

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
“JNANA SANGAMA”, BELGAUM-590018.



**A
Report**

On

Web Technology and its Application(18CS63)

COMPUTER SCIENCE AND ENGINEERING

By

J Pratheek [1JB20CS040]

UNDER THE GUIDANCE OF

Mrs. Vijayalakshmi B

Assistant Professor

Dept. of CSE



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

S J B INSTITUTE OF TECHNOLOGY

#67, BGS HEALTH AND EDUCATION CITY, Dr. Vishnuvardhana Road, Kengeri, Bangalore-560060.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



CERTIFICATE

This is to certify that the report on “Web Technology and its Application(18CS63)”, a bonafied work carried out by **J Pratheek [1JB20CS040]**, Department of Computer Science and Engineering of Visvesvaraya Technological University, Belgaum, during the academic year 2022- 2023. It is certified that all corrections/suggestions have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the academic requirements.

Signature of the guide
Mrs. Vijayalakshmi B
Assistant Professor
Dept. of CSE

Signature of the HOD
Dr. Krishna A. N
Professor & Head
Dept. of CSE

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LAB PROGRAMS

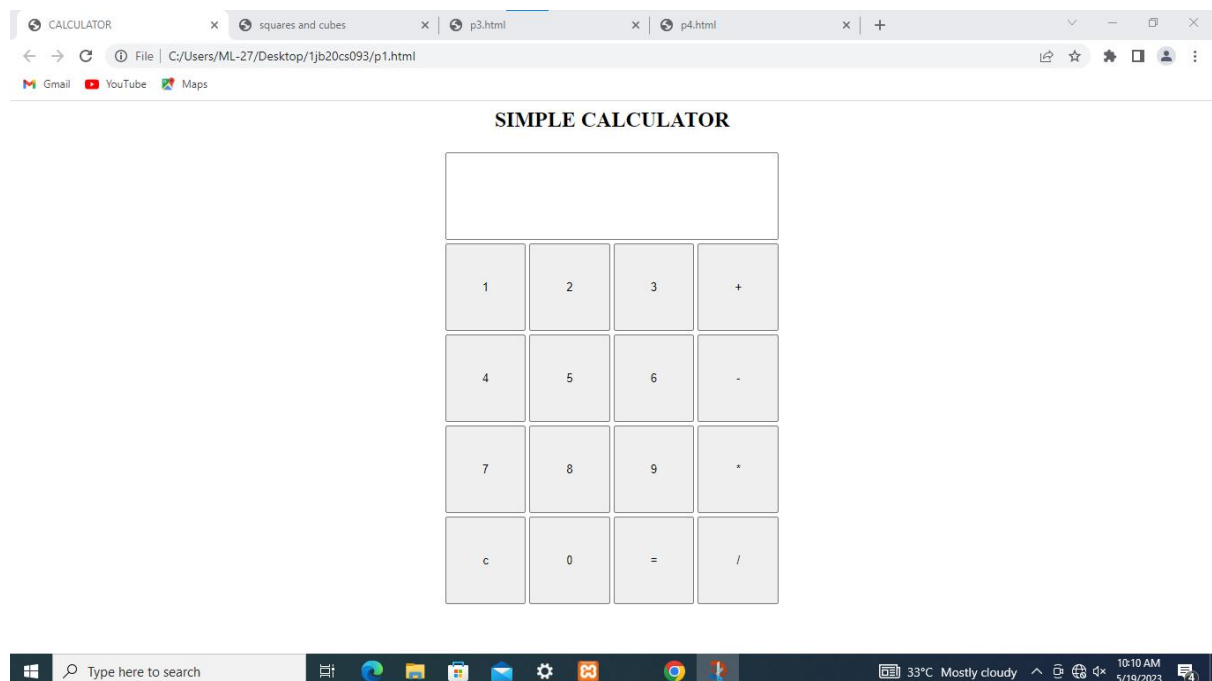
Program 1

Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.

```
<!DOCTYPE HTML>
<html>
<head>
<style>
    table, td, th
    {
        border: 1px solid black;
        background-color: DarkGray;
        border-collapse: collapse;
    }
    table { margin: auto; }
    input { text-align: right; }
</style>
<script type="text/javascript">
function calc(clicked_id)
{
var val1 = parseFloat(document.getElementById("value1").value);
var val2 = parseFloat(document.getElementById("value2").value);
if(isNaN(val1)||isNaN(val2))
alert("ENTER VALID NUMBER");
else if(clicked_id=="add")
document.getElementById("answer").value=val1+val2;
else if(clicked_id=="sub")
document.getElementById("answer").value=val1-val2;
else if(clicked_id=="mul")
document.getElementById("answer").value=val1*val2;
else if(clicked_id=="div")
document.getElementById("answer").value=val1/val2;
}
function cls()
{
value1.value="0";
value2.value="0";
answer.value="";
}
</script>
</head>
```

```
<body>
<table>
  <tr>
<th colspan="4"> SIMPLE CALCULATOR </th>
</tr>
<tr>
<td>value1</td>
<td><input type="text" id="value1" value="0"/></td>
<td>value2</td>
<td><input type="text" id="value2" value="0"/> </td>
</tr>
<tr>
<td><input type="button" value="Addition" id = "add" onclick="calc(this.id)"/></td>
<td><input type="button" value="Subtraction" id = "sub" onclick="calc(this.id)"/></td>
<td><input type="button" value="Multiplication" id = "mul" onclick="calc(this.id)"/></td>
<td><input type="button" value="Division" id = "div" onclick="calc(this.id)"/></td></tr>
<tr>
<td>Answer:</td>
<td><input type="text" id="answer" value="" disabled/></td>
<td colspan="2"><input type="button" value="CLEAR ALL" onclick="cls()"/></td>
</tr>
</table>
</body>
</html>
```

OUTPUT:



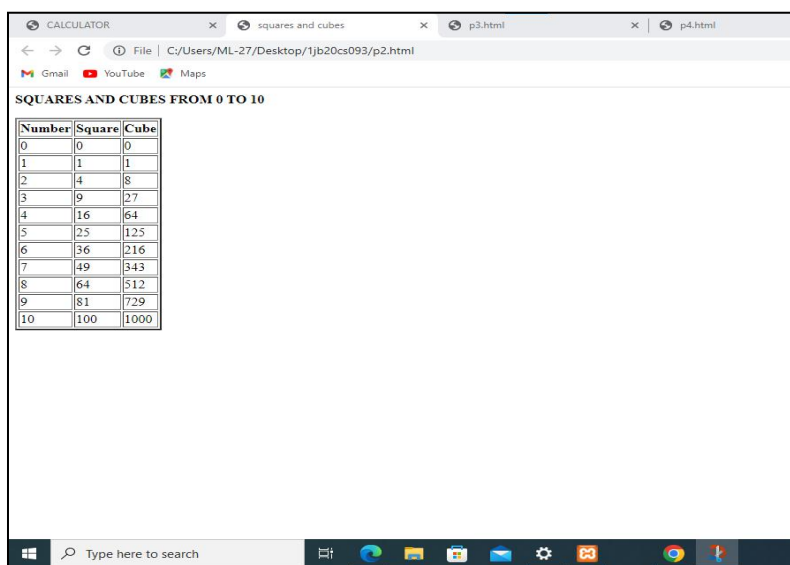
Program 2

Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.

program2.html

```
<!DOCTYPE HTML>
<html>
<head>
<style>
table, tr, td
{border: solid black;
width: 33%;
text-align: center;
border-collapse: collapse;
background-color: lightblue;}
table { margin: auto; }
</style> <script>
document.write( "<table><tr><th colspan='3'> NUMBERS FROM 0 TO 10
                WITH THEIR SQUARES AND CUBES </th></tr>" );
document.write( "<tr><td>Number</td><td>Square</td><td>Cube</td></tr>" );
for(var n=0; n<=10; n++)
{document.write( "<tr><td>" + n + "</td>
                <td>" + n*n + "</td>
                <td>" + n*n*n
                + "</td></tr>" );}
document.write( "</table>" );
</script></head></html>
```

