. Also it gives a good practice on how java script functions are working. And it helps to know which colours are suitable to use for a website.

When considering about this report, it gives a good practice on how report writing can be done.

All of the group members give their great support to do this website a success.

References

Community.jisc.ac.uk. 2020. *Janet Policies And Legal Requirements | Jisc Community*. [online] Available at:
<https://community.jisc.ac.uk/library/janet-services-documentation/janet-policies-and-legal-requirements>
[Accessed 24 March 2020].

Appendices

Appendix A: Code
Provide a full listing of your files, with well indented and commented code in the following format:

quiz.html

```html
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>Quiz</title>
  </head>
  <body id="body">
    <style>
      /*Navigation bar styling */
      .container{
      height: 75px;
      background-color: #4f1519;
      background-size: cover;
      width: 100%;
      z-index: 90;
      position: relative;
      overflow: hidden;
      }
      /* ---- Navigation ---- */
      .main-nav{
      float: left;
      margin-left: 330px;
      max-width: 1000px;
```

```css
}
.main-nav a{
text-align: center;
font-size: .95em;
color: white;
opacity: 1;
text-transform: uppercase;
padding: 5px 5px;
transition: 0.4s ease;
}
.main-nav a:hover {
opacity: .5;
}
.main-nav li {
display: inline-block;
margin-left: 15px;
margin-top: 25px;
}
#body{
background:#4f1519;
width:100%;}
header{position:fixed;
top:20;
left:0;}

.initial-container {
color:white;
background:#4f1519;
width: 100%;
text-align: center;
}

img{width:150px;
hight:150px;
position:relative; top:0; center:2}
.quiz-container {
color:white;
display: none;
margin: 5% 16%;
padding: 2% 3%;
background:#c9363f;
}
.results-container {
display: none;
text-align: center;
padding: 5% 8%;
}
.see-results-button {
margin-top: 20px;
font-size: 15px;
background-color: cornflowerblue;
}
#questionsSummaryContainer {
color:white;
background-color: #4f1519;
```

```
        padding: 4% 2%;
        }
        .correct-answer-button {
        background-color: #4dff4d;
        }
        .incorrect-answer-button {
        background-color: #ff6666;
        }
        #timer{
        text-align:right;
        color:white;
        }
        #questionsContainer p{
        margin-top: 5px;
        }
        #questionsContainer button{
        margin-right: 4px;
        }
        footer{
        color:white;
        background:#4f1519;
        width:100%;
        text-align:center;
        position:fixed;
        bottom:0;
        left:0;
        }
    </style>
    <!Navigation bar>
    <div class="container" id="container">
      <ul class="main-nav">
        <li><a href="main.html" id="home"><i class="fa fa-fw fa-home"></i>Home</a></li>
        <li><a href="main.html"><i class="fa fa-user" style="padding-right:
7px"></i>About</a></li>
        <li><a href="#.html"><i class="fa fa-edit" id="last" style="padding-right:
7px"></i>Products</a></li>
        <li><a href="CommentForm.html"><i class="fa fa-fw fa-envelope" style="padding-right:
7px"></i>Support</a></li>
        <li><a href="Gallery.html"><i class="fa fa-image" style="padding-right:
7px"></i>Gallery</a></li>
        <li><a href="quiz.html"><i class="fa fa-edit" id="last" style="padding-right:
7px"></i>Quiz</a></li>
        <li><a href="sitemap.html"><i class="fa fa-image" style="padding-right: 7px"></i>site
map</a></li>
        <li><a href="#developers-heading"><i class="fa fa-edit" id="last" style="padding-right:
7px"></i>Developers</a></li>
        <li><a href="sitemap.html"><i class="fa fa-image" style="padding-right: 7px"></i>site
map</a></li>
      </ul>
    </div>

    <!Quiz home page content>
    <div class="initial-container" id="initialContainer">
      <img src = "img/logo.jpeg">
      <h2>Basket ball Quiz </h2>
```

```html
    <hr>
    <div>
      <p>You have <span id="timeDisplay"></span> to answer all questions</p>
      <button onclick="startQuiz()">Begin</button>
    </div>
  </div>

  <!Second page with question content>
  <div class="quiz-container" id="quizContainer">
    <header>
      <img src = "img/logo.jpeg">
      <h3 id="timer"></h3>
    </header>
    <div id="questionsContainer"></div>
    <button class="see-results-button" onclick="displayResults()">See Results</button>
  </div>


  <!Third page with resultand sumary page content>
  <div class="results-container" id="resultsContainer">
    <img src = "img/logo.jpeg">
    <h1>Results</h1>
    <hr />
    <div id="marksContainer"></div>
    <div id="questionsSummaryContainer"></div>
  </div>
  <!Page Developer details content for every page>
  <footer>
    <hr>
    Page Developer: <a href = "Student3.html">Student 03</a>
  </footer>
  <script>
    var quizTime = 60000;
    var spentSeconds = 0;
    var interval;

    document.getElementById("timeDisplay").innerHTML = quizTime / 1000 + ' seconds';

    var questions = [
      {
        question: "1.  The only essential equipment of Basketball game is?",
        answers: ["Towel and bottle of water", "Shoes and shirt", "Table and board", "Ball and
court"],
        correctAnaswer: 4,
        selectedAnswer: null
      },
      {
        question: "2.  Who is the fastest player of the basketball team?",
        answers: ["Rebounder", "Point guard", "Shooting guard", "Blocker"],
        correctAnaswer: 2,
        selectedAnswer: null
      },
      {
        question: "3.  Where do you go, if you get fouled in the act of shooting?",
        answers: ["The Bench", "Three-Point Line", "Free Throw Line", "Half Court Line"],
```

```
            correctAnaswer: 3,
            selectedAnswer: null
        },
        {
            question: "4.  ball-handler takes three steps without dribbling, what violation did he
