

COMPSOFT TECHNOLOGIES

Bengaluru, Karnataka, India



AN INTERNSHIP REPORT

ON

“VTU SGPA AND CGPA CALCULATOR”

Bachelor of Engineering

In

Computer Science and Engineering

Submitted by: **TEAM ESCN**



B.T.L INSTITUTE OF TECHNOLOGY AND MANAGEMENT

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Hosur Road, Bangalore-560099, Karnataka, India**

2020-2021

ABOUT THE COMPANY

The race for digital transformation is on. In this globally connected on-demand world with rapid advancements in internet technologies, businesses worldwide are under constant pressure to add innovative real-time capabilities to their applications to respond to market opportunities.

Every business worldwide is building event-driven, real-time applications - from financial services, transportation, and energy, to retail, healthcare, and Gaming companies.

Our Endeavour is to make it easy to develop innovative real-time applications and efficient to operate them in production.

We have a proven record of building highly scalable, world-class consulting processes that offer tremendous business advantages to our clients in the form of huge cost-benefits, definitive results and consistent project deliveries across the globe.

We prominently strive to improve your business by delivering the full range of competencies including operational performance, developing and applying business strategies to improve financial reports, defining strategic goals and measure and manage those goals along with measuring and managing them.

Vision
We are committed to going the extra mile to bring success to the clients consistently

We are dedicated to delivering the right people, solutions, and services to the clients that they require to meet their technology challenges and business goals.

Mission
Optimizing client satisfaction with quality services

Delivering the most efficient and the best solution to our clients to every client leveraging leading technologies & industry best practices.

TABLE OF CONTENTS

Table of contents	i
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Overview of the Project	1
About vtu sgpa and cgpa calculator	2
Tools Used	4
Implementation	5
Snapshots	21
Bibliography	25

OVERVIEW OF THE PROJECT

Project Name: “VTU SGPA AND CGPA CALCULATOR”

Team Members: SANJAY M

SUDEEPU BS

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

TOOLS USED

Software Requirements

- Visual Studio Code 2019.
- Google Chrome or Microsoft Edge of latest version.
- Front End: HTML, CSS, JS (optional)
- Linux 7.1 or Windows XP/7/8/10 OS or Mac OS

Hardware Requirements

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

IMPLEMENTATION

Source Code (ESCN.HTML):

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <script data-ad-client="ca-pub-1137844533742687" async
src="https://pagead2.googlesyndication.com/pagead/js/adsbygoogle.js"></script>

  <!-- Google Tag Manager -->

<script>(function(w,d,s,l,i){w[l]=w[l]||[];w[l].push({'gtm.start':
  new Date().getTime(),event:'gtm.js'});var f=d.getElementsByTagName(s)[0],
  j=d.createElement(s),dl=l!='dataLayer'?'&l='+l:'';j.async=true;j.src=
  'https://www.googletagmanager.com/gtm.js?id='+i+dl;f.parentNode.insertBefore(j,f);
  })(window,document,'script','dataLayer','GTM-N94LCGC');</script>

  <!-- End Google Tag Manager -->

  <script>
(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){
(i[r].q=i[r].q||[]).push(arguments)},i[r].l=1*new Date();a=s.createElement(o),
m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m)
})(window,document,'script','https://www.google-analytics.com/analytics.js','ga');

ga('create', 'UA-101884646-3', 'auto');
ga('send', 'pageview');

</script>

  <meta name="viewport" content="width=device-width, initial-scale=1">
  <meta name="og:description" content="Calculate SGPA and CGPA for VTU CBCS students">
  <meta name="author" content="TEAM ESCN" />
  <meta property="og:title" content="SGPA calculator for VTU CBCS scheme students"/>
  <meta property="og:url" content="vtusgpacalculator.site"/>
  <title>SGPA and CGPA calculator for VTU</title>

