

COMPSOFT TECHNOLOGIES

Rajajinagar,Bangalore-560010



**AN INTERNSHIP
REPORT ON
“VTU CGPA/SGPA CALCULATOR “**

Bachelor of Engineering

**In
Computer Science and Engineering**

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2021**

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OVERVIEW OF THE PROJECT

Project Name: Engineering SGPA/CGPA Calculator

Team Members: AAJNA H M

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CGPA refers to the cumulative grade point average which literally translates to the sum total of all your credit points. This system helps in assessing the overall academic performance of a student. Although the evaluation criteria may vary from one country to another, the CGPA system is among the most common evaluation way in most professional/technical courses.

Marks calculation is an important aspect of college and school life. Although there are numerous methods of carrying out the same task, the most used method of score calculation is the GPA method. The one aspect of this method that appears a little confusing but is a perfectly simple concept is the conversion from SGPA to CGPA. Even though both the concepts of SGPA and CGPA serve a similar purpose, they differ from each other and are calculated separately and through different methods.

ABOUT THE PROJECT

Semester End Grade Point Average is the SGPA and Cumulative Grade Point Average is called the CGPA. Both indicate the weightage of marks secured by a student. If you want to know how to convert SGPA to CGPA, then here is the online SGPA to CGPA calculator to find the CGPA from SGPA. Just enter the semester GPA score in this SGPA to CGPA conversion calculator to get the equivalent weightage. This SGPA to CGPA converter will be an effective tool for the students to do mark conversion. Marks calculation is an important aspect of college and school life. Although there are numerous methods of carrying out the same task, the most used method of score calculation is the GPA method. The one aspect of this method that appears a little confusing but is a perfectly simple concept is the conversion from SGPA to CGPA. Even though both the concepts of SGPA and CGPA serve a similar purpose, they differ from each other and are calculated separately and through different methods.

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Marks calculation is an important aspect of college and school life. Although there are numerous methods of carrying out the same task, the most used method of score calculation is the GPA method. The one aspect of this method that appears a little confusing but is a perfectly simple concept is the conversion from SGPA to CGPA. Even though both the concepts of SGPA and CGPA serve a similar purpose, they differ from each other and are calculated separately and through different methods.

HOW TO CALCULATE SGPA

SGPA is the abbreviated form of Sessional Grade Point Average/Semester End Grade Point Average. Before delving into the discussion of SGPA and CGPA, let's first understand what these two mean. To begin with, the marks we score in our schools or colleges can be calculated in different ways. One of these ways includes SGPA. It is the grade point average that is calculated at the end of an academic session like a year at school or a semester at college. First, adding the grade points of all the subjects in an academic year or session are collected together and then their average is calculated which is referred to as the SGPA for that particular year or session.

SGPA, which stands for Semester Grade Point Average is an evaluation method that highlights the semester wise performance of the student. It can be calculated by simply adding all the credit points awarded for the subjects and then dividing it by the total credits allotted to that semester.

For example, in a total of 3 subjects, you scored the following grade points:

Subject 1: 8

Subject 2: 6

Subject 3: 7

The total credit for each subject is 10.

1. Now, first we will multiply, the grade point with the total credit point for each subject:

Subject 1: $8 \times 10 = 80$

Subject 2: $6 \times 10 = 60$

Subject 3: $7 \times 10 = 70$

2. To calculate SGPA here, you need to add all these grade points and then divide it by the total credits, i.e.

Total grade points: 210

Total credits: 30

To get SGPA, divide grade points by total credits,

$= 210/30 = 7$ SGPA

HOW TO CALCULATE CGPA

Another prominent method of calculation of the marks we score in our colleges or schools is through CGPA. Simply put, CGPA is the abbreviated form of Cumulative Grade Point Average and depicts the total marks we score in a complete academic term or a certain time period like the 1st year or 4th year of college. The total marks that we score in all the sessions of a college term or both half yearly examination in school, is taken together to calculate the CGPA scored in that academic term.