commit?",
            answers: ["Travelling", "Goaltending", "Double Dribble", "Carrying"],
            correctAnaswer: 1,
            selectedAnswer: null
        },
        {
            question: "5.  The ball-handler dribbles with both hands, what violation is that?",
            answers: ["Carrying", "Double Dribble", "Traveling", "Technical Foul"],
            correctAnaswer: 2,
            selectedAnswer: null
        },
        {
            question: "6.  What happens if the two teams' scores are tied at the end of regulation
time?",
            answers: ["The game is counted as a tie", "The team play "rock, paper, scissors" to decide
who wins", "The two teams have a shootout", "The game goes into overtime"],
            correctAnaswer: 4,
            selectedAnswer: null
        },
        {
            question: "7.  Since the 1955-1956 season, the NBA has given out the Most Valuable
Player award. Who won the award for the 2008-2009 NBA season?",
            answers: ["Dwight Howard", "Kobe Bryant", "LeBron James", "Kevin Garnett"],
            correctAnaswer: 3,
            selectedAnswer: null
        },
        {
            question: "8.  Who was the first person to score 100 points in a regulation NBA game?",
            answers: ["Michael Jordan", "Wilt Chamberlain", "LeBron James", "Oscar Robertson"],
            correctAnaswer: 2,
            selectedAnswer: null
        },
        {
            question: "9.  Who won the 2009 NBA Finals?",
            answers: ["Cleveland Cavaliers", "Boston Celtics", "Orlando Magic", "Los Angeles
Lakers"],
            correctAnaswer: 4,
            selectedAnswer: null
        },
        {
            question: "10.           Which creates a high volume of score?",
            answers: ["Point guard", "Shooting guard", "Libero", "Blocker"],
            correctAnaswer: 2,
            selectedAnswer: null
        },
    ];

    function startQuiz() {

        var initialContainer = document.getElementById("initialContainer");
```

```
        var quizContainer = document.getElementById("quizContainer");
        var questionsContainer = document.getElementById("questionsContainer");

        var questionsHtml = "";

        // generate questions
        for (i = 0; i < questions.length; i++) {
            questionsHtml = questionsHtml + "<p>" + questions[i].question + "</p>";

            for (a = 0; a < questions[i].answers.length; a++) {
                var answerNumber = a + 1;
                questionsHtml = questionsHtml + "<button class='answer_" + i + "'
onClick='answerQuestion(this, " + answerNumber + "," + i + ")'>" + questions[i].answers[a] +
"</button><br><br>";
            }
        }

        questionsContainer.innerHTML = questionsHtml;

        initialContainer.style.display = "none";
        quizContainer.style.display = "block";

        startTimer();
    }

    function startTimer() {
        var quizTimeInSeconds = quizTime / 1000;

        interval = setInterval(function () {
            spentSeconds = spentSeconds + 1;


            document.getElementById("timer").innerHTML = 'You have ' +(quizTimeInSeconds -
spentSeconds) + ' seconds';

            if (spentSeconds == quizTimeInSeconds) {
                displayResults();
            }
        }, 1000);
    }

    function displayResults() {
        clearInterval(interval);
        var quizContainer = document.getElementById("quizContainer");
        var resultsContainer = document.getElementById("resultsContainer");
        var marksContainer = document.getElementById("marksContainer");
        var questionsSummaryContainer =
document.getElementById("questionsSummaryContainer");


        var marks = 0;
        var correctAnswers = 0;
        var incorrectAnswers = 0;
        var notAnsweredQuestions = 0;
```

```
for (i = 0; i < questions.length; i++) {

    if (questions[i].correctAnaswer == questions[i].selectedAnswer) {
        marks = marks + 2;
        correctAnswers = correctAnswers + 1;
    } else if (questions[i].selectedAnswer == null) {
        notAnsweredQuestions = notAnsweredQuestions + 1;
    } else {
        marks = marks - 1;
        incorrectAnswers = incorrectAnswers + 1;
    }
}

var resultsHtml = "<h3> Total marks : " + marks + "</h3>" +
    "<h3> Correctly answered questions : " + correctAnswers + "</h3>" +
    "<h3> Incorrectly answered questions : " + incorrectAnswers + "</h3>" +
    "<h3> Not answered questions : " + notAnsweredQuestions + "</h3>" +
    "<h3> Time spent : " + spentSeconds + " seconds</h3>"+"<br>"+
"<h5> (2 marks for each correct answer and redusing 1 mark for each incorect answer)";



marksContainer.innerHTML = resultsHtml;

var questionsSummaryHtml = "";

// generate questions summary
for (i = 0; i < questions.length; i++) {
    questionsSummaryHtml = questionsSummaryHtml + "<p>" + questions[i].question +
"</p>";

    for (a = 0; a < questions[i].answers.length; a++) {
        var answerNumber = a + 1;
        if (answerNumber == questions[i].correctAnaswer) {
            questionsSummaryHtml = questionsSummaryHtml + "<button class='correct-answer-
button' >" + questions[i].answers[a] + "</button><br><br>";
        } else if (answerNumber == questions[i].selectedAnswer) {
            questionsSummaryHtml = questionsSummaryHtml + "<button class='incorrect-
answer-button' >" + questions[i].answers[a] + "</button><br><br>";
        } else {
            questionsSummaryHtml = questionsSummaryHtml + "<button>" +
questions[i].answers[a] + "</button><br><br>";
        }

    }
}

questionsSummaryContainer.innerHTML = questionsSummaryHtml;


quizContainer.style.display = "none";
resultsContainer.style.display = "block";

if (marks < 10) {
    document.getElementById("body").style.backgroundColor = "#ff4000";
```

