

WEB PROGRAMMING ACTIVITY

4

Manan Shah

22BCE0618 GitHub repo: <https://github.com/manan04shah/bcse203e-web-programming>

Q)

Design a Webform with JavaScript to perform this. VIT considers two parameters while calculating GPA - grades obtained and corresponding credits assigned. VIT has assigned each Letter Grade some numeric Grade points, like S - 10, A - 9, B - 8, C - 7, D - 6, E - 5, F - 0.

$$\text{GPA} = (\text{Grades} \times \text{Credits}) / \text{Credits}$$

The absolute grading concept is adopted when the strength of the class is less than or equal to 10 in a theory or lab-embedded theory course.

Letter Grade	Marks Range (Maximum marks = 100)
S	>=90
A	>= 80 but < 90
B	>= 70 but < 80
C	>= 60 but < 70
D	>= 55 but < 60
E	>= 50 but < 55
F	Less than 50

Use this Assessment pattern for a Theory Subject as below

1	Digital Assignment - I	10
2	Quiz - I	10
3	Quiz - II	10
4	Continuous Assessment Test - I	50
5	Continuous Assessment Test - II	50
6	Final Assessment Test	100

HTML:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Absolute Graded CGPA Calculator</title>
  <link rel="stylesheet" href="../styles/style.css">
  <script src="../scripts/script.js"></script>
</head>
<body>
  <div class="formDiv">
    <form action="" method="post">
      <div class="courseOne">
        <div class="details">
          <label for="courseOne">Course 1 Name: </label>
          <input type="text" name="courseOne" id="courseOne">
          <label for="courseOne">Course 1 Credits: </label>
          <input type="number" name="courseOneCredits"
id="courseOneCredits">
        </div>
        <br>
        <div class="marks">
          <div class="submarks">
            <label for="courseOne">DA 1 Marks: </label>
            <input type="number" name="courseOneDA1" id="courseOneDA1"
step="0.1">
          </div>
          <div class="submarks">
            <label for="courseOne">Quiz 1 Marks: </label>
            <input type="number" name="courseOneQuiz1"
id="courseOneQuiz1" step="0.1">
          </div>
          <div class="submarks">
            <label for="courseOne">Quiz 2 Marks: </label>
            <input type="number" name="courseOneQuiz2"
id="courseOneQuiz2" step="0.1">
          </div>
          <div class="submarks">
            <label for="courseOne">CAT 1 Marks: </label>
            <input type="number" name="courseOneCAT1"
id="courseOneCAT1" step="0.1">
          </div>
          <div class="submarks">
            <label for="courseOne">CAT 2 Marks: </label>
            <input type="number" name="courseOneCAT2"
id="courseOneCAT2" step="0.1">
          </div>
        </div>
      </div>
    </form>
  </div>
</body>
</html>
```

```
        <div class="submarks">
        <label for="courseOne">FAT Marks: </label>
        <input type="number" name="courseOneFAT" id="courseOneFAT"
step="0.1">
        </div>
    </div>
</div>
<br>
<div class="submitButtonDiv">
    <input value="Calculate" class="submitButton"
onclick="calculateGPA()">
    <div class="displayGrade">

        </div>
    </div>
</form>
</div>
</body>
</html>
```

CSS:

```
* {
  margin: 0;
  padding: 0;
}

body {
  font-family: Arial, sans-serif;
  background-color: #f4f4f4;
}

.formDiv {
  display: flex;
  justify-content: center;
  align-items: center;
  height: 100vh;
}

form {
  border: 1vh solid black;
  padding: 2vh;
  width: 65vw;
}

label {
  margin: 1vh 1vh;
  display: inline-block;
  width: 10vw;
}

.submitButton {
  margin: 2vh 1vh;
  display: inline-block;
  width: 10vw;
  padding: 1vh;
  background-color: #4CAF50;
  color: white;
  border: none;
  cursor: pointer;
}

.submitButtonDiv,
.displayDiv {
  display: flex;
  justify-content: center;
  align-items: center;
}
```

JavaScript:

```
function calculateGPA() {
    var subjName = document.getElementById("courseOne");
    var subjCreds = document.getElementById("courseOneCredits");
    var da1marks = document.getElementById("courseOneDA1");
    var quiz1marks = document.getElementById("courseOneQuiz1");
    var quiz2marks = document.getElementById("courseOneQuiz2");
    var cat1marks = document.getElementById("courseOneCAT1");
    var cat2marks = document.getElementById("courseOneCAT2");
    var fatmarks = document.getElementById("courseOneFAT");

    //Convert all marks to a float
    var credits = parseInt(subjCreds.value);
    var da1 = parseFloat(da1marks.value);
    var quiz1 = parseFloat(quiz1marks.value);
    var quiz2 = parseFloat(quiz2marks.value);
    var cat1 = parseFloat(cat1marks.value);
    var cat2 = parseFloat(cat2marks.value);
    var fat = parseFloat(fatmarks.value);

    var weightageFAT = 0.4 * fat;
    var internals = da1 + quiz1 + quiz2 + (0.3*cat1) + (0.3*cat2);
    var overallMarks = weightageFAT + internals;

    var grade = "B";
    var gpa = 0;

    if(overallMarks >= 90) {
        grade = "S";
        gpa = 10;
    }
    else if(overallMarks >= 80) {
        grade = "A";
        gpa = 9;
    }
    else if(overallMarks >= 70) {
        grade = "B";
        gpa = 8;
    }
    else if(overallMarks >= 60) {
        grade = "C";
        gpa = 7;
    }
    else if(overallMarks >= 55) {
        grade = "D";
        gpa = 6;
    }
}
```

```
    else if(overallMarks >= 50) {
        grade = "E";
        gpa = 5;
    }
    else {
        grade = "F";
        gpa = 0;
    }

    console.log("Internal Marks: ", internals, " | Overall Marks: ",
overallMarks, " | Grade: ", grade, " | GPA: ", gpa);

    var displayDiv = document.getElementsByClassName("displayGrade")
    displayDiv[0].innerHTML = "Grade: " + grade + " | GPA: " + gpa;
}
```

OUTPUT:

Absolute Graded CGPA Calculator

javascript mcq quiz - Google

50 JavaScript MCQ With Answers

manan04shah/bcse203e

file:///C:/Users/MANAN/Desktop/Manan%20Shah/VIT/Credit%20Courses/BCSE203E%20(Web%20Programming%20S4)/CGPA%20Activity/html/index.html

Course 1 Name: Web Programming

Course 1 Credits: 3

DA 1 Marks: 10

Quiz 1 Marks: 9

Quiz 2 Marks: 10

CAT 1 Marks: 45.7

CAT 2 Marks: 39.8

FAT Marks: 87.1

Calculate

Grade: A | GPA: 9