The central difference between sessional grade point average and cumulative grade point average is that we calculate CGPA at the end of the academic year with many SGPA's of different semesters or sessions. Students must understand that having an idea about what is CGPA will help them in getting a hold of how to go calculate SGPA.

1. The VTU adopts absolute grading system wherein the marks are converted to grades, and every semester results will be declared with semester grade point average (SGPA) and Cumulative Grade Point Average (CGPA). The CGPA will be calculated every semester, except the first semester.

2.. The grading system is with the following letter grades as given

below:

3. A student obtaining Grade "F" shall be considered failed and will be required to reappear in the examination. Such students after passing the failed subject in subsequent examination/s will be awarded with "E" grade irrespective of marks he/she scores in the subsequent examination/s.

Number of attempts taken to clear a subject/s shall be shown in the transcripts

HOW TO FIND CGPA FROM SGPA

To find CGPA from SGPA, you need to follow this formula:

$CGPA = (SGPAs \text{ of All semesters in an academic year}) / \text{Number of semesters}$

Thus, by adding up all the SGPA's you have got in an academic year by the total number of semesters, you will find CGPA from SGPA.

For example,

Suppose that you scored 7 SGPA and 9 SGPA in your two semesters.

1. First you need to add both these SGPA's.
2. Then, divide the total SGPA with the number of semesters, i.e. 2.

Your CGPA would be:

$CGPA = SGPA \text{ of all semesters in a year} / \text{Number of semesters}$

$= (7+9)/2$

$= 8 \text{ CGPA}$

$= 8 \text{ CGPA}$

Structural and Conceptual Framework:

The website should be easy to use and should be user-friendly. It should be compatible with mobile phones and other devices. Also, the data of the user should be completely secured and (s)he has to make an account and set their password to access their account at any point in time, the content of the web page should be downloadable in pdf format

Structural and Conceptual Planning:

- Conversion of current web page content into PDF format.
- User Input(credits available as per the University's guidelines)

-
-
- Making sure to use the Information above to build a logical approach towards the Client requirements

Now that you know what SGPA, CGPA and GPA, let's try to find out the key differences between these concepts.

- CGPA as the cumulative GPA is a result of the division the sum of all the SGPAs in an academic year with the number of semesters. So, in simple terms, CGPA is calculated for the entire course while GPA is per the semester and SGPA is for a particular session be it a year or so.
- Many universities and colleges have different grade systems as some use GPA while others have CGPA as the major grading system to assess the scholastic abilities of a student.
- While CGPA and GPA aim to highlight a student's academic performance over a stipulated time period, many institutions prefer GPA more than CGPA to give admissions to the students.
- CGPA is reflective of your performance for an entire course thus it can only be a higher one if you have a better GPA and SGPA. Another prominent difference is CGPA and SGPA always differ from the scale of 0.0-10.0/
- According to the definitions we have established of SGPA and CGPA, CGPA can be termed as the collective SGPAs calculated at the end of an academic year. In order to calculate your CGPA, you need to first find the average score of all subjects in each of the semesters, i.e. SGPA. Then, add all the SGPAs of all the semesters and divide the total by the number of semesters or sessions to find your CGPA for the academic year.

• **CGPA= (SGPAs of All semesters in an academic year)/Number of semesters**

- For example:

If a student scored 8 and 7 SGPA in their two semesters, their CGPA would be:

- **CGPA of 1 college academic term = (SGPA of semester 1+ SGPA of semester 2)/ 2**
=
= 15/2= 7.5 CGPA

TOOLS USED

Software Requirements

- Logic requirement: JavaScript and Logical use of the formula
- Editor –Visual Studio Code
- Front End Requirements – HTML, CSS, JavaScript,

Hardware Requirements

- Pentium 200-MHz computer with a minimum of 64 MB of RAM (128 MB of RAM recommended).
- Windows xp7/8/10 operating system
- Monitor with a refresh rate of at least 40Hz for a smooth GUI experience(optional).