31

```
        } else {
          document.getElementById("body").style.backgroundColor = "#33ff33";
        }
      }

    function answerQuestion(element, answerNumber, questionIndex) {
      var answerButtons = document.getElementsByClassName("answer_" + questionIndex);

      for (a = 0; a < answerButtons.length; a++) {
        answerButtons[a].style.backgroundColor = "white";
      }

      element.style.backgroundColor = "yellow";
      questions[questionIndex].selectedAnswer = answerNumber;
    }


    </script>
  </body>
</html>
```

Student3.html

```
<!Doctype html>
<html>

<head>
<title>Student 03 - Page editor</title>
</head>
<style>
body {
  background-image: url('img/myBG.jpg');
  background-repeat: no-repeat;
  background-attachment: fixed;
  background-size: cover;
}
</style>
<body>
```

<!name, role and a list of the tasks completed>
Name: W.T.N.Peiris

Role: Student 03

Tasks:
 Quiz
 Student details
External CSS (10a reused)
Page Editor
Page Editor
Logo/Page Editor
Anchors
Additional Interactivity

<button onclick="goBack()">Go Back</button>

<script>
function goBack() {
  window.history.back();
}
</script>
</body>
</html>

main.html

(Developers code from main.html line number 200 - 265)

```
        <div class="paragraph"id="developers-heading">
    <p style="color: white">DEVELOPERS</p>
      </div>
      <div class="container4">
            <div class="box1" style="margin-left:12%">
                  <div class="imgbox1">
                        <img src="Danuja.jpg">
                  </div>
                  <div class="content">
                        <div>
                              <h2>Student 1</h2>
                              <br>
                              <p>Name: Danuja Silva <br><br> UOW ID: w1761772
<br><br> IIT ID: 2018221<br>
```

```
                                        <input type="button" value="For More Info"
onclick="newDoc1()" id="MoreInfo">
                                </p>
                        </div>
                </div>
                <div class="box1">
                        <div class="imgbox1">
                                <img src="Thamadi.jpg">
                        </div>
                        <div class="content">
                                <div>
                                        <h2>Student 2</h2>
                                        <p>Name: K.A.T.D.Gunawardena  <br><br> UOW ID:
w1714900  <br><br> IIT ID: 2018135<br>
                                        <input type="button" value="For More Info"
onclick="newDoc2()" id="MoreInfo">
                                </p>
                                </div>
                        </div>
                </div>
                <div class="box1">
                        <div class="imgbox1">
                                <img src="Tharusha.jpg">
                        </div>
                        <div class="content">
                                <div>
                                        <h2>Student 3</h2>
                                        <br>
                                        <p>Name: W.T.N.Peiris<br><br> UOW ID: w1761915
<br><br> IIT ID: 2018422<br>

                                        <input type="button" value="For More Info"
onclick="newDoc3()" id="MoreInfo">
                                </p>
                                </div>
                        </div>
                </div>
                <div class="box1">
                        <div class="imgbox1">
                                <img src="Jonathan.jpg">
                        </div>
                        <div class="content">
                                <div>
                                        <h2>Student 4</h2>
                                        <br>
                                        <p>Name: E.J.Homer <br><br> UOW ID: w1761887
<br><br> IIT ID: 2018330<br>

                                        <input type="button" value="For More Info"
onclick="newDoc4()" id="MoreInfo">
                                </p>
                                </div>
                        </div>
                </div>
        </div>
        <div class="container5">
```
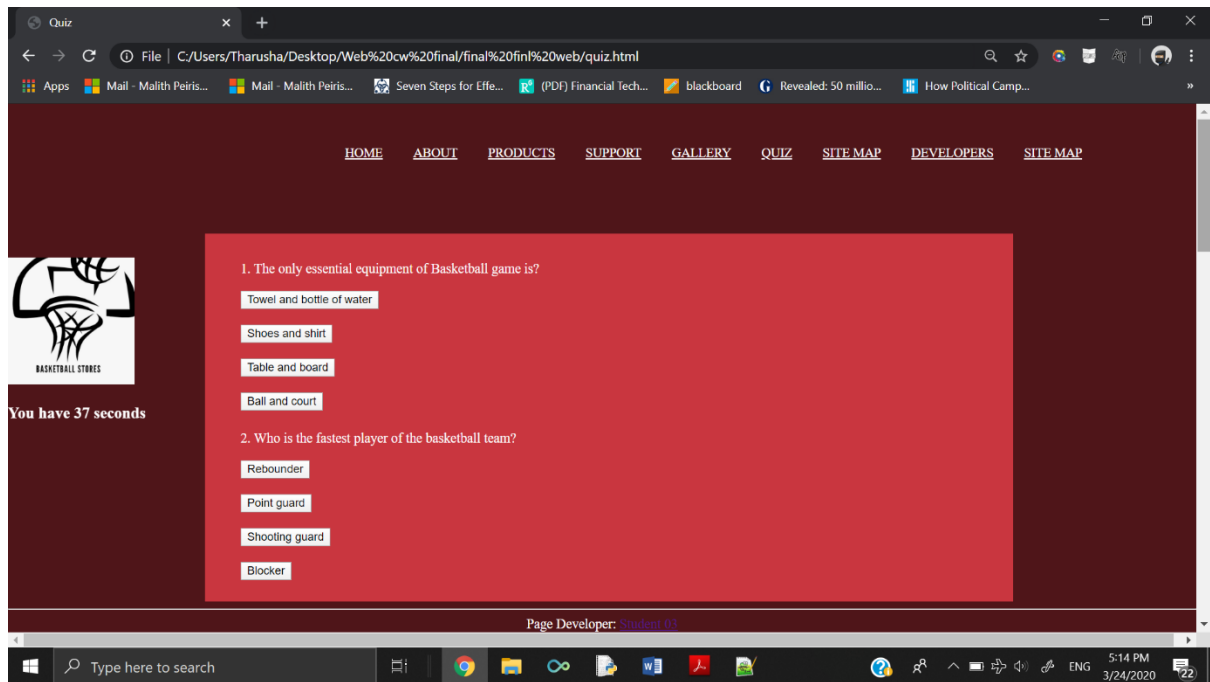
```
<a href="article1.html" class="button1">Article 01</a>
<a href="article2.html" class="button2">Article 02</a>
<a href="article3.html" class="button2">Article 03</a>
<a href="article4.html" class="button2">Article 04</a>
</div>
```