OUTPUT:



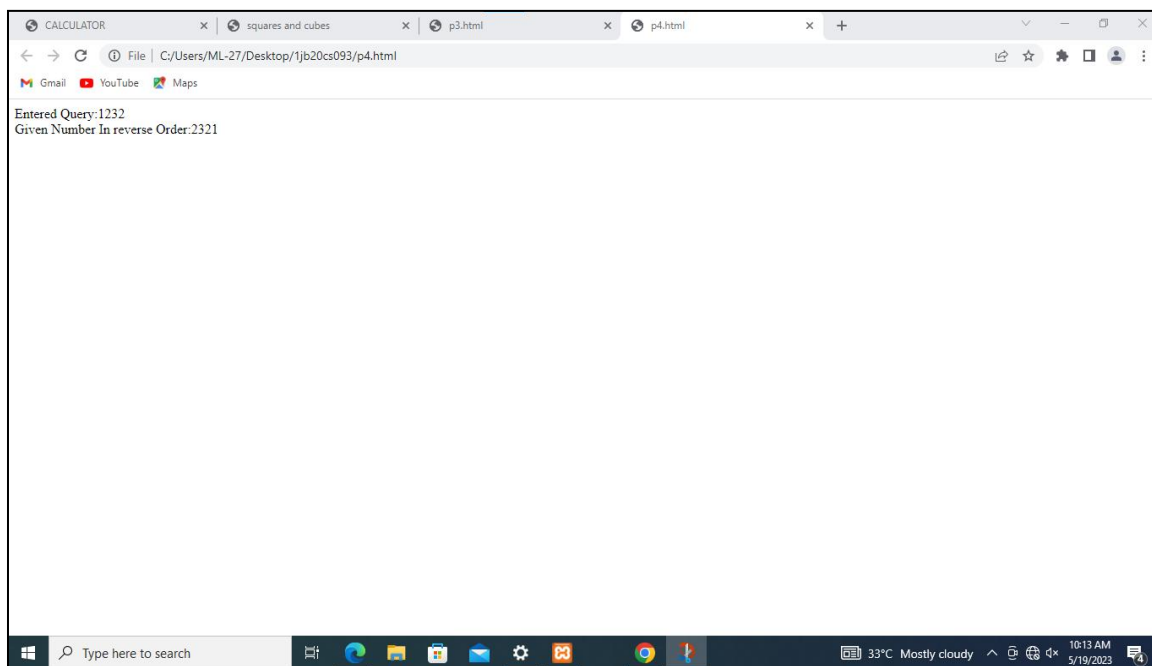
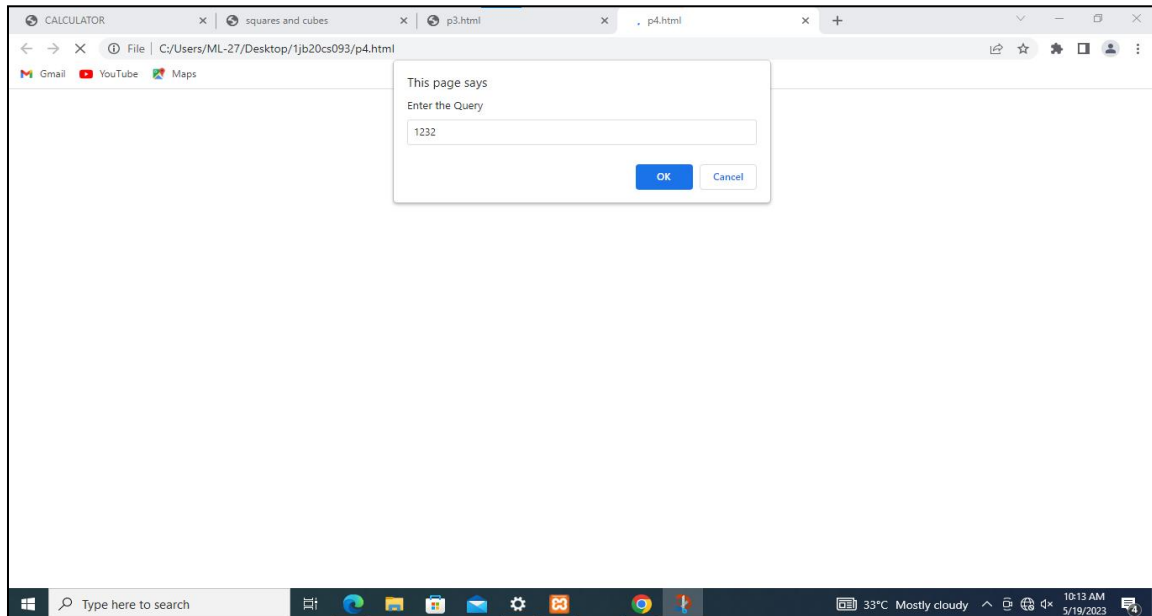
Number	Square	Cube
0	0	0
1	1	1
2	4	8
3	9	27
4	16	64
5	25	125
6	36	216
7	49	343
8	64	512
9	81	729
10	100	1000

Program 3

Develop and demonstrate a HTML5 file that includes JavaScript script that uses functions for the following problems:

- a) Parameter: A string**
- b) Output: The position in the string of the left-most vowel**
- c) Parameter: A number**
- d) Output: The number with its digits in the reverse order**

```
<!DOCTYPE HTML>
<html>
<body>
<script type="text/javascript">
var str = prompt("Enter the Input","");
if(!(isNaN(str)))
{
var num,rev=0,remainder;
num = parseInt(str);
while(num!=0) {
remainder = num%10;
num = parseInt(num/10);
rev = rev * 10 + remainder;
}
alert("Reverse of "+str+" is "+rev);
}
else
{
str = str.toUpperCase();
for(var i = 0; i < str.length; i++) {
var chr = str.charAt(i);
if(chr == 'A' || chr == 'E' || chr == 'I' || chr == 'O' || chr == 'U')break;
}
if( i < str.length )
alert("The position of the left most vowel is "+(i+1));
else
alert("No vowel found in the entered string");
}
}
</script>
</body>
</html>
```

OUTPUT:

Program 4

Write a JavaScript code that displays text “TEXT-GROWING” with increasing font size in the interval of 100ms in RED COLOR, when the font size reaches 50pt it displays “TEXT- SHRINKING” in BLUE color. Then the font size decreases to 5pt.

```
<!DOCTYPE HTML>
<html>
<head>
<style>
p {
position: absolute;
top: 50%;
left: 50%;
transform: translate(-50%, -50%);    }
</style>
</head>
<body>
<p id="demo"></p>
<script>
var var1 = setInterval(inTimer, 1000);
var fs = 5;
var ids = document.getElementById("demo");

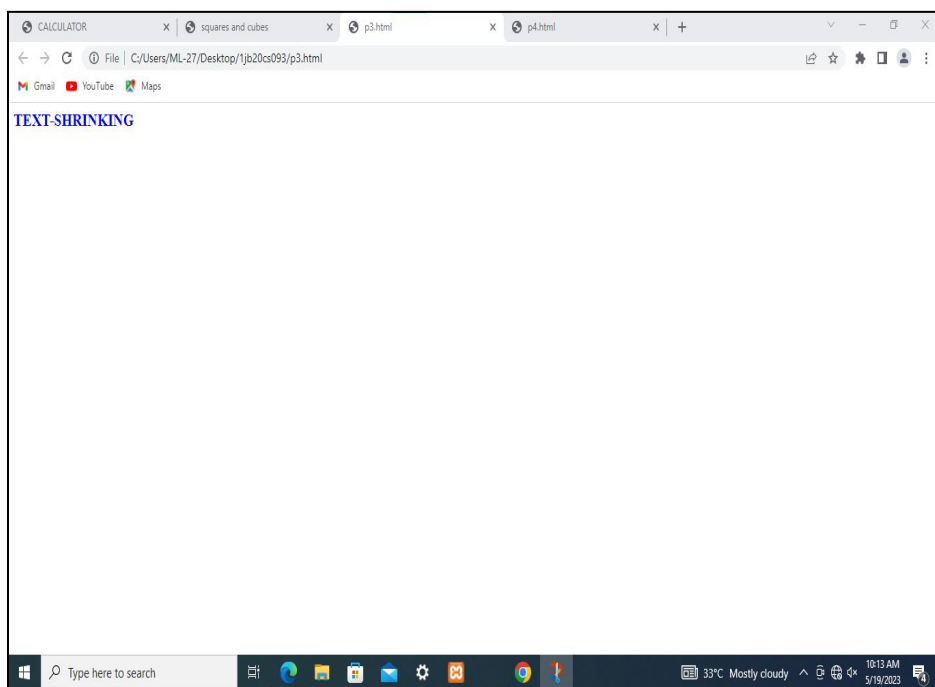
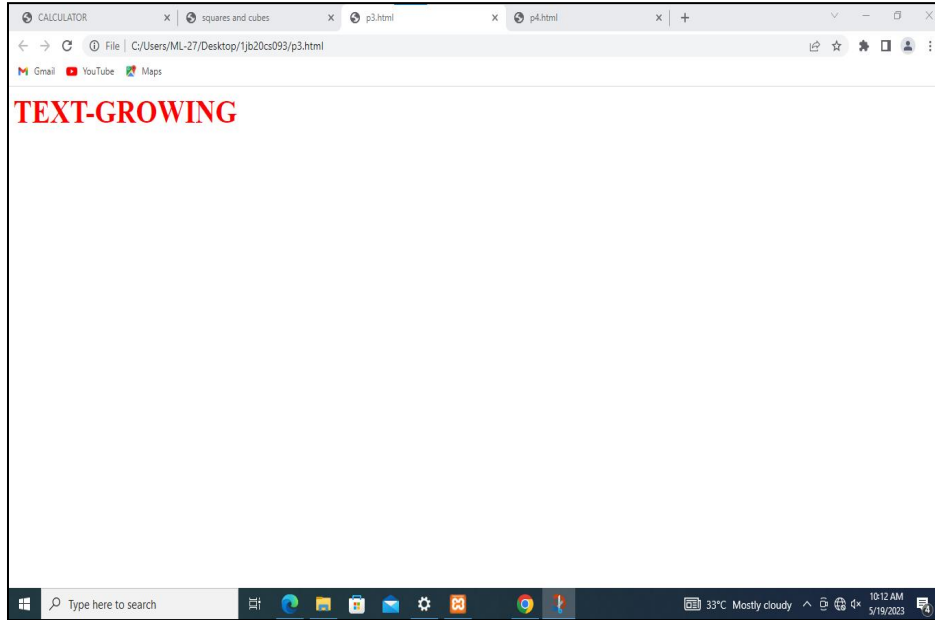
function inTimer()
{
    ids.innerHTML = 'KEERTHANA R';
    ids.setAttribute('style', "font-size: " + fs + "px; color: red");
    fs += 5;
    if(fs >= 50 )
    {
        clearInterval(var1);
        var2 = setInterval(deTimer, 1000);}}
function deTimer() {
fs -= 5;
ids.innerHTML = '1JB20CS049';

ids.setAttribute('style', "font-size: " + fs + "px; color: blue");
if(fs === 5 )
{
clearInterval(var2);
}
}
</script>
```

```
</body>
```

```
</html>
```

OUTPUT:



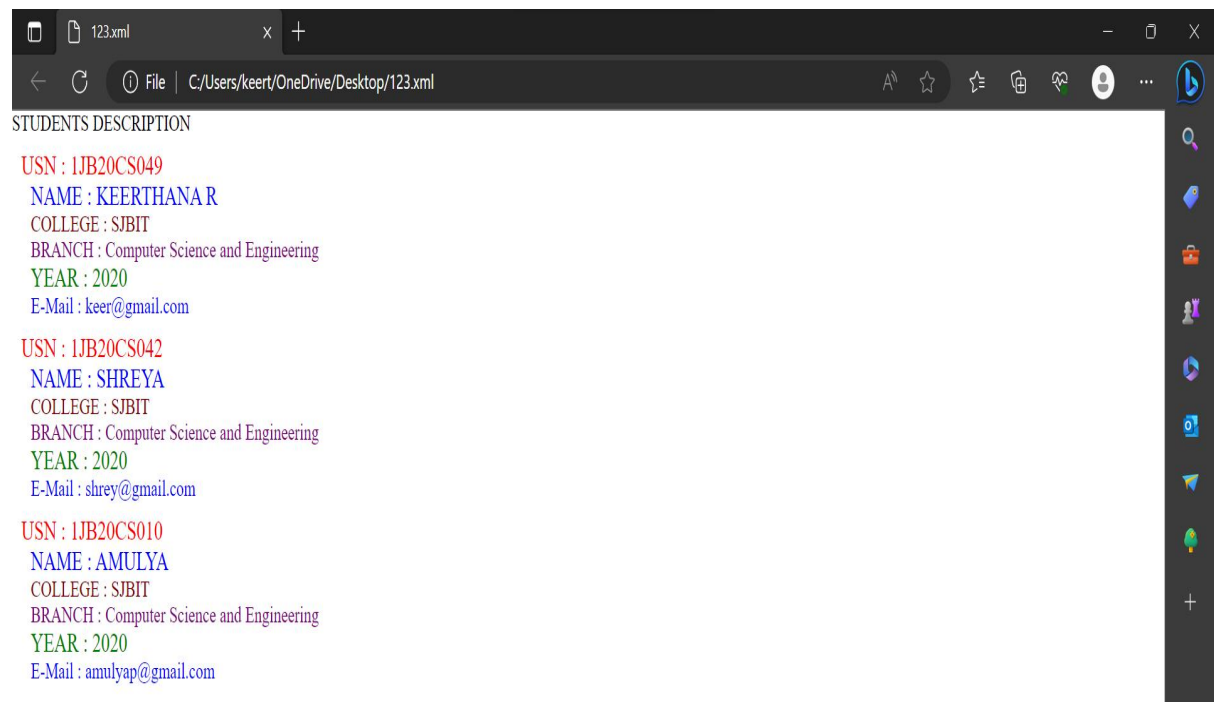
Program 5

Design an XML document to store information about a student in an engineering college affiliated to VTU. The information must include USN, Name, and Name of the College, Branch, Year of Joining, and email id. Make up sample data for 3 students. Create a CSS style sheet and use it to display the document.

```
<?xml-stylesheet type="text/css" href="1.css" ?>
<!DOCTYPE HTML>
<html>
<head>
<h1> STUDENTS DESCRIPTION </h1>
</head>
<students>
<student>
<USN>USN : 1JB20CS049</USN>
<name>NAME : KEERTHANA R</name>
<college>COLLEGE : SJBIT</college>
<branch>BRANCH : Computer Science and Engineering</branch>
<year>YEAR : 2020</year>
<e-mail>E-Mail : keer@gmail.com</e-mail>
</student>
<student>
<USN>USN : 1JB20CS042</USN>
<name>NAME : SHREYA</name>
<college>COLLEGE : SJBIT</college>
<branch>BRANCH : Computer Science and Engineering</branch>
<year>YEAR : 2020</year>
<e-mail>E-Mail : shrey@gmail.com</e-mail>
</student>
<student>
<USN>USN : 1JB20CS010</USN>
<name>NAME : AMULYA</name>
```

```
<college>COLLEGE : SJBIT</college>
<branch>BRANCH : Computer Science and Engineering</branch>
<year>YEAR : 2020</year>
<e-mail>E-Mail : amulyap@gmail.com</e-mail>
</student>
</students>
</html>
```

```
1.css
student{
display:block; margin-top:10px; color:Navy;
}
USN{
display:block; margin-left:10px;font-size:14pt; color:Red;
}
name{
display:block; margin-left:20px;font-size:14pt; color:Blue;
}
college{
display:block; margin-left:20px;font-size:12pt; color:Maroon;
}
branch{
display:block; margin-left:20px;font-size:12pt; color:Purple;
}
year{
display:block; margin-left:20px;font-size:14pt; color:Green;
}
e-mail{
display:block; margin-left:20px;font-size:12pt; color:Blue;
}
```