IMPLEMENTATION

Source code (cgpa.html)

```
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>Semester Details </title></head>
  <link rel="stylesheet" href="cgpa.css">
<body>
  <script src="cgpa.js"></script>
  <form action class="semresult" id="semresult" >
    <div class="calc" id="calc">
      <div class="nofsem" id="sem1">
        <label for="semno" id="1stl" class="semno">1st Sem : </label>
        <input type="number" name="sem" required id="sema" class="sem"
placeholder="SGPA of 1st Sem" >
      </div>
      <div class="nofsem" id="sem2">
        <label for="semno" class="semno" >2nd Sem :</label>
        <input type="number" name="sem" id="semb" class="sem" required
placeholder="SGPA of 2nd Sem" >
      </div>
      <div class="nofsem" id="sem3">
        <label for="semno" class="semno">3rd Sem : </label>
        <input type="number" name="sem" class="sem" required id="semc"
placeholder="SGPA of 3rd Sem" >
```

```

</div>
<div class="nofsem" id="sem4">
    <label for="semno"class="semno">4th Sem : </label>
    <input type="number" name="sem" class="sem" required id="semd"
placeholder="SGPA of 4th Sem" >
</div>
<div class="nofsem" id="sem5">
    <label for="semno"class="semno">5th Sem : </label>
    <input type="number" name="sem" class="sem" required id="seme"
placeholder="SGPA of 5th Sem" >
</div>
<div class="nofsem" id="sem6">
    <label for="semno"class="semno">6th Sem : </label>
    <input type="number" name="sem" class="sem" required id="semf"
placeholder="SGPA of 6th Sem" >
</div>
<div class="nofsem" id="sem7">
    <label for="semno"class="semno">7th Sem : </label>
    <input type="number" name="sem" class="sem" required id="semg"
placeholder="SGPA of 7th Sem" >
</div>
<div class="nofsem" id="sem8">
    <label for="semno"class="semno">8th Sem : </label>
    <input type="number" name="sem" class="sem" required id="semh"
placeholder="SGPA of 8th Sem" ></div>
<div class="btn">
    <input type="submit" class="CalCulate" id="CalCulate"
onclick="clickfunction()" value="Calculate"> </div>
<h4 class="nmofsem" id="nmofsem">
<input type="number" name="numberofsem" id="numberofsem"></h4>
</div>
</form></div>

```

Source code (cgpa.css)

```
@media print {
    ul
    {
page-break-inside: avoid;
    }
}
*
{
    margin: 0;
    padding: 0;
    box-sizing: border-box;
    background-color: black;
}
h1{
display: block;
font-size: 60px;
font-weight: bold;
font-family: sans-serif;
color:yellow;
text-align: center;
padding-top: 50px;
}
form{
font-size: 20px;
font-family: serif;
color:aqua;
padding-top: 20px;
```

```
text-align: center;
}
INPUT
{
background-color: white;
outline: none;
width: 200px;
height: 33px;
border-radius: 20px;
color: black;
font-size: 18px;
font-weight: bold;
text-align: center;
margin: 10px;
border: 1px solid;
font-family: tahoma;
}
```

Source code (sgpa.html)

DOCTYPE html>

```
<head><h1 align=center> VTU SGPA Calculator </h1>
```

```
<title>VTU SGPA Calculator</title></b>
```

```
<link rel="stylesheet" href="sgpa.css">
```

```
<meta charset="utf-8">
```

```
</head>
```

```
<body>
```

```
<script type="text/javascript" src="sgpa.js"></script>
```

```
<h2 align=center>Enter the grade points of each subject</h2>
```

```
<form name="form1" align=center>
```

```
<b>Subject 1: </b><INPUT type="text" name="textNum1"> </br>
```

```
<b>Subject 2: </b><INPUT type="text" name="textNum2"> </br>
```

```
<b>Subject 3: </b><INPUT type="text" name="textNum3"> </br>
```

```
<b>Subject 4: </b><INPUT type="text" name="textNum4"> </br>
```

```
<b>Subject 5: </b><INPUT type="text" name="textNum5"> </br>
```

```
<b>Subject 6: </b><INPUT type="text" name="textNum6"> </br>
```

```
<INPUT type="button" value="Calculate" onclick="Calculate()"><br>
```

```
<br> <p><span id="SGPA : "></span></p><br>
```

```
<p><input type="reset" value="Reset"></p>
```

```
</form>
```

```
</body>
```

```
</html>
```

Source code (sgpa.css)

```
@media print {  
    ul  
    {  
page-break-inside: avoid;  
    }  
}  
*  
{  
    margin: 0;  
    padding: 0;  
    box-sizing: border-box;  
    background-color: black;  
}  
h1{  
    display: block;  
    font-size: 60px;  
    font-weight: bold;  
    font-family: sans-serif;  
    color:yellow;  
    text-align: center;  
    padding-top: 50px;  
}  
form{  
    font-size: 20px;  
    font-family: serif;  
    color:aqua;  
    padding-top: 20px;  
    text-align: center;
```

```
}
```

INPUT

```
{
```

```
background-color: white;
```

```
outline: none;
```

```
width: 160px;
```

```
height: 30px;
```

```
border-radius: 10px;
```

```
color:black;
```

```
font-size: 18px;
```

```
font-weight: bold;
```

```
text-align: center;
```

```
margin: 10px;
```

```
border:1px solid;
```

```
font-family: tahoma;
```

```
}
```

span{

```
background-color:yellow;
```

```
outline: none;
```

```
width: 500px;
```

```
height: 50px;
```

```
border-radius: 15px;
```

```
color:black;
```

```
font-size: 25px;
```

```
font-weight: bold;
```

```
text-align: center;
```

```
margin: 15px;
```

```
border:1px solid;
```

```
font-family: tahoma;
```