  <script src="https://code.jquery.com/jquery-3.2.1.min.js" integrity="sha256-
hwg4gsxgFZhOsEEamdOYGBf13FyQuiTwlAQgxVSNgt4=" crossorigin="anonymous"></script>
  <link href="https://fonts.googleapis.com/css?family=Chela+One|Fira+Sans|Lato|Roboto|Ubuntu|Pacifico"
rel="stylesheet">
  <link href="https://fonts.googleapis.com/icon?family=Material+Icons" rel="stylesheet">
  <!-- Latest compiled and minified CSS -->
```

P1

```
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
integrity="sha384-BVYiSIFeK1dGmJRAkycuHAHRg32OmUcww7on3RYdg4Va+PmSTsz/K68vbdEjh4u"
crossorigin="anonymous">

<!-- Optional theme -->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap-theme.min.css"
integrity="sha384-rHyoN1iRsVXV4nD0JutlnGaslCJuC7uwjduW9SVrLvRYooPp2bWYgmgJQIXwl/Sp"
crossorigin="anonymous">

<!-- Latest compiled and minified JavaScript -->
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js" integrity="sha384-
Tc5IQib027qvyjSMfHjOMaLkfuWVxZxUPnCIA7l2mCWNIpG9mGCD8wGNlcpD7Txa"
crossorigin="anonymous"></script>
<!-- JQuery script -->

<!-- GreenSock JS -->
<script src="https://cdnjs.cloudflare.com/ajax/libs/gsap/1.19.1/TweenMax.min.js"></script>
<link rel="stylesheet" href="escnjs.css">

</head>
<body><script src="ESCN.JS"></script>

<!-- End Google Tag Manager (noscript) -->
<nav class="navbar navbar-inverse">
  <div class="container-fluid">
    <div class="navbar-header">
      <button type="button" class="navbar-toggle" data-toggle="collapse" data-target="#bar">
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
      </button>
      <a class="navbar-brand" href="#">SGPA & CGPA calculator</a>
    </div>
    <div class="collapse navbar-collapse" id="bar">
      <ul class="nav navbar-nav">
        <li class="active"><a href="ESCNJS.html">Calculator</a></li>

      </ul>
    </div>
  </div>
</nav>

<div class="container-fluid main">
  <h1 class="sgpa-title">SGPA Calculator</h1>
  <p class="sgpa-title"> use this web app to calculate your SGPA and CGPA. Built for VTU students. </p>
```

P1

```
<form class="form-horizontal">
```

```
<div class="row">
```

```
<div class="col-md-6" style="text-align:center;">
```

```
<h1 class="sgpa-title">Introduction</h1>
```

```
<p class="intro">This SGPA calculator was built to help VTU students calculate their
```

SGPA, it may be flexible enough to work with your

university as well. To add subjects click the "+" button. The credit break up is as follows:

```
<ul class="intro" style="text-align:initial">
```

```
<li>Main - 4 credits</li>
```

```
<li>Final Year Project - 5 credits</li>
```

```
<li>Elective - 3 credits</li>
```

```
<li>Labs, Internship seminars, technical seminars - 2 credits</li>
```

```
<li>1 credit</li>
```

```
</ul>
```

```
</p>
```

```
<p class="intro"> Use these settings to setup the calculator to the configuration of your current  
semester. As of 2019, this calculator is able
```

to support semesters 1 to 8. The CGPA calculator is similar, just enter your cgpa from
semester 1 to 8.