OUTPUT:

Program 6

Write a PHP program to keep track of the number of visitors visiting the web page and to display this count of visitors, with proper headings.

```
<?php
print "<h3> REFRESH PAGE </h3>";

$name="counter.txt";

$file = fopen($name,"r");

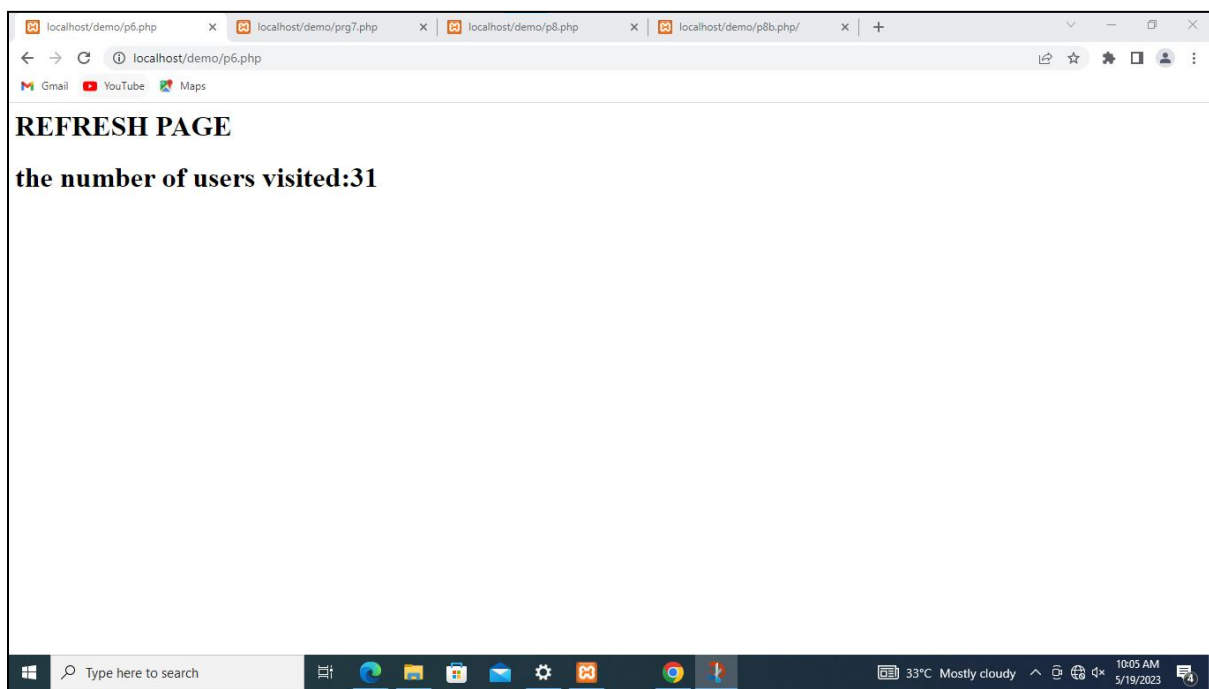
$hits= fscanf($file,"%d");

fclose($file);
    $hits[0]++;

$file = fopen($name,"w");
fprintf($file,"%d",$hits[0]);
fclose($file);

print "Total number of views: ".$hits[0];
?>
```

OUTPUT:

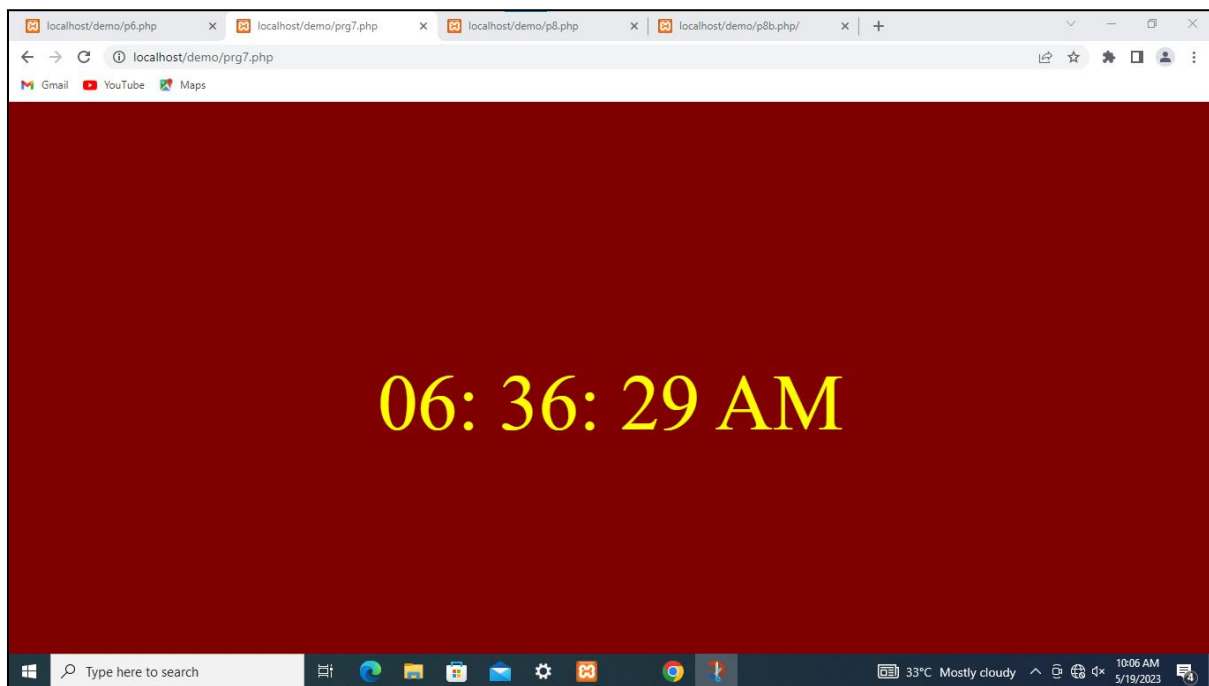


Program 7

7] Write a PHP program to display a digital clock which displays the current time of the server.

```
<html>
<head>
<meta http-equiv="refresh" content="1">
<title> digital clock</title>
<style type="text/css">
h1 {text-align= center;}
</style>
</head>
<?php
echo"<h1> Experiment to display current time of server</h1>";
echo"<hr>";
echo"<h1>".date('h:i:s:A')."<h1>";
echo"<hr>";
?>
</body>
</html>
```

OUTPUT:



Program 8

Write the PHP programs to do the following:

- a) Implement simple calculator operations.**
- b) Find the transpose of a matrix.**

Multiplication of two matrices.

