

Practical Exam

WEB DESIGN LAB

Name: AMEY THAKUR

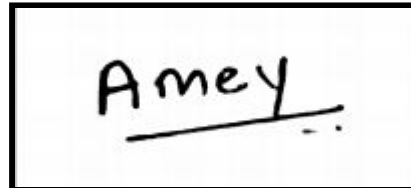
Roll No.: 50

Class: TE COMPS B

College ID: TU3F1819127

Date: 17-12-2020

Signature:

A rectangular box containing a handwritten signature that reads "Amey" with a horizontal line underneath.

Aim: Write a JavaScript function to calculate compound and simple interest of user-provided input.

Theory:

Formula to calculate Compound and Simple Interest

→ Simple Interest

Here,

P = Principal

R = rate% per annum

T = time

I = simple interest

A = amount

The formula for calculating simple interest is **$S.I = (P \times R \times T)/100$**

→ Compound Interest

The formula for annual compound interest, including principal sum, is:

$$\mathbf{A = P (1 + r/n)^{(nt)}}$$

Where:

A = the future value of the investment/loan, including interest

P = the principal investment amount (the initial deposit or loan amount)

r = the annual interest rate (decimal)

n = the number of times that interest is compounded per year

t = the number of years the money is invested or borrowed for.

$$\text{Total compounded interest} = \mathbf{P (1 + r/n)^{(nt)} - P}$$

Web page Snapshot:

- **Interest Calculator**

Amey B-50

File | D:/WDL%20EXAM/calculator.html

Name	College	Department	Class	Division	Roll Number
Amey Thakur	Terna Engineering College	Computer Engineering	Third Year	B	50

WDL EXAM
INTEREST CALCULATOR

SIMPLE INTEREST

Principal Amount

Interest Rate

Total Years

CALCULATE

COMPOUND INTEREST

Principal Amount

Interest Rate

Total Years

Compound Rate Per Year

CALCULATE

Amey Thakur B-50

- **Calculator**

Amey B-50

File | D:/WDL%20EXAM/calculator.html

Name	College	Department	Class	Division	Roll Number
Amey Thakur	Terna Engineering College	Computer Engineering	Third Year	B	50

WDL EXAM

INTEREST CALCULATOR

SIMPLE

INTEREST

Principal Amount

100000

Interest Rate

12

Total Years

4

CALCULATE

Simple Interest is 48000

COMPOUND

INTEREST

Principal Amount

1000

Interest Rate

12

Total Years

4

Compound Rate Per Year

4

CALCULATE

Compound Interest is 1604.71

Amey Thakur B-50

B.2 Web page source code:

- **Calculator.html**

```
<DOCTYPE html>

<html lang="en" dir="ltr">

<head>

  <meta charset="utf-8">

  <meta name="viewport" content="width=device-width">

  <meta name="description" content="calculator">

    <meta name="keywords" content="calculator">

    <meta name="author" content="Amey Thakur">

  <title>Amey B-50</title>

  <link rel="stylesheet" href="./css/style.css">

  <script src="javascript.js"></script>

</head>

<body>

  <aside id="sidebar">

    <p>

      <table border="0" bgcolor="#000000" align="center" cellspacing="20">

        <tr style="color:#000dff">

          <th >Name</th>

          <th>College</th>

          <th>Department</th>

          <th>Class</th>

          <th>Division</th>

          <th>Roll Number</th>

        </tr>

        <tr style="color:#ff0000">

          <td>Amey Thakur</td>
```

```

        <td>Terna Engineering College</td>

        <td>Computer Engineering</td>

        <td>Third Year</td>

        <td>B</td>

        <td>50</td>

    </tr>

</table>

</p>

</aside>

<center>

    <p style="color:#000dff">WDL EXAM</p>

    <p style="color:#ff0000">INTEREST CALCULATOR</p>

</center>

<div class="ex">

    <table border="0" bgcolor="#000000" align="center" cellspacing="20">

        <tr style="color:#000dff">

            <th align="right">SIMPLE</th>

            <th align="left">INTEREST</th>

        </tr>

        <tr style="color:#ffffff">

            <td>Principal Amount</td>

            <td><input type="number" placeholder="Enter Amount" size="25" id="sprincipal"
name="sprincipal" required></td>

        </tr>

        <tr style="color:#ffffff">

            <td>Interest Rate</td>

            <td><input type="number" placeholder="Enter Rate in %" size="25" id="srate"
name="srate" required></td>

        </tr>