```
</p>
```

```
</div>
```

```
<div class="col-md-1"></div>
```

```
<div class="col-md-5">
```

```
<legend>Enter your marks</legend>
```

```
<div class="form-group" id="subject-field">
```

```
<div class="input-group">
```

```
<span class="input-group-addon">Subject 1</span>
```

```
<input id="sub1" type="text" class="form-control" name="sub1" placeholder="marks"
```

required>

```
</div>
```

```
<br>
```

```
</div>
```

```
<div class="form-group" id="lab-fields">
```

```
<div class="input-group">
```

```
<span class="input-group-addon">Lab 1</span>
```

```
<input id="lab1" type="text" class="form-control" name="sub1" placeholder="marks. Put 0 if
```

not required" required>

```
</div>
```

```
<br>
```

```
<div class="input-group">
```

```
<span class="input-group-addon">Lab 2</span>
```

```
<input id="lab2" type="text" class="form-control" name="sub1" placeholder="marks. Put 0 if
```

not required" required>

```
</div>
```

```
<br>
```

```
</div>
```


P1

```
<button class="btn btn-default addSubject" data-toggle="modal" data-target="#subModal"><i
class="material-icons">add</i></button>
<button type="button" class="btn btn-success sgpaCalculate" id="startSGPA">Calculate</button>
<button type="reset" class="btn btn-danger">Reset</button>
</div>

</div>
<br>
<div class="col-md-7">
</div>
<div class="col-md-5">
<div class="well SGPAresult">Result will appear here</div>
</div>
</form>
<br>
<div class="row">
</div>
</div>
<div class="container-fluid main">
<div class="row">
<h1 class="sgpa-title">CGPA calculator</h1>
<div class="col-md-5">
<legend>Enter your SGPA's according to semester</legend>
<p>leave fields blank for semesters not completed</p>
<form class="form-horizontal" id="CPGAarea">
<div class="input-group">
<input type="text" class="form-control cgpa" placeholder="semester 1">
</div>
<div class="input-group">
<input type="text" class="form-control cgpa" placeholder="semester 2">
</div>
<div class="input-group">
<input type="text" class="form-control cgpa" placeholder="semester 3">
</div>
<div class="input-group">
<input type="text" class="form-control cgpa" placeholder="semester 4">
</div>
<div class="input-group">
<input type="text" class="form-control cgpa" placeholder="semester 5">
</div>
<div class="input-group">
<input type="text" class="form-control cgpa" placeholder="semester 6">
</div>
<div class="input-group">
<input type="text" class="form-control cgpa" placeholder="semester 7">
</div>
```

P1

```
<div class="input-group">
```

```
  <input type="text" class="form-control cgpa" placeholder="semester 8">
```

```
</div>
```

```
<br>
```

```
<button type="button" class="btn btn-success cgpaCalculate">Calculate CGPA</button>
```

```
<button type="reset" class="btn btn-danger">Reset</button>
```

```
</form>
```

```
</div>
```

```
<!-- <script type="text/javascript" language="javascript">
```

```
  var aax_size='300x600';
```

```
  var aax_pubname = 'sgpa10f-21';
```

```
  var aax_src='302';
```

```
</script>
```

```
<script type="text/javascript" language="javascript" src="http://c.amazon-  
adssystem.com/aax2/assoc.js"></script> -->
```

```
</div>
```

```
<br>
```

```
<div class="col-md-4">
```

```
  <div class="well cgpareresult">Result will appear here</div>
```

```
</div>
```

```
</div>
```

```
<br>
```

```
<br>
```

```
<center><footer class="footer"> <i class="material-icons">TEAM ESCN</i> </footer></center>
```

```
<div id="subModal" class="modal fade" role="alertdialog">
```

```
  <div class="modal-content">
```

```
    <div class="modal-header">
```

```
      <button type="button" class="close" data-dismiss="modal">&times;</button>
```

```
      <h4 class="modal-title">Choose type of subject</h4>
```

```
    </div>
```

```
    <div class="modal-body">
```

```
      <button class="btn btn-primary btn-block" id="addSubject" data-dismiss="modal">Main  
subject</button>
```

```
      <button class="btn btn-primary btn-block" id="addElective" data-dismiss="modal">Elective</button>
```

```
      <button class="btn btn-primary btn-block" id="addTwoCredit" data-dismiss="modal">2
```