(Developers code CSS from stylesheet.css line number 506 - 593)

```css
.container4{
        display: flex;
 width: 100%;
 box-sizing: border-box;
 height: 50vh;
 background-color:#4f1519;
}
.container4 .box1{
        position:relative;
        padding-left:20%;
        width:275px;
        height:275px;
        overflow:hidden;
        transition:0.5s;
}
.container4 .box1:hover{
        z-index:1;
        transform:scale(1.25);
        box1-shadow:0 25px 40px rgba(0,0,0,.5);
}
.container4 .box1 .imgbox1{
        position:absolute;
        top:0;
        left:0;
        width:70%;
        height:190%;
}
.container4 .box1 .imgbox1:before{
        content:'';
        position:absolute;
        top:0;
        left:0;
        width:100%;
        height:100%;
        z-index:1;
        background:linear-gradient(180deg,#ff00ff,#000066);
        mix-blend-mode:multiply;
        opacity:0;
        transition:0.5s;
}
.container4 .box1:hover .imgbox1:before{
        opacity:1;
}
.container4 .box1 .imgbox1 img{
        position:absolute;
```

```
        top:0;
        left:0;
        width:100%;
        height:100%;
        object-fit:cover;
}
.container4 .box1 .content{
        position:absolute;
        top:0;
        left:0;
        width:100%;
        height:100%;
        z-index:2;
        display:flex;
        padding:50px;
        align-items:flex-end;
}
.container4 .box1 .content h2{
        color:#fff;
        transition:0.5s;
        text-transform:uppercase;
        margin-bottom:2px;
        font-size:20px;
        transform:translateY(200px);
}
.container4 .box1:hover .content h2{
        transform:translateY(0);
        transition-delay:0.6s;
}
.container4 .box1 .content p{
        color:#fff;
        transform:translateY(200px);
        transition:0.5s;
        font-size:14px;
}
.container4 .box1:hover .content p{
        transform:translateY(0);
        transition-delay:0.7s;
}
#MoreInfo{
        color:black;
}
```

Appendix B: Screenshots

Provide a screenshot of all your web pages, in the following format:

quiz.html

HOME   ABOUT   PRODUCTS   SUPPORT   GALLERY   QUIZ   SITE MAP   DEVELOPERS   SITE MAP

BASKETBALL STORES

You have 37 seconds

1. The only essential equipment of Basketball game is?

Towel and bottle of water

Shoes and shirt

Table and board

Ball and court

2. Who is the fastest player of the basketball team?

Rebounder

Point guard

Shooting guard

Blocker

Page Developer: Student 03

6. What happens if the two teams' scores are tied at the end of regulation time?

The game is counted as a tie

The team play "rock, paper, scissors" to decide who wins

The two teams have a shootout

The game goes into overtime

7. Since the 1955-1956 season, the NBA has given out the Most Valuable Player award. Who won the award for the 2008-2009 NBA season?

