

# HW5 – Loan Calculation Web Site

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MSCI:3300 – Software Design and Development

Due **Tuesday, March 3, 2015**

## Assignment:

Create single web page that enables users to calculate loan payments and provides an amortization schedule.

## Case

A developer has started a loan calculator application for the company, but it needs modification. Download the source code from <https://github.com/mikecolbert/HW5>. Copy the source code to a new folder and commit to your Github. Make the modifications below using branches and merges as well as multiple commits with useful messages.

## Requirements:

Use your Instruct HW5 folder.

Create a new, empty web site, set the framework to 4.5.1.

Name your file default.aspx and place your VB code in a separate file.

Your application should also have a “clear” button so the user can empty the values they entered from all fields with one click.

You should collect all necessary information from the user and accurately calculate the monthly loan payments and amortization schedule.

You should have an external style sheet to format your web app *similar* to the one shown below.

Required fields should be denoted on the user interface and input examples noted (if necessary).

User input validation should be used and a useful message should be returned on required fields.

Payment date field should be added to the table and correctly calculated. Assume the first payment is due one month from the current date.

New Balance field should be added to the table should correctly display the remaining principal balance.

Use Adobe Kuler or Color Scheme Designer 3 to design a thoughtful, attractive page. Links to each are on the class resources page.

You should have multiple, useful git commits on Github for this project.

This is an individual assignment.

I will grade your application from Instruct and check the file times to ensure the assignment was completed on time.

Finished product should be similar to this.

## Mike's Massively Awesome Loan Calculator

Loan Amount:

Annual Interest %:

Loan Term (Yrs):

Welcome to my mortgage calculator. Please complete the fields above to have your monthly payment and loan repayment schedule calculated for you.

## Mike's Massively Awesome Loan Calculator

Loan Amount:

Annual Interest %:

Loan Term (Yrs):

Monthly Payment: **\$87.92**

| Payment Number | Payment Date | Principal Paid | Interest Paid | New Balance |
|----------------|--------------|----------------|---------------|-------------|
| 1              | 3/25/2014    | \$79.58        | \$8.33        | \$920.42    |
| 2              | 4/25/2014    | \$80.25        | \$7.67        | \$840.17    |
| 3              | 5/25/2014    | \$80.91        | \$7.00        | \$759.26    |
| 4              | 6/25/2014    | \$81.59        | \$6.33        | \$677.67    |
| 5              | 7/25/2014    | \$82.27        | \$5.65        | \$595.40    |
| 6              | 8/25/2014    | \$82.95        | \$4.96        | \$512.45    |
| 7              | 9/25/2014    | \$83.65        | \$4.27        | \$428.80    |
| 8              | 10/25/2014   | \$84.34        | \$3.57        | \$344.46    |
| 9              | 11/25/2014   | \$85.05        | \$2.87        | \$259.41    |
| 10             | 12/25/2014   | \$85.75        | \$2.16        | \$173.66    |
| 11             | 1/25/2015    | \$86.47        | \$1.45        | \$87.19     |
| 12             | 2/25/2015    | \$87.19        | \$0.73        | \$0.00      |

## Code Snippets:

### Postback:

```
<tr>
  <td align="right">&nbsp;</td> <td align="left"> <asp:Button ID="btnCalcPmt" runat="server" TabIndex="4" Text="Calculate" />
</td>
</tr>
</table>
```

```
<% If Not IsPostBack Then%>
  <!-- This is the first time the page has loaded. There is nothing to display. -->

  <p>Welcome to my mortgage calculator. Please complete the fields above to have your monthly payment and loan repayment schedule
  calculated for you.</p>

<% Else %>
  <!-- Then then page is in postback so show the monthly payment and payment schedule. -->

  <br />

  Monthly Payment: &nbsp;<span class="bold"><asp:Label ID="lblMonthlyPmt" runat="server"></asp:Label></span>

  <br />
  <br />

  <asp:GridView ID="loanGridView" runat="server" CssClass="cssgridview">
    <AlternatingRowStyle CssClass="alt" />
  </asp:GridView>

<% End If %>

</div>
```

### CSS:

```
body { background-color:lightcoral; color:black; }

/* Custom classes - START */
/* MWC */

.bold {font-weight:bold; font-size:24px;}

/* Custom classes - END */

/* CSS to format the gridview -- START*/
.cssgridview { width:auto; margin:5px 0 10px 0; border:solid 1px #525252; border-collapse:collapse; text-align:center; font-family: "Comic Sans MS"; color:
.cssgridview td { padding:10px; border:solid 1px #c1c1c1; color:#717171; }
.cssgridview th { padding:10px; color:#fff; background:#424242 url(../style/grd_head.png) repeat-x top; border-left:solid 1px #525252; font-size:0.9em; }
.cssgridview .alt { background-color:aqua;}

/* CSS to format the gridview -- END*/
```