```
Credits(Project phase 1, technical seminar, labs)</button>
```

```
      <button class="btn btn-primary btn-block" id="addProjectTwo" data-dismiss="modal">Project phase  
2</button>
```

```
      <button class="btn btn-primary btn-block" id="addOneCredit" data-dismiss="modal">1  
Credit</button>
```

```
    </div>
```

```
  </div>
```

```
</div>
```

P1

</body>
</html>



IMPLEMENTATION

Source Code (escnjs.CSS+ESCN.JS(if used)):

```
body {
  font-family: 'Lato',sans-serif;
  background-color: aqua;
}
.main {
  padding: 10px;
  margin: 10px;
}
.about {
  font-size: 25px;
  text-align: justify;
  font-family: 'Lato',sans-serif;
}
.intro {
  font-size: 20px;
  text-align: justify;
  font-family: 'Lato',sans-serif;
}
.cgpa {
  margin: 10px;
  background-color: rgb(222, 233, 222);
}
.sgpa-title {
  font-family: 'Chela One',sans-serif;
}
form {
  padding: 10px;
}
#subModal {
  top: 100px;
  max-width: 600px;
}
```

```

const credit = 4;
const optional_creds = 3;
const lab_creds = 2;
const final_year_project_creds = 5;
const one_credits = 1;
const hasOptional = false;
var no_of_main = 1;
var no_of_opt = 0;
var no_of_project = 0;
var no_of_twocreds = 0;
var no_of_onecred = 0;
function addSubMain(){
  no_of_main++;
  let input_field = "<div class='input-group'>" +
    "<span class='input-group-addon'>Subject "+no_of_main+"</span>" +
    "<input id='sub"+no_of_main+"' type='text' class='form-control' name='sub1' "
placeholder='marks' required>" +
    "</div><br>";
  $('#subject-field').append(input_field);
}

function addSubOptional(){
  no_of_opt++;
  let input_field = "<div class='input-group'>" +
    "<span class='input-group-addon'>Elective "+no_of_opt+"</span>" +
    "<input id='opt"+no_of_opt+"' type='text' class='form-control' name='sub1' "
placeholder='marks' required>" +
    "</div><br>";
  $('#subject-field').append(input_field);
}

function addProject(){
  no_of_project++;
  let input_field = "<div class='input-group'>" +
    "<span class='input-group-addon'>Final Year Project "+no_of_project+"</span>" +
    "<input id='project"+no_of_project+"' type='text' class='form-control' name='sub1' "
placeholder='marks' required>" +
    "</div><br>";
  $('#subject-field').append(input_field);
}

function addTwoCreds(){
  no_of_twocreds++;
  let input_field = "<div class='input-group'>" +
    "<span class='input-group-addon'>2 credit subject "+no_of_twocreds+"</span>" +
    "<input id='twocredits"+no_of_twocreds+"' type='text' class='form-control' name='sub1' "

```

P1

```
placeholder='marks' required>" +
    "</div><br>";
$('#subject-field').append(input_field);
}
function addOneCred(){
    no_of_onecred++;
    let input_field = "<div class='input-group'>" +
        "<span class='input-group-addon'>1 credit subject "+no_of_onecred+"</span>" +
        "<input id='onecredit'+no_of_onecred+'\" type='text' class='form-control' name='sub1' "
placeholder='marks' required>" +
    "</div><br>";
$('#subject-field').append(input_field);
}
function calcSGPA() {
    console.log("hello");
    var points = {};
    var i;
    if(no_of_opt > 0){
        for(i=1;i<= no_of_opt;i++){
            var id='#opt'+i;
            var item = parseInt($(id).val());
            points[id] = getGrade(item);
        }
    }
    if(no_of_main > 0) {
        for(i=1;i<=no_of_main;i++){
            var id='#sub'+i;
            var item = parseInt($(id).val());
            points[id] = getGrade(item);
        }
    }
    if(no_of_project > 0){
        for(i=1;i<=no_of_project;i++){
            var id='#project'+i;
            var item = parseInt($(id).val());
            points[id] = getGrade(item);
        }
    }
    if(no_of_twocreds > 0){
        for(i=1;i<=no_of_twocreds;i++){
            var id='#twocredits'+i;
            var item = parseInt($(id).val());
            points[id] = getGrade(item);
        }
    }
    if(no_of_onecred > 0){
```