Dwight Howard

Kobe Bryant

LeBron James

Kevin Garnett

8. Who was the first person to score 100 points in a regulation NBA game?
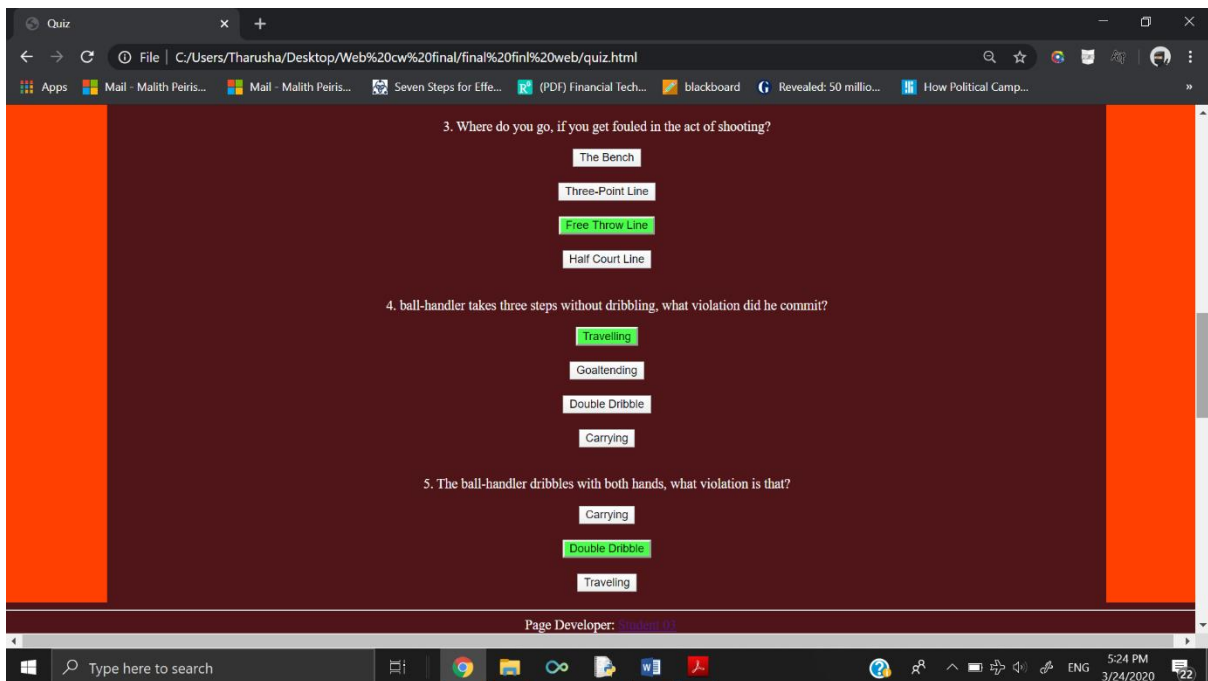
Michael Jordan