SNAPSHOTS

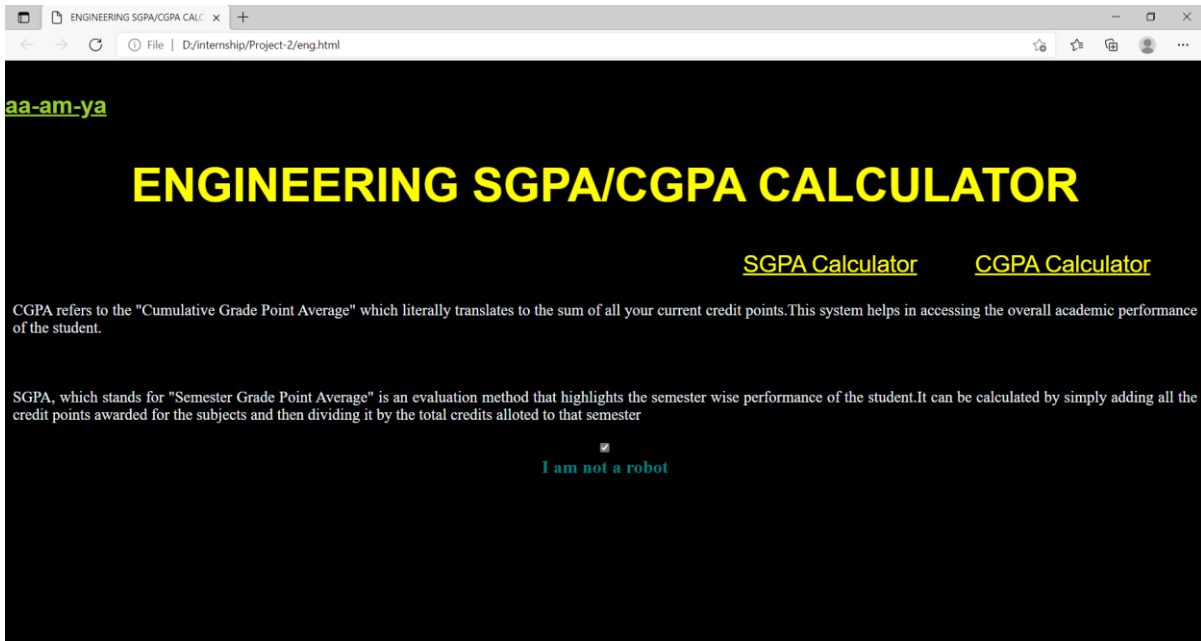


Fig: 1.1

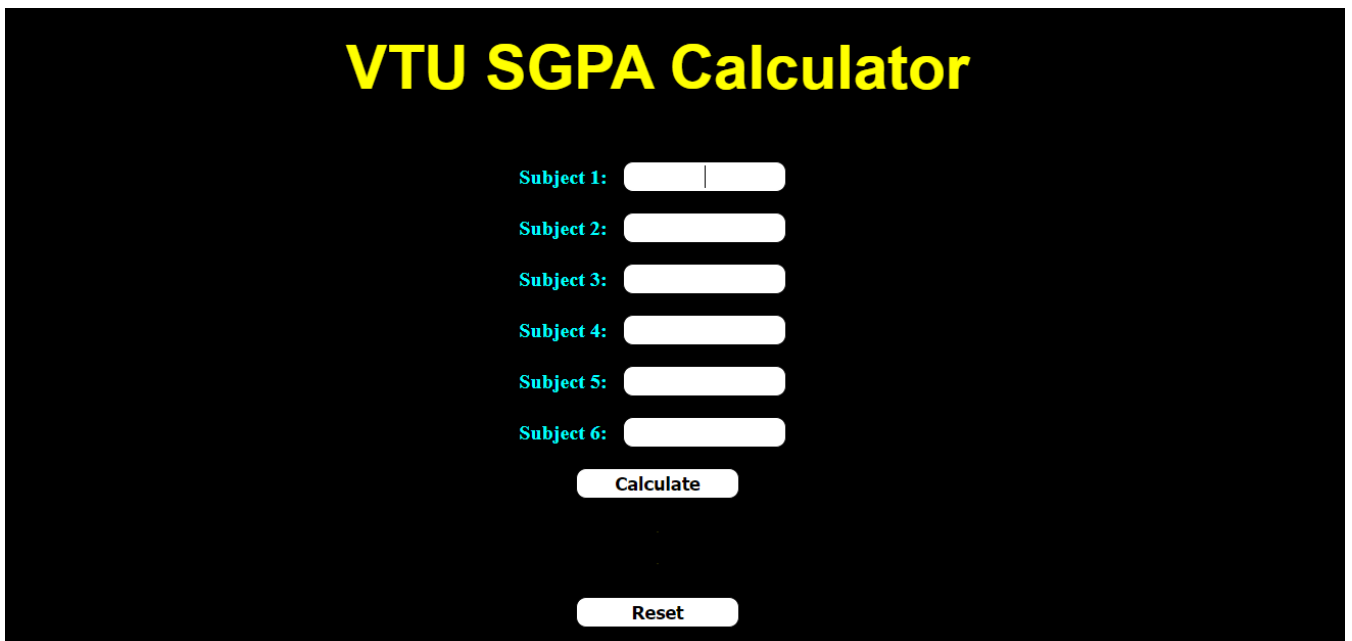


Fig: 1.2

VTU SGPA Calculator

Enter the grade points of each subject

Subject 1: 9

Subject 2: 8.5

Subject 3: 8.5

Subject 4: 9

Subject 5: 9

Subject 6: 10