```

P1
for(i=1;i<=no_of_onecred;i++){
    var id='#onecredit'+i;
    var item = parseInt($(id).val());
    points[id] = getGrade(item);
}
}
for(i=1;i<=2;i++) {
    var id1 = '#lab' + i;
    var item1 = parseInt($(id1).val());
    points[id1] = getGrade(item1);
}
var keys = Object.keys(points);
var totalSubPoints = 0;
var total_creds = 0;
for(i = 0; i < keys.length; i++){
    if(keys[i].match(/sub/) != null){
        console.log("subject")
        totalSubPoints = totalSubPoints + credit * points[keys[i]];
        total_creds = total_creds+ credit;
    }
    else if(keys[i].match(/opt/) != null){
        console.log("elective")
        totalSubPoints = totalSubPoints + optional_creds * points[keys[i]];
        total_creds += optional_creds;
    }
    else if(keys[i].match(/lab/) != null){
        console.log("lab")
        totalSubPoints = totalSubPoints + lab_creds * points[keys[i]];
        if(points[keys[i]] !== 0)
            total_creds += lab_creds;
    }
    else if(keys[i].match(/project/) != null){
        console.log("project")
        totalSubPoints = totalSubPoints + final_year_project_creds * points[keys[i]];
        total_creds += final_year_project_creds;
    }
    else if(keys[i].match(/twocredits/) != null){
        console.log("twocredits")
        totalSubPoints = totalSubPoints + lab_creds * points[keys[i]];
        total_creds += lab_creds;
    }
    else if(keys[i].match(/onecredit/) != null){
        console.log("onecredit")
        totalSubPoints = totalSubPoints + one_credits * points[keys[i]];
        total_creds += one_credits;
    }
}

```

P1

```
}
var SGPA = totalSubPoints/total_creds;
$('.SGPAresult').html(SGPA.toFixed(2));
console.log("Total points"+totalSubPoints);
console.log("Total creds"+total_creds);
console.log(points);
// console.log(myLabs);
}
function getGrade(item) {
  if (item < 40)
    return 0;
  else if (item < 45 && item >=40)
    return 4;
  else if (item < 50 && item >=45)
    return 5;
  else if (item < 60 && item >=50)
    return 6;
  else if (item < 70 && item >=60)
    return 7;
  else if (item < 80 && item >=70)
    return 8;
  else if (item < 90 && item >=80)
    return 9;
  else if (item >=90)
    return 10;
}

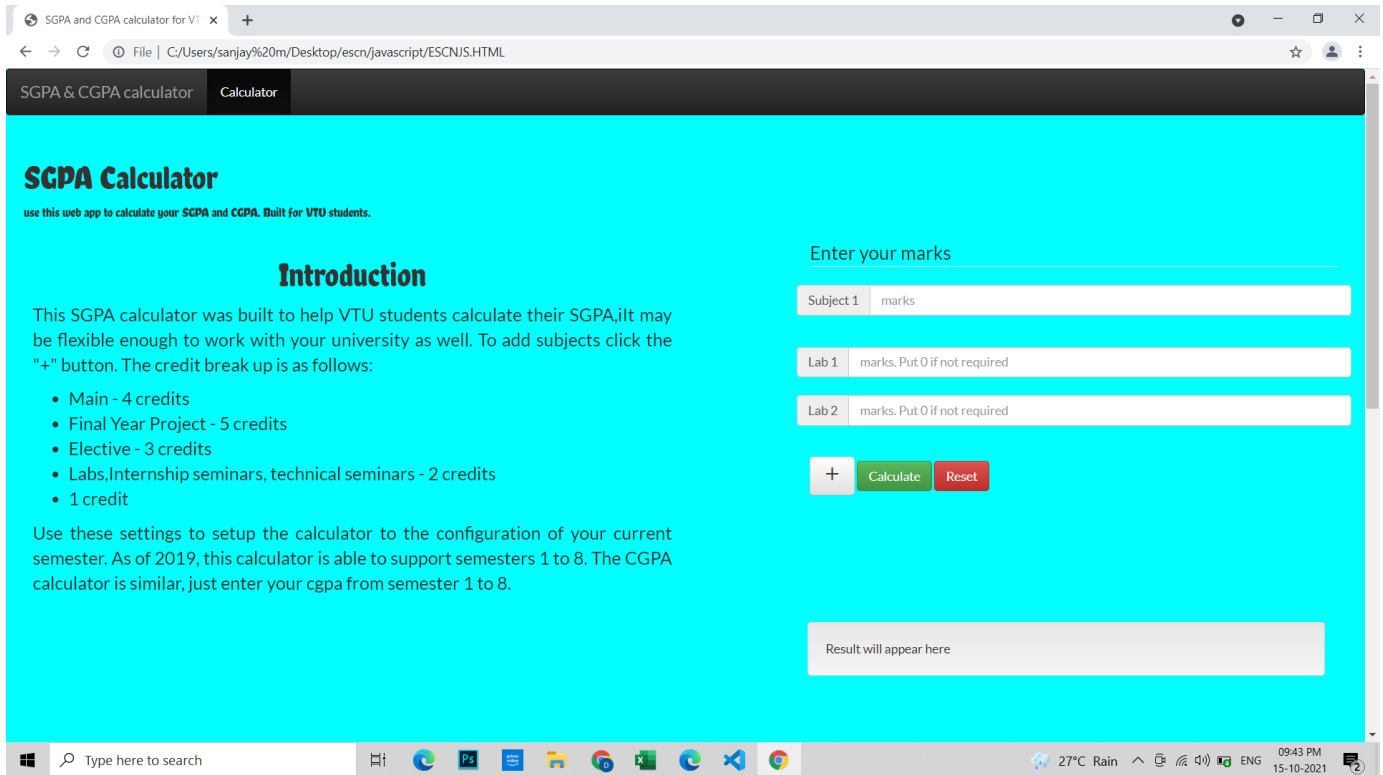
//dont change this it works fine
function calcCGPA() {
  var creds = [24,24,28,28,26,26,22,21]
  var cgpa = new Array();
  var i,sum=0,finalCGPA=0,cred_sum=0,elements=8;
  var id = $('.cgpa');
  for(i=0;i<8;i++) {
    var num = parseFloat($(id[i]).val());
    if (isNaN(num)){
      num = 0;
      --elements;
    }
    cgpa.push(num);
  }
  for (i=0;i<elements;i++)