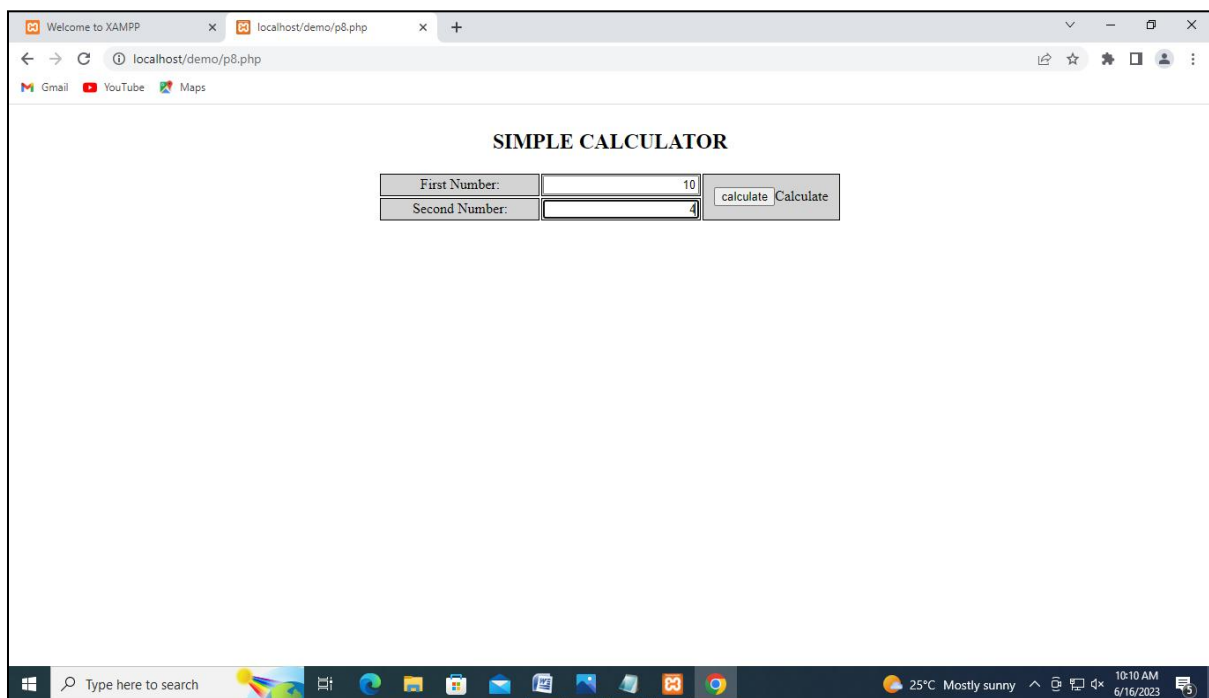
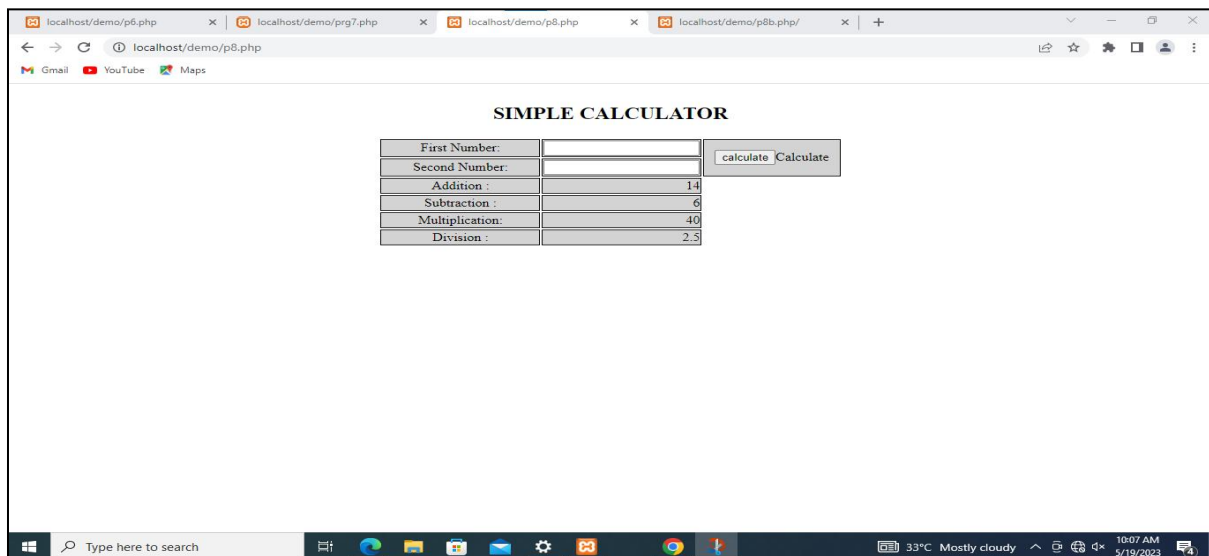
Addition of two matrices.

a)

```
<html>
<head>
<style>
table, td, th
{
border: 1px solid black;
width: 35%;
text-align: center;
background-color: DarkGray;
}
table { margin: auto; }
input,p { text-align:right; }
</style>
</head>
<body>
<form method="post">
<table>
<caption><h2> SIMPLE CALCULATOR </h2></caption>>
<tr><td>First Number:</td>
<td><input type="text" name="num1" /></td>
<td rowspan="2"><input type="submit"      name="submit"
value="calculate"></td></tr>
<tr><td>Second  Number:</td>
<td><input type="text" name="num2"/></td></tr>
</form>
<?php
if(isset($_POST['submit']))
{
$num1 = $_POST['num1'];
$num2 = $_POST['num2'];
if(isnumeric($num1) and isnumeric($num2) )
{
echo "<tr><td> Addition :</td><td><p>".($num1+$num2)."</p></td>";
echo "<tr><td> Subtraction :</td><td><p> ".($num1-$num2)."</p></td>";
echo "<tr><td> Multiplication :</td><td><p>".($num1*$num2)."</p></td>";
echo "<tr><td>Division :</td><td><p> ".($num1/$num2)."</p></td>";
```

```
echo "</table>";
}
else
{
echo"<script type='text/javascript' > alert(' ENTER VALID NUMBER');</script>";
}
}
?>
</body>
</html>
```

OUTPUT:



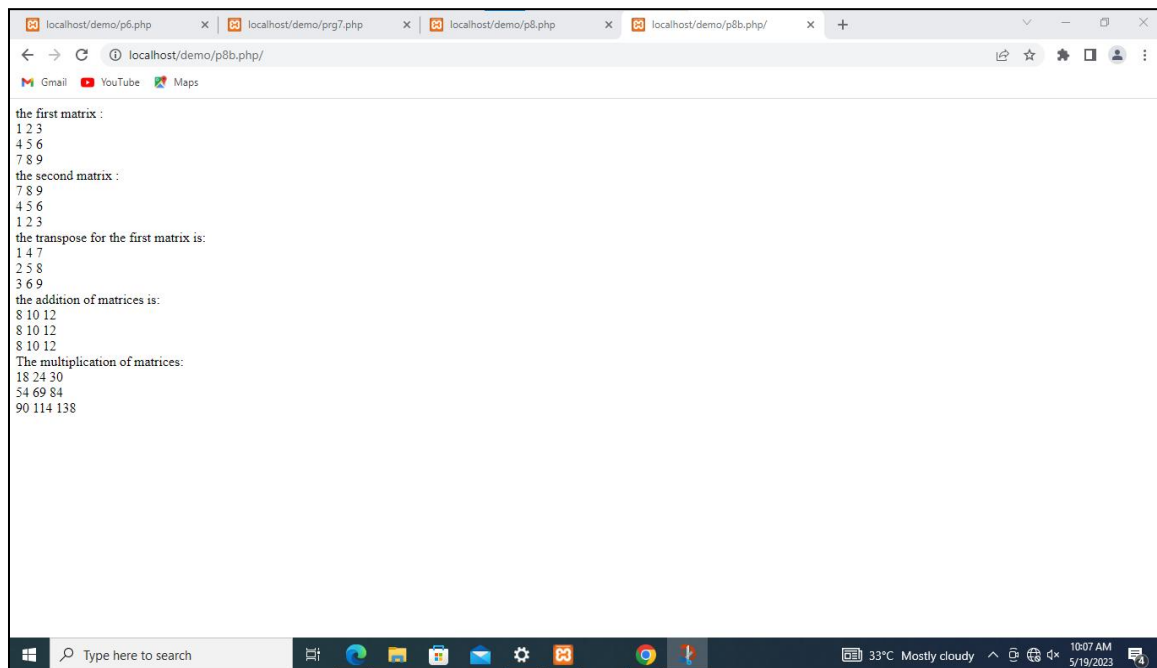
b)

```

if(($m===$p) and ($n===$q))
{
echo "the addition of matrices is:".<br/>;
for ($row = 0; $row < 3; $row++) {
for ($col = 0; $col < 3; $col++)
echo " ".$a[$row][$col]+$b[$row][$col]." ";
echo "<br/>";
}
}
if($n===$p){
echo " The multiplication of matrices: <br/>";
$result=array();
for ($i=0; $i < $m; $i++) {
for($j=0; $j < $q; $j++){
$result[$i][$j] = 0;
for($k=0; $k < $n; $k++)
$result[$i][$j] += $a[$i][$k] * $b[$k][$j];
}
}
for ($row = 0; $row < $m; $row++) {
for ($col = 0; $col < $q; $col++)
echo " ".$result[$row][$col];
echo "<br/>";
}
}
?>
$a = array(array(1,2,3),array(4,5,6),array(7,8,9));
$b = array(array(7,8,9),array(4,5,6),array(1,2,3));
$m=count($a);
$n=count($a[2]);
$p=count($b);
$q=count($b[2]);
echo "the first matrix  :".<br/>;
for ($row = 0; $row < $m; $row++) {
for ($col = 0; $col < $n; $col++)
echo " ".$a[$row][$col];
echo "<br/>";
}
echo "the second matrix  :".<br/>;
for ($row = 0; $row < $p; $row++) {
for ($col = 0; $col < $q; $col++)
echo " ".$b[$row][$col];
echo "<br/>";
}
echo "the transpose for the first matrix is:".<br/>;
for ($row = 0; $row < $m; $row++) {