Calculate

SGPA : 8.833333333333334

Reset

Fig: 1.3

CGPA CALCULATOR

Enter number of Semester

Submit

Fig: 1.4

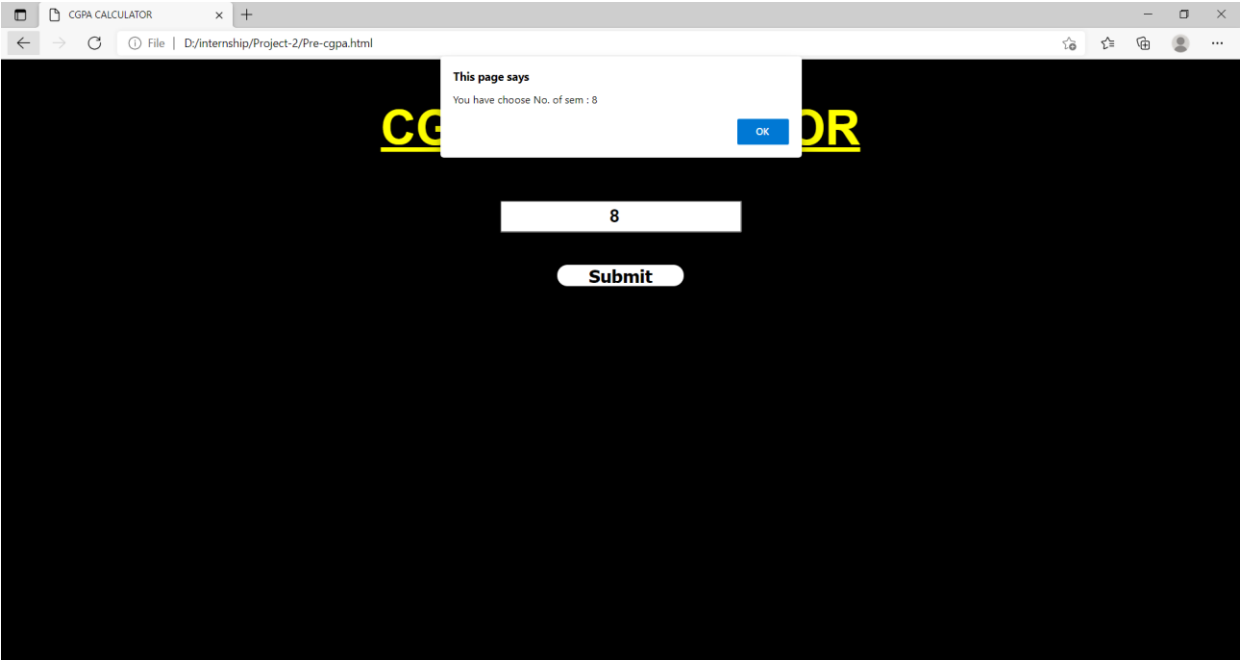


Fig: 1.5

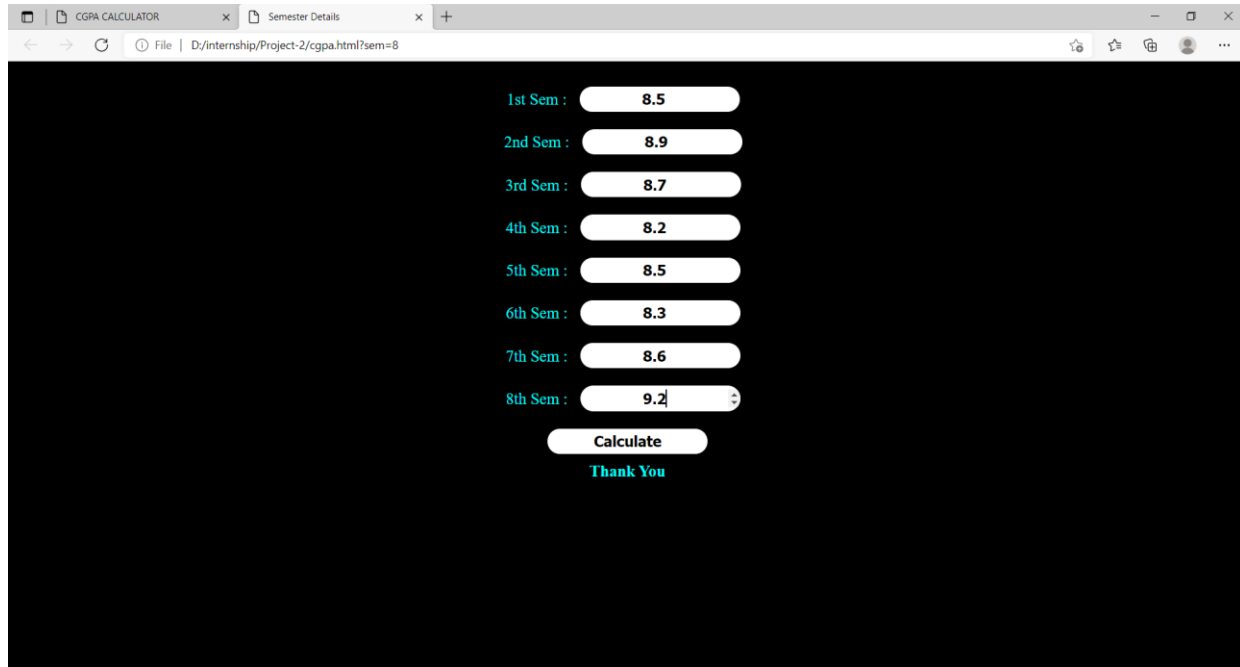


Fig 1.6

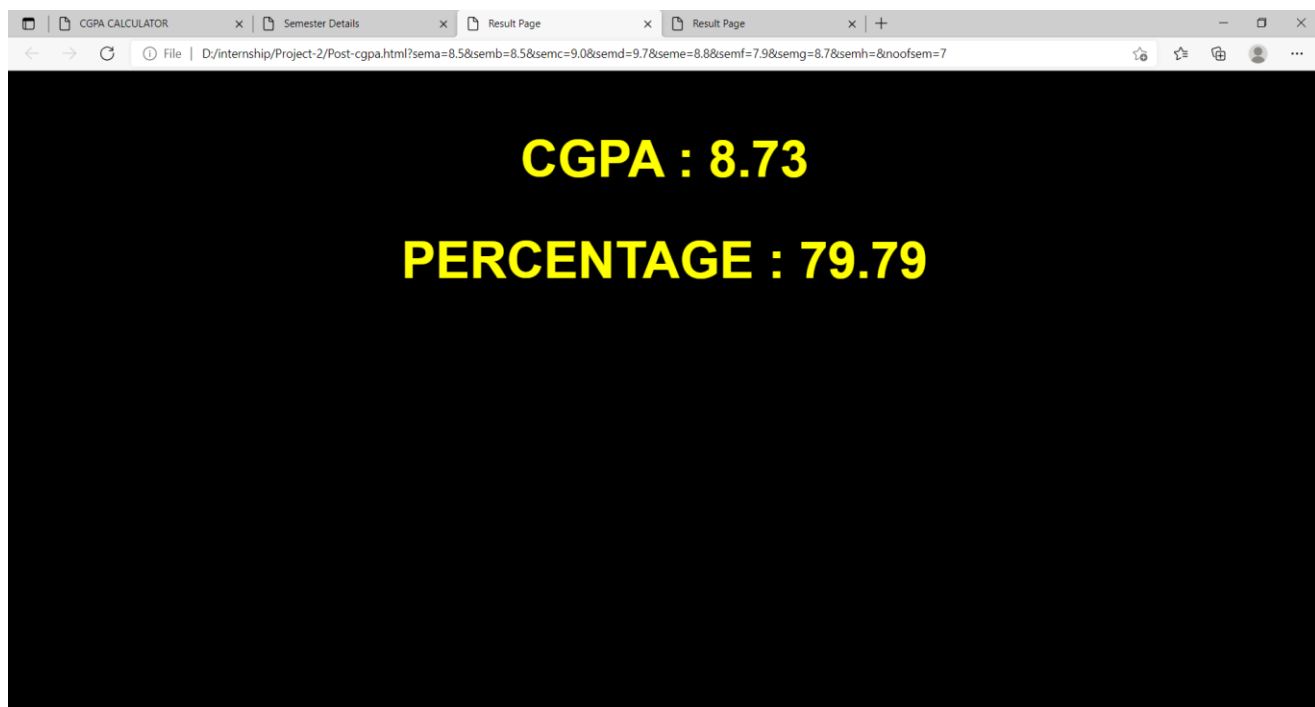


Fig 1.7

BIBLIOGRAPHY

- <https://www.w3schools.com>
- <https://www.geeksforgeeks.org>
- <https://freefrontend.com>

About my TEAM

Team Name: aa-am-ya

Team Members:

- Aajna H M
- Ambika P
- Yakshitha J

We three members equally involved in coding and generating the report .