    cred_sum += creds[i];
  console.log("creds sum is"+cred_sum);
  console.log(cgpa);
  sum = 24*(cgpa[0]+cgpa[1])+28*(cgpa[2]+cgpa[3])+26*(cgpa[4]+cgpa[5])+22*cgpa[6]+21*cgpa[7];
}
```

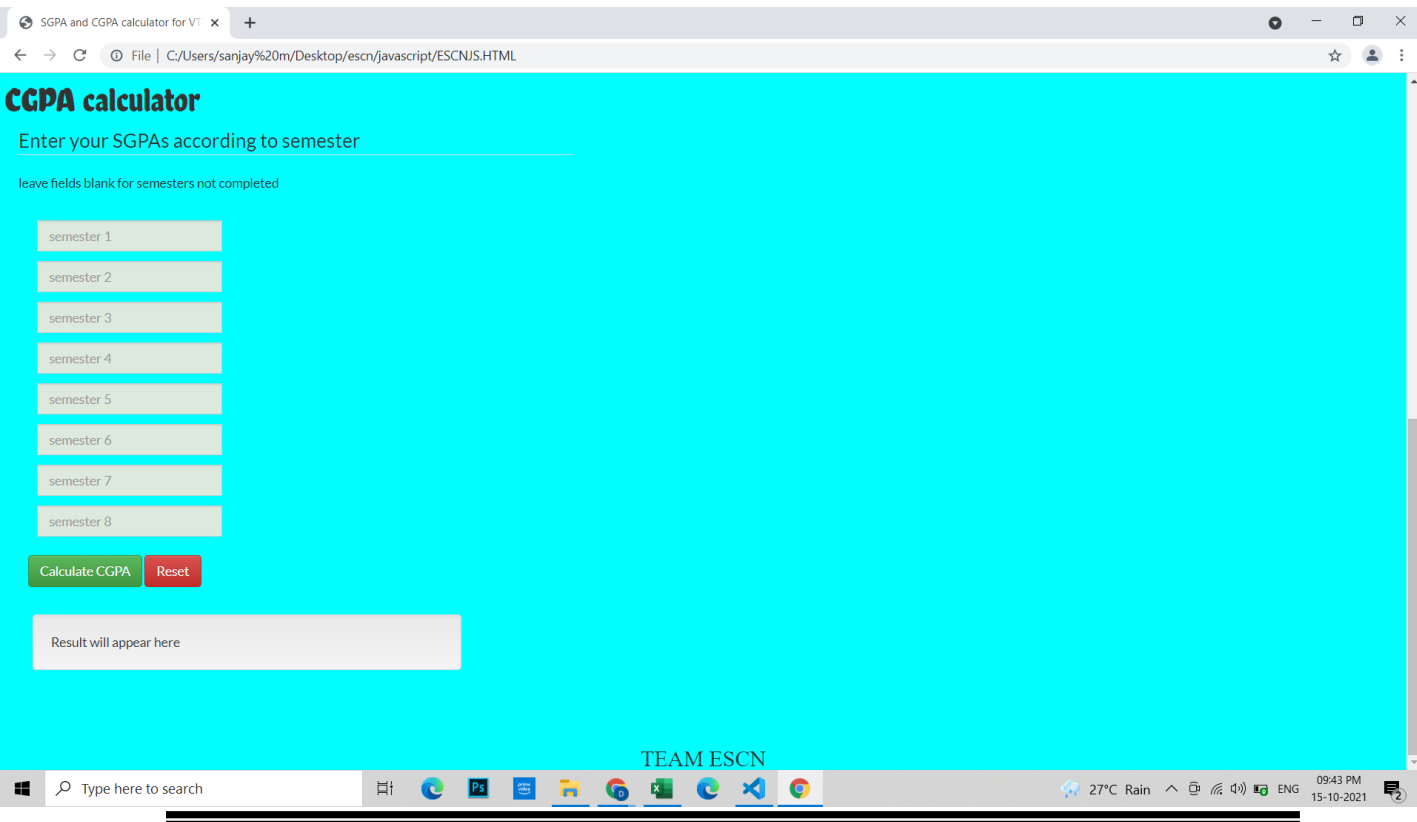
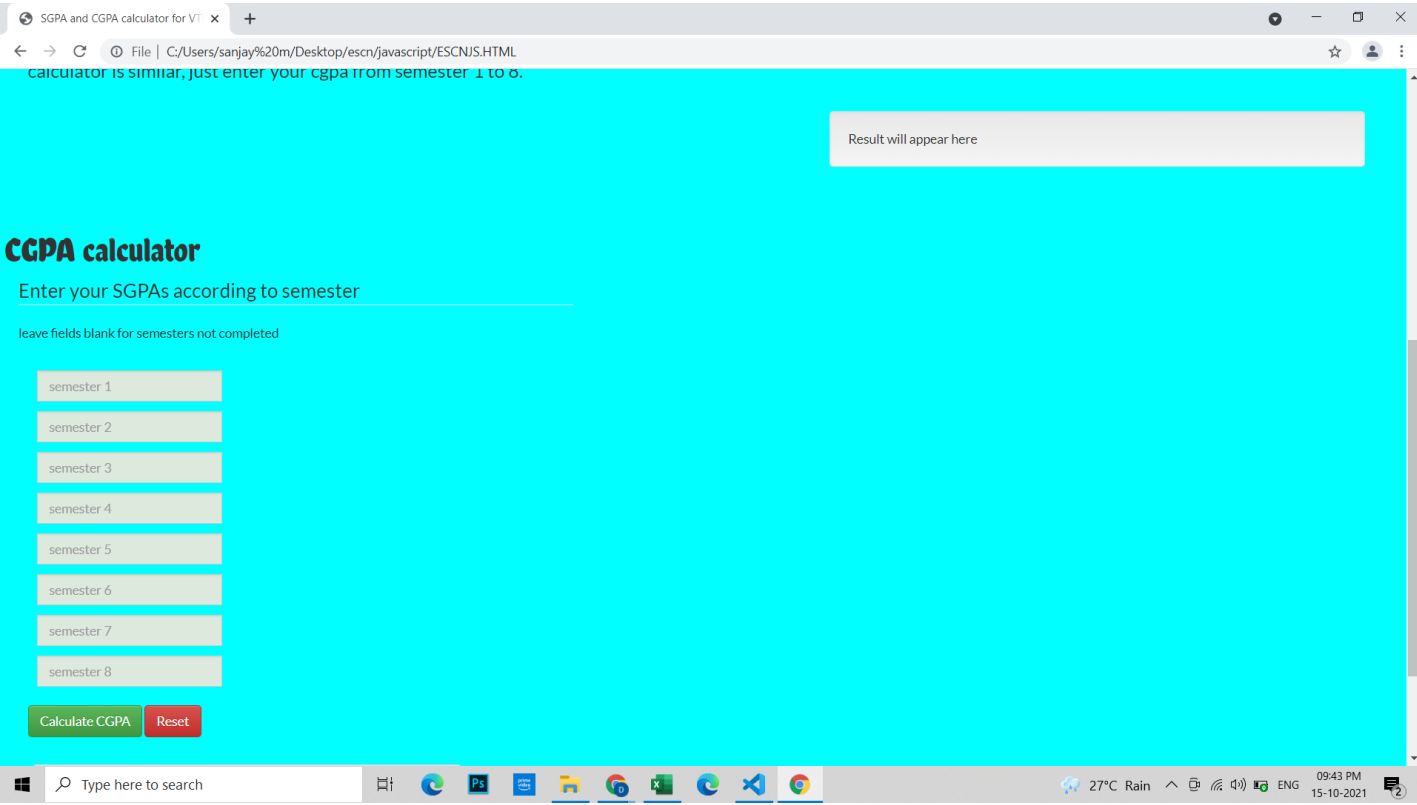

P1

```
console.log(sum);
finalCGPA = sum / cred_sum;
$('#cgpareresult').html(finalCGPA.toFixed(2));
}
$(document).ready(function () {
    $('#sgpaCalculate').click(calcSGPA);
    $('#cgpaCalculate').click(calcCGPA);
    $('#addSubject').click(addSubMain);
    $('#addElective').click(addSubOptional);
    $('#addTwoCredit').click(addTwoCreds);
    $('#addProjectTwo').click(addProject);
    $('#addOneCredit').click(addOneCred);
});
```

IMPLEMENTATION

Snapshots :





BIBLIOGRAPHY

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

About my TEAM

SANJAY M
SUDEEPU BS