Wilt Chamberlain

LeBron James

Page Developer: Student 03

LeBron James

Oscar Robertson

9. Who won the 2009 NBA Finals?

Cleveland Cavaliers

Boston Celtics

Orlando Magic

Los Angeles Lakers

10. Which creates a high volume of score?

Point guard

Shooting guard

Libero

Blocker

Page Developer: Student 03
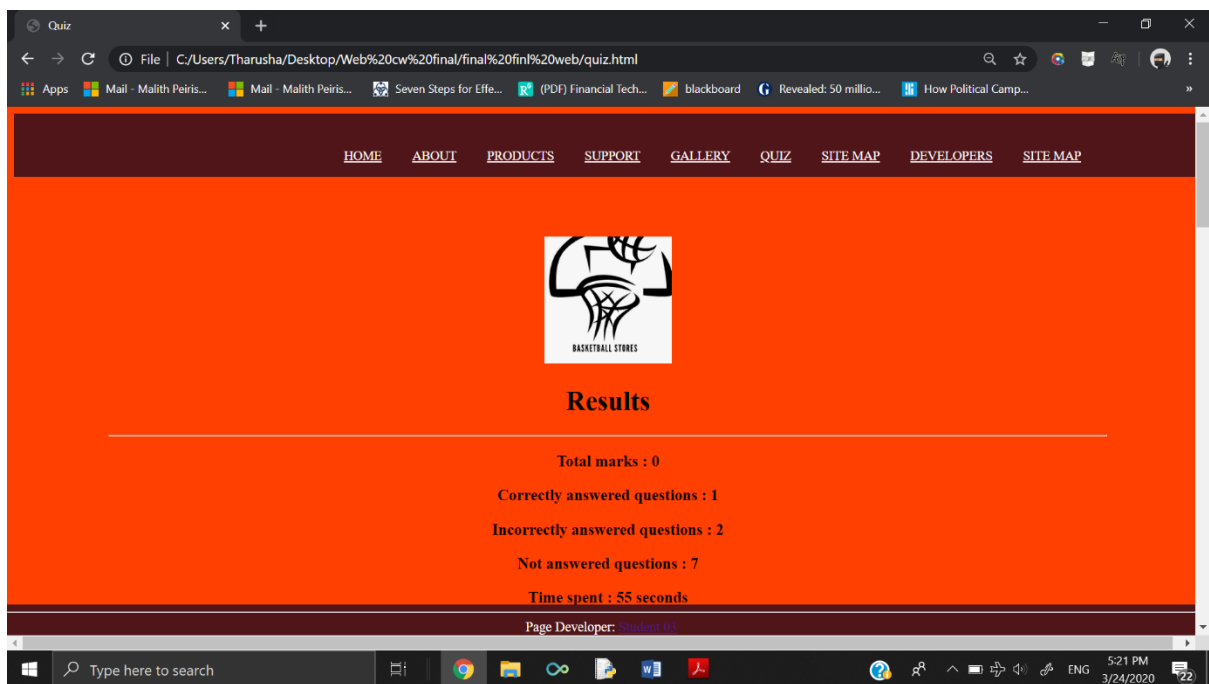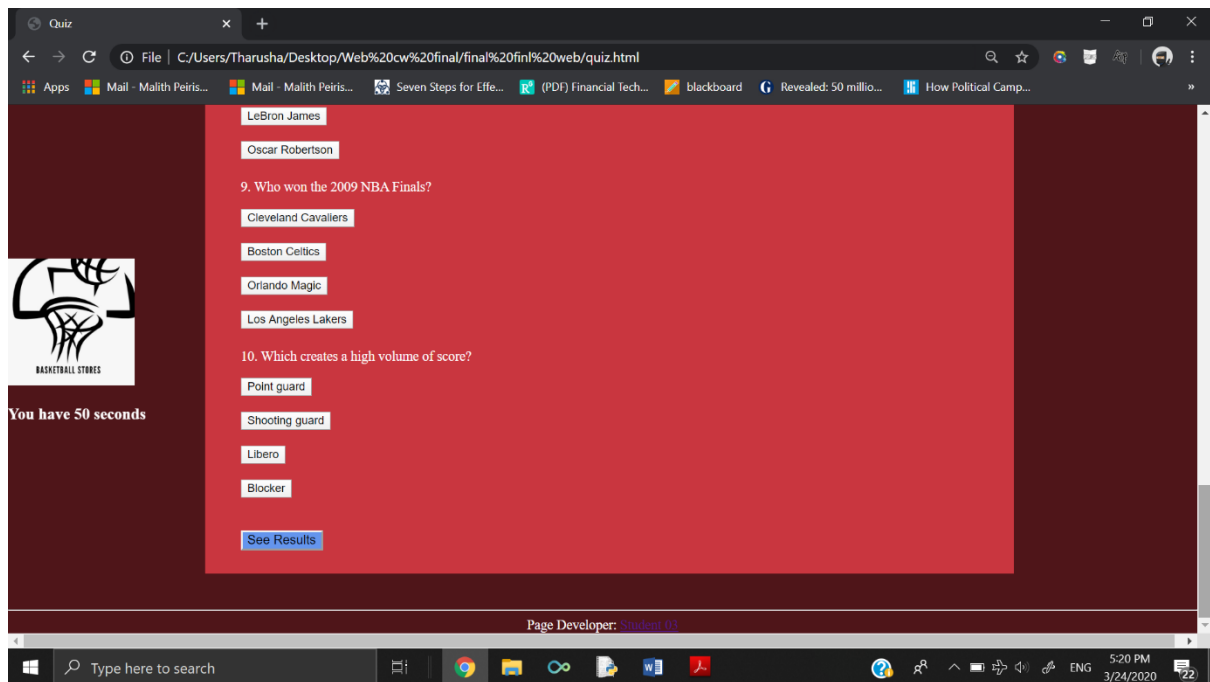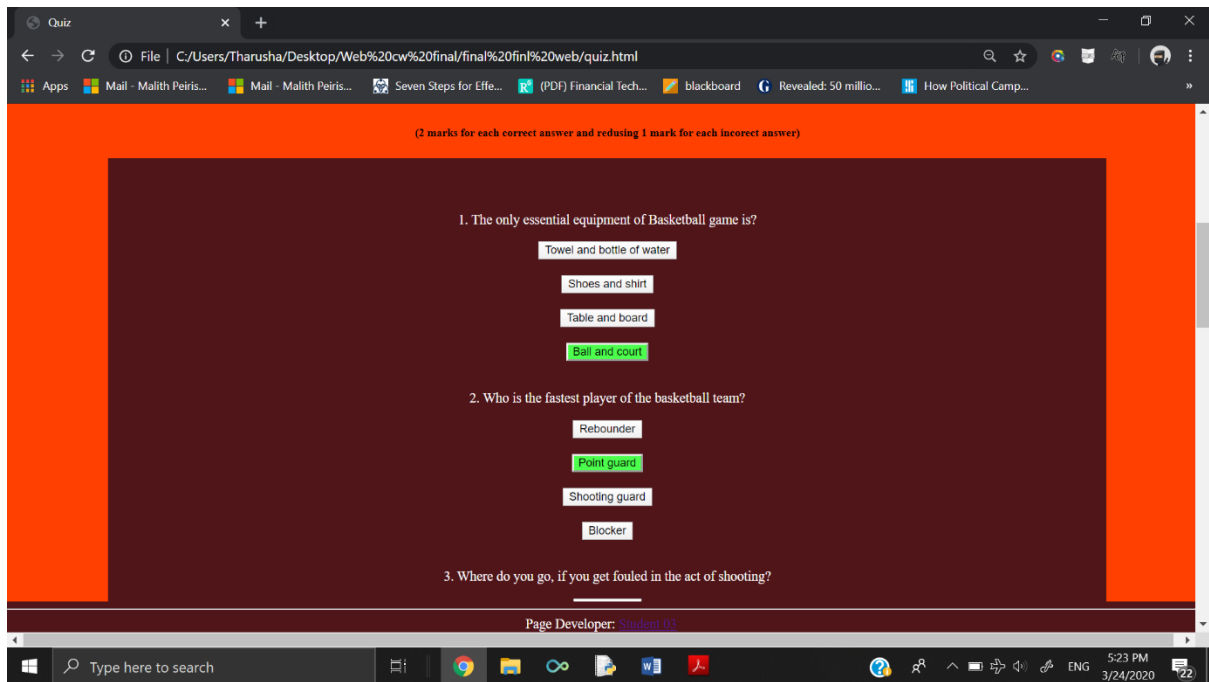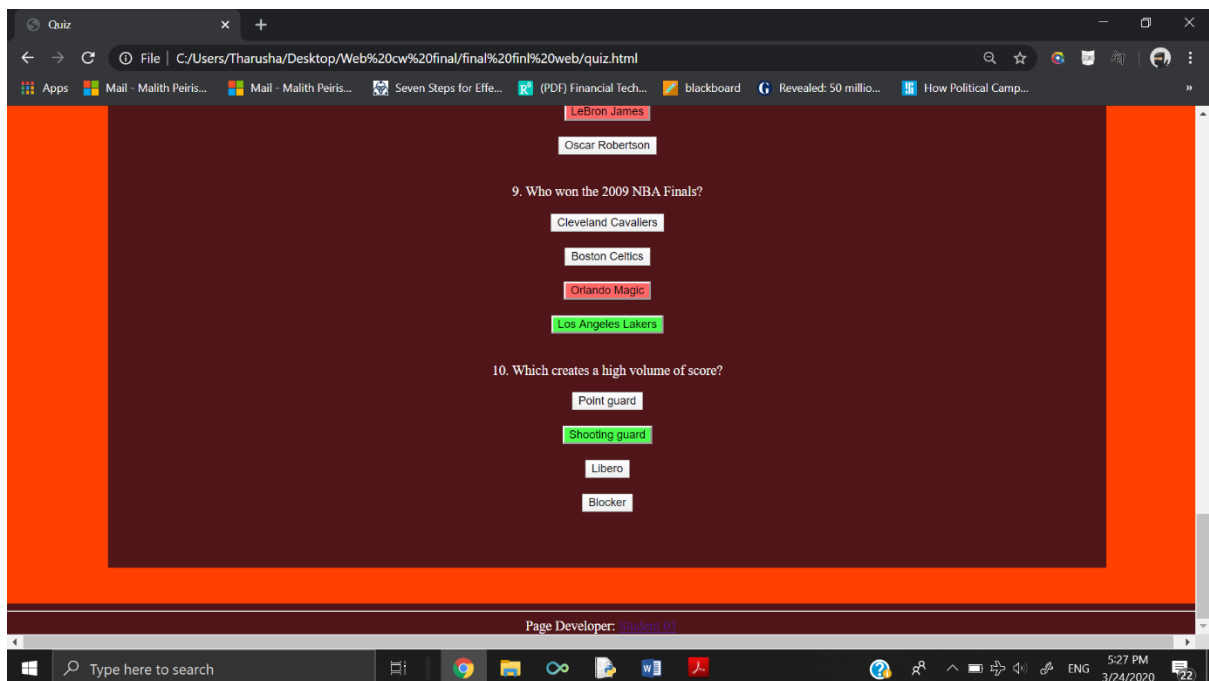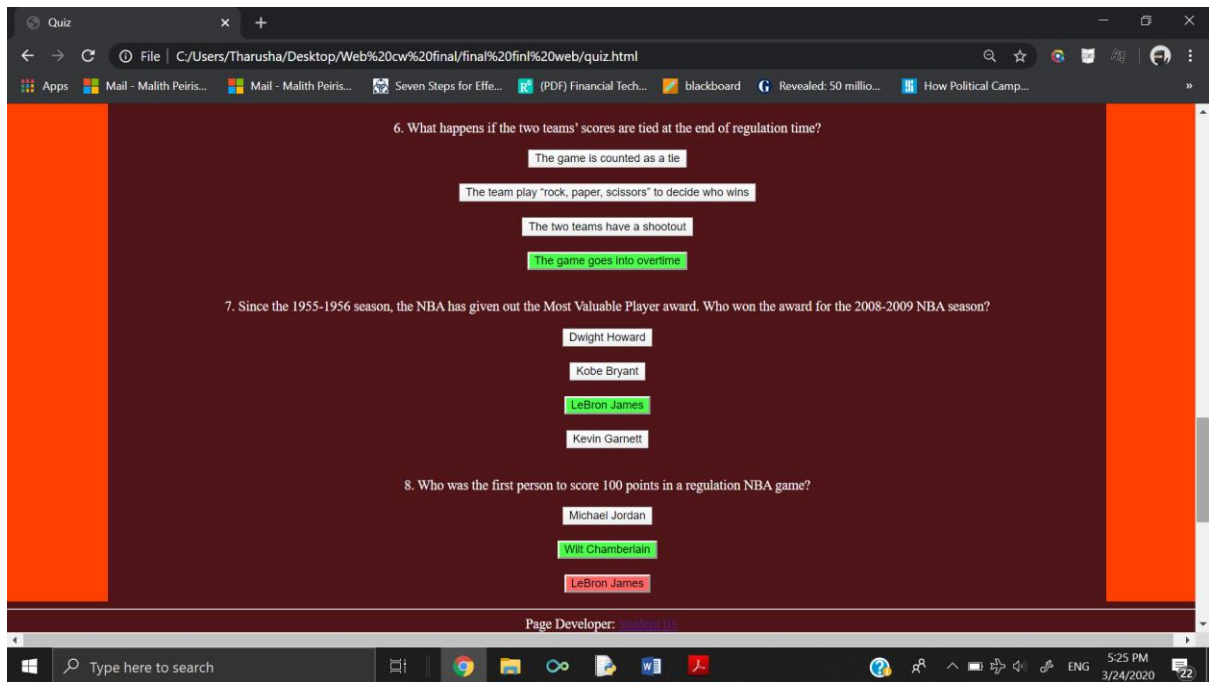
Student3.html
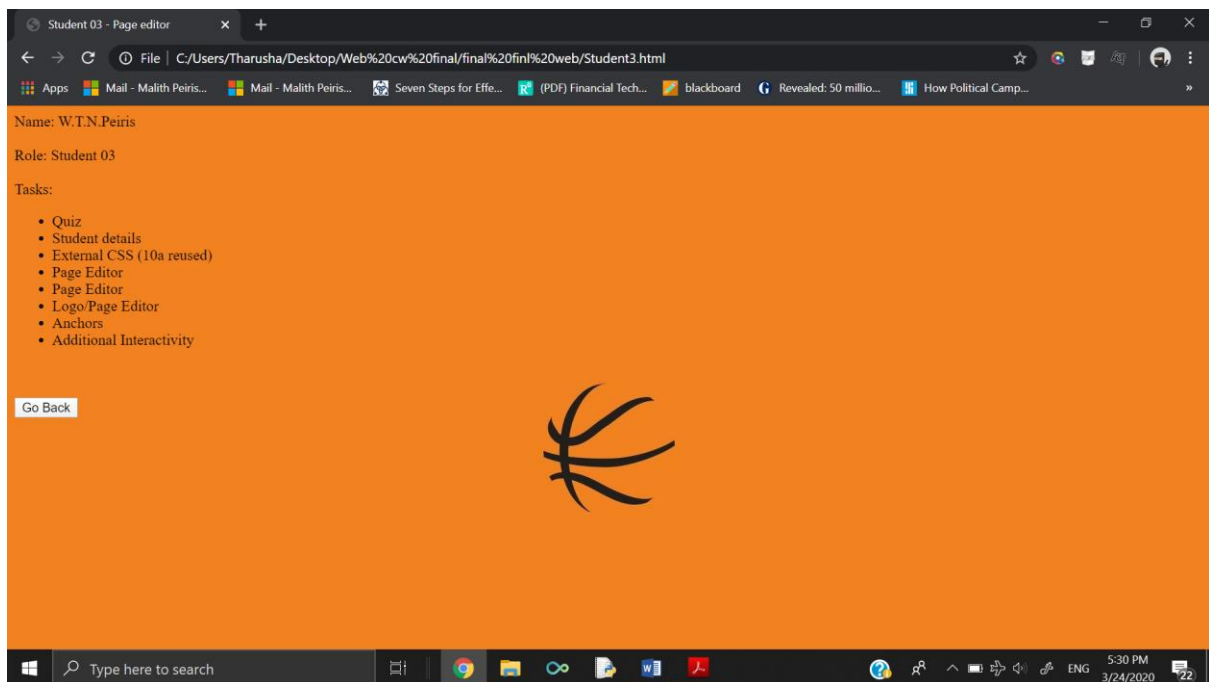
