

## EMI Calculator

The Silver Bank requires a EMI Calculator for the ease of it's customers. The customers are asked to fill a form regarding their EMI details. The customers can know about the EMI to be paid per month for the loan taken.

Concept covered: Javascript Deep Dive – Math, number, functions

The following are the screenshots for EMI Calculator

***EMI Calculator***

|   |                                     |                             |
|---|-------------------------------------|-----------------------------|
| Principal Amount in Rs.   | <input type="text" value="500000"/> | → <b>id=principalAmount</b> |
| Interest Per Annum  | <input type="text" value="11"/>     | → <b>id=interestRate</b>    |
| Tenure in Months  | <input type="text" value="24"/>     | → <b>id=tenure</b>          |
| <input type="button" value="Calculate"/> <input type="button" value="Clear"/> |                                     |                             |

**id=submit   id=reset**

***EMI Calculator***

|   |                                     |
|---|-------------------------------------|
| Principal Amount in Rs.   | <input type="text" value="500000"/> |
| Interest Per Annum  | <input type="text" value="11"/>     |
| Tenure in Months  | <input type="text" value="24"/>     |
| <input type="button" value="Calculate"/> <input type="button" value="Clear"/> |                                     |
| EMI is Rs.23303.92  |                                     |

**div id=result**

Use the Label Name and the Component Id as given. The Component Id can be given in any case (Upper case or Lower case or Mixed case).All the necessary attributes for the Components should be given.

The Component Id should be specified for each HTML Component. If the Component Id is not provided for a HTML component, the marks will not be provided for this component.

All Tags, Elements and Attributes should conform to HTML5 Standards. All the fields are mandatory.

Provide the details as given in the table below.

| Req. # | Req. Name | Req. Description |
|--------|-----------|------------------|
|        |           |                  |

| 1                       | Design a Web page “EMI Calculator” with the specified fields. | <table> <tr> <th data-bbox="612 244 794 434">Label Name</th><th data-bbox="794 244 1067 434">Component Id<br/>(Specify it for the “id” attribute)</th><th data-bbox="1067 244 1386 434">Description</th></tr> <tr> <td data-bbox="612 434 794 958">Principal Amount in Rs.</td><td data-bbox="794 434 1067 958">principalAmount</td><td data-bbox="1067 434 1386 958">           To enter the principal amount.<br/><br/>           Design Constraints:<br/><br/>           It should be a numeric field.<br/><br/>           The text “Principal Amount” should appear by default.<br/><br/>           It should be mandatory.         </td></tr> <tr> <td data-bbox="612 958 794 1482">Interest Per Annum</td><td data-bbox="794 958 1067 1482">interestRate</td><td data-bbox="1067 958 1386 1482">           To enter the interest rate percentage.<br/><br/>           Design Constraints:<br/><br/>           It should be a numeric field.<br/><br/>           The text “Interest Per Annum” should appear by default.<br/><br/>           It should be mandatory.         </td></tr> <tr> <td data-bbox="612 1482 794 2007">Tenure in Months</td><td data-bbox="794 1482 1067 2007">tenure</td><td data-bbox="1067 1482 1386 2007">           To enter the tenure in months.<br/><br/>           Design Constraints:<br/><br/>           It should be a numeric field.<br/><br/>           The text “Tenure in Months” should appear by default.<br/><br/>           It should be mandatory.         </td></tr> </table> | Label Name | Component Id<br>(Specify it for the “id” attribute) | Description | Principal Amount in Rs. | principalAmount | To enter the principal amount.<br><br>Design Constraints:<br><br>It should be a numeric field.<br><br>The text “Principal Amount” should appear by default.<br><br>It should be mandatory. | Interest Per Annum | interestRate | To enter the interest rate percentage.<br><br>Design Constraints:<br><br>It should be a numeric field.<br><br>The text “Interest Per Annum” should appear by default.<br><br>It should be mandatory. | Tenure in Months | tenure | To enter the tenure in months.<br><br>Design Constraints:<br><br>It should be a numeric field.<br><br>The text “Tenure in Months” should appear by default.<br><br>It should be mandatory. |
|-------------------------|---|--|------------|---|-------------|-------------------------|-----------------|--|--------------------|--------------|--|------------------|--------|--|
| Label Name              | Component Id<br>(Specify it for the “id” attribute)           | Description  |            |   |             |                         |                 |  |                    |              |  |                  |        |  |
| Principal Amount in Rs. | principalAmount   | To enter the principal amount.<br><br>Design Constraints:<br><br>It should be a numeric field.<br><br>The text “Principal Amount” should appear by default.<br><br>It should be mandatory.   |            |   |             |                         |                 |  |                    |              |  |                  |        |  |
| Interest Per Annum      | interestRate  | To enter the interest rate percentage.<br><br>Design Constraints:<br><br>It should be a numeric field.<br><br>The text “Interest Per Annum” should appear by default.<br><br>It should be mandatory.   |            |   |             |                         |                 |  |                    |              |  |                  |        |  |
| Tenure in Months        | tenure  | To enter the tenure in months.<br><br>Design Constraints:<br><br>It should be a numeric field.<br><br>The text “Tenure in Months” should appear by default.<br><br>It should be mandatory.   |            |   |             |                         |                 |  |                    |              |  |                  |        |  |

|  |        |  |
|--|--------|--|
| Calculate  | submit | The input type submit must be used.                                |
|  | reset  | Reset Button. On clicking this button, all fields should be reset. |
| NOTE: The text highlighted in bold in the Description needs to be implemented in the code to complete the web page design. |        |  |

|   |  |  |
|---|--|--|
| 3 | Use JavaScript for displaying the calculated EMI | <p>Use JavaScript for displaying the calculated EMI:</p> <p>When the customer enters the valid values and clicks the "Submit" button, the calculated EMI Amount is displayed as follows:</p> <p>The result should be displayed as "EMI is Rs. <i>EMI</i>"</p> <p>in a div tag with id "result".</p> <p>Note: Use the <code>getElementsByName()</code> or <code>getElementById()</code> function to retrieve the values.</p>  |
| 4 | form Tag with attribute onsubmit                 | <p>form Tag is already given in the code template. Do not change the code template and do the coding as per the requirements and specification.</p> <p>Make sure that the onsubmit attribute in the form tag is invoking the JavaScript function like "return calculateEMI()".</p> <p>Also ensure that "return false;" statement is the last line of the JavaScript function "calculateEMI()".</p> <p>The EMI is calculated using the following formulae:</p> $EMI = P * R * ((1 + R)^N / ((1 + R)^N - 1))$ <p>where P -&gt; Principal amount</p> <p>R -&gt; rate of interest per month = <math>(r/100) / 12</math></p> <p>r -&gt; rate of Interest per annum</p> <p>N -&gt; tenure in months.</p> <p>Use <code>toFixed()</code> function to display only two numbers after the decimal point in the calculated EMI.</p> <p>For Example, the EMI is calculated as follows:</p> <p>P = Rs. 1,00,000</p> <p>r = 10% R = <math>(10/100) / 12</math></p> <p>N = 24 months</p> <p>EMI is Rs.4614.49</p> |