```

```

<tr style="color:#ffffff">
    <td>Total Years</td>
    <td><input type="number" placeholder="Enter Years" size="25" id="syear" name="syear"
required></td>
</tr>
<tr>
    <td>
        <button style="color:#ff0000" onclick="myFunction1()">CALCULATE</button>
    </td>
</tr>
<tr>
    <td>
        <p id="SI"></p>
    </td>
</tr>
<tr style="color:#000dff">
    <th align="right">COMPOUND</th>
    <th align="left">INTEREST</th>
</tr>
<tr style="color:#ffffff">
    <td>Principal Amount</td>
    <td><input type="number" placeholder="Enter Amount" size="25" id="cprincipal"
name="sprincipal" required></td>
</tr>
<tr style="color:#ffffff">
    <td>Interest Rate</td>
    <td><input type="number" placeholder="Enter Rate in %" size="25" id="crate"
name="srate" required></td>
</tr>
<tr style="color:#ffffff">

```

```

        <td>Total Years</td>

        <td><input type="number" placeholder="Enter Years" size="25" id="cyear" name="syear"
required></td>

    </tr>

    <tr style="color:#ffffff">

        <td>Compound Rate Per Year</td>

        <td><input type="number" placeholder="Enter Compound Rate" size="25" id="cnd"
name="syear" required></td>

    </tr>

    <tr>

        <td>

            <button style="color:#ff0000" onclick="myFunction2()">CALCULATE</button>

        </td>

    </tr>

    <tr>

        <td>

            <p id="CI"></p>

        </td>

    </tr>

</table>

</div>

<footer>

    <center><p style="color:#f70000">Amey Thakur B-50</p></center>

</footer>

</body>

</html>

```

- **Javascript.js**

```
function myFunction1(){  
    var p = document.getElementById('sprincipal').value;  
    var r = document.getElementById('srate').value;  
    var t = document.getElementById('syear').value;  
    var inr = p*r*t;  
    var inrst = inr/100;  
    document.getElementById('SI').innerHTML= "<span class='color-class'>Simple Interest is  
"+inrst+"</span>";  
}
```

```
function myFunction2(){  
    var p = document.getElementById('cprincipal').value;  
    var r = document.getElementById('crate').value;  
    var t = document.getElementById('cyear').value;  
    var n = document.getElementById('cnd').value;  
    var r1 = r/100;  
    var nbr = r1/n;  
    var x = (1+nbr);  
    var nt = n*t;  
    var xnt = Math.pow(x,nt);  
    var cmpndint = p*xnt;  
    var z = cmpndint.toFixed(2);  
    document.getElementById('CI').innerHTML= "<span class='color-class'>Compound  
Interest is "+z+"</span>";  
}
```


- **Style.css**

```
body{  
    background-color: #00fbff;  
}  
  
h1.hc{  
    font-family: cursive;  
    font-size: 50px;  
    color: #ff0000;  
    position: absolute;  
    left: auto;  
}  
  
div.ex{  
    width: auto;  
    padding: 20px;  
    border: 0px;  
    margin: 0px;  
}  
  
p.in{  
    font-family: cursive;  
    font-size: 15px;  
}  
  
.color-class{  
    color:#ff0008;  
}
```

Conclusion

Hence we studied how to simple mathematical calculations at client-side using JavaScript and apply the concept of client-side validation and design dynamic web pages using JavaScript.