```

```
for ($col = 0; $col < $n; $col++)  
echo " ".$a[$col][$row];  
echo "<br/>";  
}
```

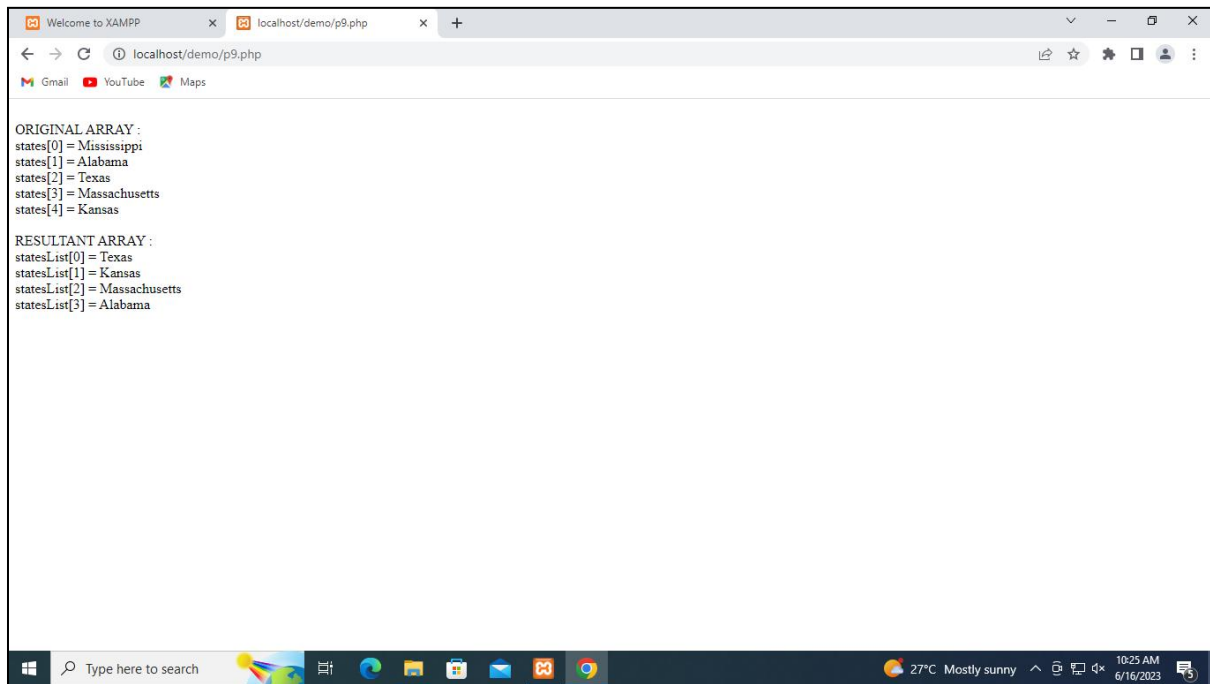
OUTPUT:

Program 9

Write a PHP program named states .py that declares a variable states with value "Mississippi Alabama Texas Massachusetts Kansas". write a PHP program that does the following:

- a) Search for a word in variable states that ends in xas. Store this word in element 0 of a list named statesList.**
- b) Search for a word in states that begins with k and ends in s. Perform a case-insensitive comparison. [Note: Passing re.I as a second parameter to method compile performs a case-insensitive comparison.] Store this word in element1 of statesList.**
- c) Search for a word in states that begins with M and ends in s. Store this word in element 2 of the list.**
- d) Search for a word in states that ends in a. Store this word in element 3 of the list.**

```
<?php
$states = "Mississippi Alabama Texas Massachusetts Kansas";
$statesArray = [];
$states1 = explode(' ', $states);
echo "Original Array :<br>"; foreach ( $states1 as $i => $value )
print("STATES[$i]=$value<br>");
foreach($states1 as $state) {
if(preg_match( '/xas$/ ', ($state)))
$statesArray[0] = ($state);
}
foreach($states1 as $state) {
if(preg_match('/^k.*s$/i', ($state)))
$statesArray[1] = ($state);
}
foreach($states1 as $state) {
if(preg_match('/^M.*s$/ ', ($state)))
$statesArray[2] = ($state);
}
foreach($states1 as $state){
if(preg_match('/a$/ ', ($state)))
$statesArray[3] = ($state);
}
echo "<br><br>Resultant Array :<br>";
foreach ( $statesArray as $array => $value )
print("STATES[$array]=$value<br>");
```

OUTPUT:

The screenshot shows a web browser window with two tabs: 'Welcome to XAMPP' and 'localhost/demo/p9.php'. The address bar shows 'localhost/demo/p9.php'. The page content displays two arrays of US states. The 'ORIGINAL ARRAY' contains five elements: Mississippi, Alabama, Texas, Massachusetts, and Kansas. The 'RESULTANT ARRAY' contains four elements: Texas, Kansas, Massachusetts, and Alabama. The Windows taskbar at the bottom shows the search bar, several application icons, and the system tray with a weather forecast of 27°C Mostly sunny and the date 6/16/2023.

```
ORIGINAL ARRAY :  
states[0] = Mississippi  
states[1] = Alabama  
states[2] = Texas  
states[3] = Massachusetts  
states[4] = Kansas  
  
RESULTANT ARRAY :  
statesList[0] = Texas  
statesList[1] = Kansas  
statesList[2] = Massachusetts  
statesList[3] = Alabama
```

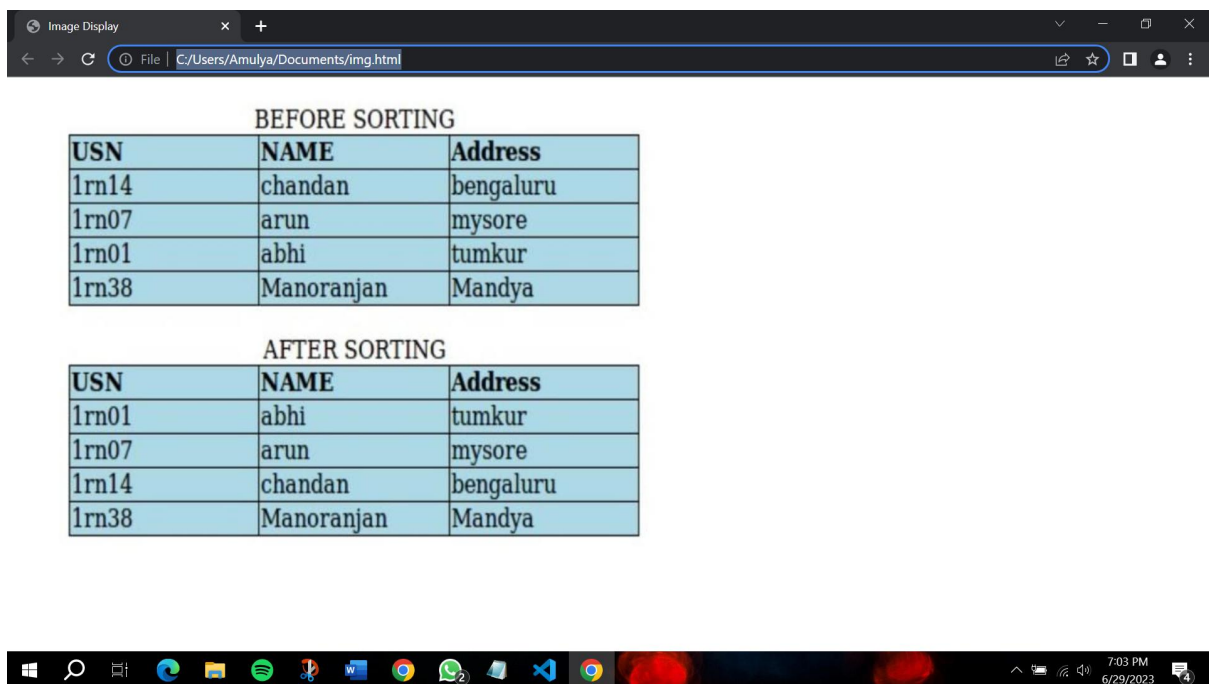
Program 10

Write a PHP program to sort the student records which are stored in the database using selection sort.

```
<?php
    $servername = "localhost";
    $username = "root";
    $password = "";
    $dbname = "student";
    $conn = mysqli_connect($servername, $username, $password, $dbname);
    if (!$conn) {
        die("Connection failed: " . mysqli_connect_error());
    }
    $sql = "SELECT * FROM student";
    $result = $conn->query($sql);
    $usn = array() ;
    echo "<table border='2'><caption>Before Sorting </caption><br>";
    echo "<tr><th>USN</th><th>NAME</th><th>Marks</th></tr>";
    if ($result->num_rows > 0)
    {
        while($row = $result->fetch_assoc())
        {
            echo "<tr><td>". $row["usn"]."</td>";
            echo "<td>". $row["name"]."</td>";
            echo "<td>". $row["marks"]."</td></tr>";
            $usn[] = $row["usn"] ;
        }
    }
    $n = sizeof($usn) ;
    for($i = 0 ; $i < $n-1 ; $i++ )
    {
```

```
$pos = $i ;
for($j = $i + 1 ; $j < $n ; $j++ )
{
    if( $usn[$pos] < $usn[$j])
    {
        $pos = $j ;
    }
}
if( $pos != $i)
{
    $temp = $usn[$i] ;
    $usn[$i] = $usn[$pos] ;
    $usn[$pos] = $temp ;
}
}
$name = [] ;
$marks = [] ;
$result = $conn->query($sql);
if ($result->num_rows > 0)
{
    while($row = $result->fetch_assoc())
    {
        for($i=0;$i<$n;$i++)
        {
            if($row["usn"] == $usn[$i])
            {
                $name[$i]=$row["name"];
                $marks[$i]=$row["marks"];
            }
        }
    }
}
```

```
}  
echo "<br><table border='2'><caption>After Sorting </caption><br>";  
echo "<tr><th>USN</th><th>NAME</th><th>Marks</th></tr>";  
for($i = 0 ; $i < sizeof($usn) ; $i++)  
{  
    echo "<tr><td>". $usn[$i]. "</td>";  
    echo "<td>". $name[$i]. "</td>";  
    echo "<td>". $marks[$i]. "</td></tr>";  
}  
?>
```

OUTPUT:

The screenshot shows a web browser window titled "Image Display" with the address bar showing "File | C:/Users/Amulya/Documents/img.html". The browser displays two tables. The first table, titled "BEFORE SORTING", has three columns: USN, NAME, and Address. It contains four rows of data. The second table, titled "AFTER SORTING", also has three columns: USN, NAME, and Address, but the rows are sorted by USN in ascending order.

USN	NAME	Address
1rn14	chandan	bengaluru
1rn07	arun	mysore
1rn01	abhi	tumkur
1rn38	Manoranjan	Mandya

USN	NAME	Address
1rn01	abhi	tumkur
1rn07	arun	mysore
1rn14	chandan	bengaluru
1rn38	Manoranjan	Mandya

MINI-PROJECT

Stock Market Information Website

Introduction

The stock market is a dynamic and complex financial environment where investors make decisions based on various factors. Analyzing stock market data is crucial for making informed investment choices. To facilitate this process, we aim to develop a stock market analysis website that provides users with real-time stock data, interactive charts, and insightful visualizations. The website will be built using HTML/CSS, JavaScript, and ApexCharts, leveraging data from a reliable source such as Alpha Vantage.

Problem Statement

The problem this aims to address is the lack of an intuitive and user-friendly platform for analyzing stock market data. Many existing solutions either have limited features or are inaccessible to novice investors. Our goal is to provide a comprehensive and accessible platform that enables users to analyze stock market trends, monitor their investments, and make data-driven decisions.

Objectives

Provide real-time stock market data, The website will fetch real-time stock data from a reliable API source, such as Alpha Vantage, to ensure accuracy and timeliness of information. Visualize stock data, Implement interactive charts and candlestick charts using ApexCharts to provide visual representations of stock prices, trends, and patterns. Perform technical analysis: Incorporate indicators and tools for technical analysis, such as moving averages, to assist users in evaluating stock performance. Portfolio management, Allow users to create and manage their investment portfolios, track portfolio performance, and receive alerts for significant changes.

Scope

The scope of this project includes the development of a stock market analysis website using PHP and JavaScript. The website will utilize the ApexCharts library to generate dynamic and interactive charts, including candlestick charts. The data for analysis will be sourced from a reliable API provider, such as Alpha Vantage. The website will focus on providing real-time stock data, visualization of stock prices and trends, and basic technical analysis tools. Additionally, the website will offer portfolio management functionality, allowing users to track their investments and receive relevant alerts. The project aims to create a robust and user-friendly platform for stock market analysis, targeting both novice and experienced investors.

Requirements and Specification

HTML,CSS, JavaScript

HTML provides the basic structure of sites, which is enhanced and modified by other technologies like CSS and JavaScript.

CSS is used to control presentation, formatting, and layout.

JavaScript is used to control the behavior of different elements.

PHP

PHP code is usually processed on a web server by a PHP interpreter implemented as a module, a daemon or as a Common Gateway Interface (CGI) executable. On a web server, the result of the interpreted and executed PHP code – which may be any type of data, such as generated HTML or binary image data – would form the whole or part of an HTTP response. Various web template systems, web content management systems, and web frameworks exist which can be employed to orchestrate or facilitate the generation of that response.

CODE SNIPPETS

```
// stock list
const stockSymbols = ["AAPL", "GOOG", "TSLA"];

function fetchStock(symbol) {
  /// Fetch stock data from Alpha Vantage
  fetch(`https://www.alphavantage.co/query?function=GLOBAL_QUOTE&symbol=
${symbol}&apikey=C5PWPQ0AG36SN6LV`)
    .then((response) => response.json())
    .then((data) => {
      // Extract the necessary information from the response
      const stockData = {
        name: data["Global Quote"]["01. symbol"],
        exchange: data["Global Quote"]["07. latest trading day"],
        price: data["Global Quote"]["05. price"],
        change: data["Global Quote"]["09. change"],
        percentChange: data["Global Quote"]["10. change percent"],
        volume: data["Global Quote"]["06. volume"],
      };

      // Pass the stock data to a function to display it in HTML
      displayStockData(stockData);
    })
    .catch((error) => {
      console.error("Error:", error);
    });
}

// Function to display the stock data in HTML
function displayStockData(stockData) {
  const tableRow = document.createElement("tr");

  // Create the table cells and populate them with the stock data
  const nameCell = document.createElement("td");
  nameCell.innerHTML = ` <a href="details.html?symbol=${stockData.name}" target="_blank">
${stockData.name} </a>`;
  const exchangeCell = document.createElement("span");
  exchangeCell.className = "text-muted font-10";
  exchangeCell.textContent = stockData.exchange;
  nameCell.appendChild(exchangeCell);
  tableRow.appendChild(nameCell);
}
```

```
const priceCell = document.createElement("td");
const upSymbol = document.createElement("i");
priceCell.textContent = stockData.price;
priceCell.className = "text-end";
upSymbol.className = "ti ti-trending-up text-success";
tableRow.appendChild(priceCell);
priceCell.appendChild(upSymbol);

const changeCell = document.createElement("td");
changeCell.className = "text-success text-end";
changeCell.textContent = stockData.change;
tableRow.appendChild(changeCell);

const percentChangeCell = document.createElement("td");
percentChangeCell.className = "text-success text-end";
percentChangeCell.textContent = stockData.percentChange;
tableRow.appendChild(percentChangeCell);

const volumeCell = document.createElement("td");
volumeCell.className = "text-end";
volumeCell.textContent = stockData.volume;
tableRow.appendChild(volumeCell);

// Append the table row to the table body
const tableBody = document.querySelector("#stockTableBody");
tableBody.appendChild(tableRow);
}

stockSymbols.forEach((symbol) => {
  fetchStock(symbol);
});

paragraphElement.innerHTML =
  "<h4> Stock Description: </h4>" +
  stockData.description +
  "<h4> Address: </h4>" +
  stockData.Address +
  "<h4> Country: </h4>" +
  stockData.Country +
  "<h4> Sector: </h4>" +
  stockData.Sector +
  "<h4> Industry: </h4>" +
  stockData.Industry;
infoBox.appendChild(paragraphElement);
}
```

```
const apiKey = "C5PWPQ0AG36SN6LV";
const formattedData = [];
const urlParams = new URLSearchParams(window.location.search);
const symbol = urlParams.get('symbol');
var url = `https://www.alphavantage.co/query?
function=TIME_SERIES_DAILY_ADJUSTED&symbol=${symbol}&apikey=${apiKey}`;

fetch(url)
.then((response) => response.json())
.then((data) => {
  const timeSeriesData = data["Time Series (Daily)"];

  for (const date in timeSeriesData) {
    const timestamp = new Date(date).getTime();
    const prices = [
      parseFloat(timeSeriesData[date]["1. open"]),
      parseFloat(timeSeriesData[date]["2. high"]),
      parseFloat(timeSeriesData[date]["3. low"]),
      parseFloat(timeSeriesData[date]["4. close"]),
    ];

    formattedData.push({ x: timestamp, y: prices });
  }

  /// Fetch stock data from Alpha Vantage
  fetch(`https://www.alphavantage.co/query?function=OVERVIEW&symbol=
${symbol}&apikey=C5PWPQ0AG36SN6LV`)
    .then((response) => response.json())
    .then((data) => {
      // Extract the necessary information from the response
      const stockData = {
nBox = document.getElementById("infoButtons");

const exchangeBtnDiv = document.createElement("div");
exchangeBtnDiv.innerHTML = ` <div class="row">
  <div class="col-md-2"> <p class="mb-0 p-2 bg-soft-dark rounded"><b>Exchange: </b>
${stockData.Exchange}</p> </div>
  <div class="col-md-2"> <p class="mb-0 p-2 bg-soft-dark rounded"><b>Currency: </b>
${stockData.Currency}</p> </div>
  <div class="col-md-2"> <p class="mb-0 p-2 bg-soft-success rounded"><b>Upper Circuit:
</b>${stockData.High}</p> </div>
  <div class="col-md-2"> <p class="mb-0 p-2 bg-soft-danger rounded"><b>Lower Circuit:
</b>${stockData.Low}</p> </div>
  <div class="col-md-2"> <p class="mb-0 p-2 bg-soft-dark rounded"><b>Profit Margin:
</div>`;
```

Snapshots and Results



Fig 4.1: Home Page

Fig 4.1 The home page of the website where the list of stocks are shown.



Fig 4.2: Chart 1

Fig 4.2 shows the Nifty 50 chart based on historical data, that can be used to predict stock prices, available in different date frames.



Fig 4.3: Stock information

Fig 4.3 this is the page that shows the detailed information of the chosen stock, the chart is a candlestick chart that shows highs and lows at different real time data points.



Fig 4.4: Chart tooltip

Fig 4.4 displays the tooltip feature of the chart, that shows the particular values when pointed at the chart data points.

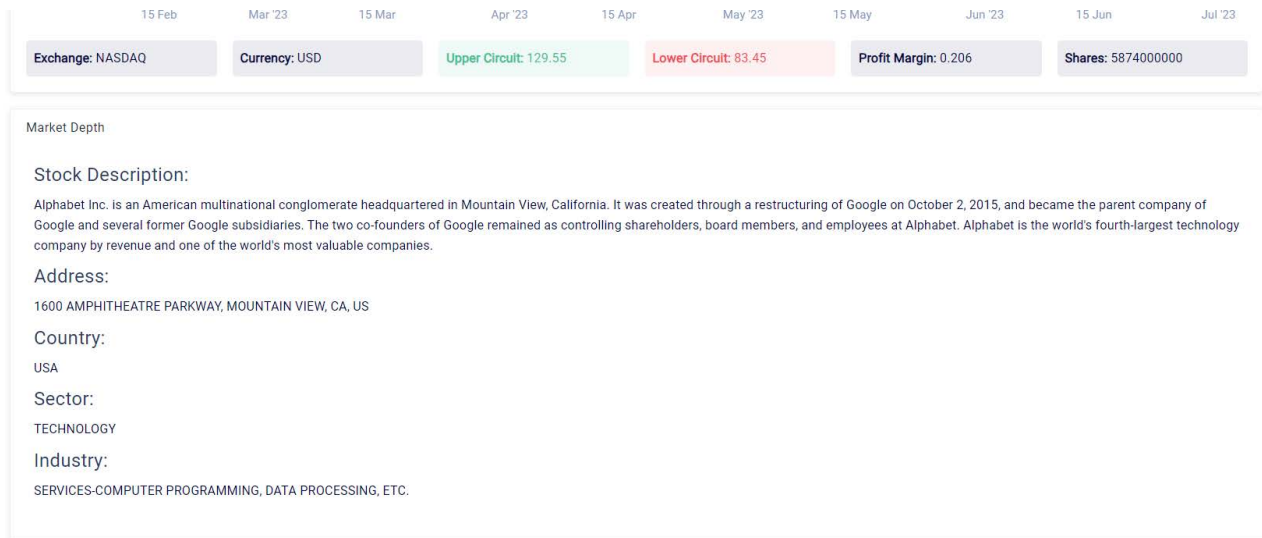


Fig 4.5: Description

Fig 4.5 shows the Market depth information of the current stock, it includes the stock description, Country of origin, Sector and Industry related information.