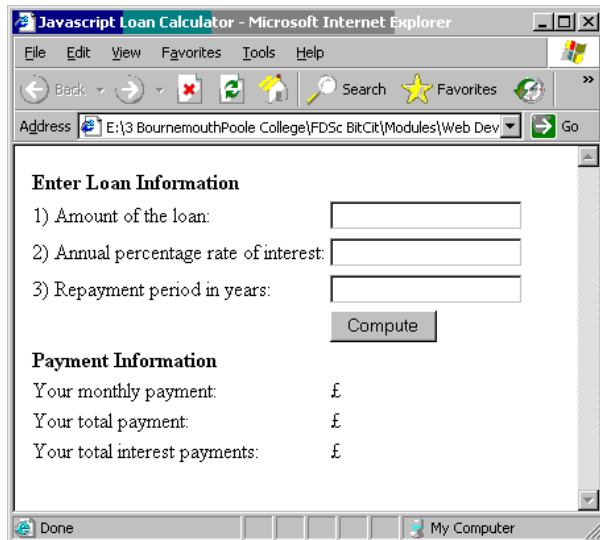


JavaScript Exercises 3 - DOM

This uses the DOM and Javascript to create a simple Bank Loan interest calculator.

Don't worry about the maths, but notice how the Javascript is able to get data from the form on the webpage, and also how it puts data back into the DOM so that it is displayed on the page.

The page should look like this – although not as well laid out:



Type in the following files and save them with the names shown:

interest.css

```
.result
{
font-weight: bold;
}

#payment
{
text-decoration: underline;
}

.title
{
font-weight: bold;
}
```

interest.htm

```
<html>
  <head>
    <title>Javascript Loan Calculator</title>
    <link type="text/css" rel="stylesheet" href="Interest.css" ></link>
    <script type="text/javascript" src="Interest.js"></script>
  </head>

  <body>
    <form name="loandata">
      <span class="title">Enter Loan Information</span>
      <br />
      1) Amount of the loan:
      <input type="text" id="principal" onchange="calculate();" />
      <br />
      2) Annual percentage rate of interest:
      <input type="text" id="interest" onchange="calculate();" />
      <br />
      3) Repayment period in years:
      <input type="text" id="years" onchange="calculate();" />
      <br />
      <input type="button" value="Compute" onclick="calculate();" />
      <br />
      <span class="title">Payment Information</span>
      <br />
      Your monthly payment:
      &pound;<span class="result" id="payment"></span>
      <br />
      Your total payment:
      &pound;<span class="result" id="total"></span>
      <br />
      Your total interest payments:
      &pound;<span class="result" id="totalinterest"></span>
    </form>
  </body>
</html>
```

interest.js

```
function calculate()
{
    // Get users input from form

    var principal = document.getElementById("principal").value;
    var rawinterest = document.getElementById("interest").value;
    var rawpayments = document.getElementById("years").value;

    // Convert interest from percent to a decimal, and annual rate to monthly

    var interest = rawinterest / 100 / 12;
    var payments = rawpayments * 12;

    // Compute monthly payment figure using Javascript math functions

    var x = Math.pow( 1 + interest, payments);
    var monthly = (principal * x * interest)/(x-1);

    // Get named <span> elements from the form

    var payment = document.getElementById("payment");
    var total = document.getElementById("total");
    var totalinterest = document.getElementById("totalinterest");

    // Check result is a finite number and display it with 2 decimal places

    if (isFinite(monthly))
    {
        payment.innerHTML = monthly.toFixed(2);
        total.innerHTML = (monthly * payments).toFixed(2);
        totalinterest.innerHTML = ((monthly * payments)-principal).toFixed(2);
    }
    else
    {
        payment.innerHTML = " ";
        total.innerHTML = " ";
        totalinterest.innerHTML = " ";
    }
}
```