main.html (Developers Section)
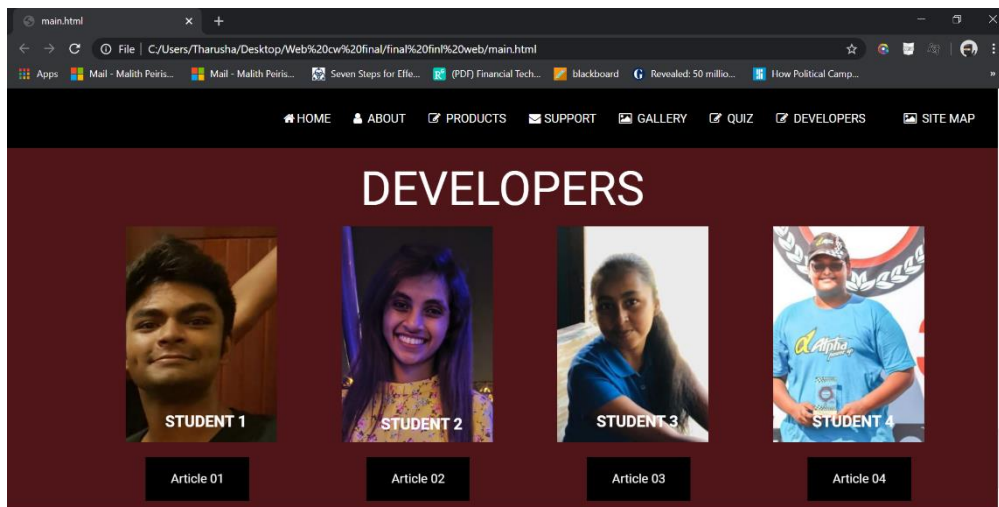
Appendix C: Individual Statement

Student Name:	W.T.N.Peiris		Student Id:	2018422
State what tasks you carried out in the project.				
- Quiz - Student details - External CSS (10a reused) - Page Editor - Logo/Page Editor - Anchors - Additional Interactivity				
State what you enjoyed and did not enjoy about teamwork.				
I enjoyed doing several parts. (having meetings)				
State what you learnt about teamwork.				
I understand the way of listening to the others ideas.				
State what skills you gained/learnt from undertaking the project.				
Writing skills Hard working				
State any strengths about yourself that emerged whilst undertaking the project.				
Commitment				
State any weaknesses about yourself that emerged whilst undertaking the project.				
Laziness				
State how you would do things better if you were to undertake the project again.				
Implementation of JS and hard to follow several guides to make it				
Additional general or project specific comments:				

	44
Student Signature:	Date: