

Capstone – Loan App

Overview

Loan_App is a free-to-use online loan calculator. Loan_App specializes in estimating your monthly payment and how much interest will be paid through the term of the loan. To do this, users must enter loan amount (principle), interest rate (ex: 5.74), and number of years. The formula for calculating payments is

- $A = P (r (1 + r)^n) / ((1 + r)^n - 1)$
- A – represents the payment amount per period
- P – represents the loan amount (principle)
- r – represents the interest rate per period (ex: 5.74 / 12)
- n – represents the total number of payments (ex: 4 years is 48 payments or 4 * 12)

Special note. There are plenty of resources online that can assist you in figuring out how to implement the above formula. In addition, you can review the exhibits I have provided below.

Styling Requirements

The styling of your website much match one of the below houses. If you are not sure what the color palettes are for the houses below, use the Internet to research them.

- House Gryffindor
- House Hufflepuff
- House Ravenclaw
- House Slytherin

Requirements

- Build a website that estimates the monthly payment and total interest paid by capturing the loan amount, interest rate, and number of years.
 - a. Add pages for About Us and Contact Us.

- i. The About Us page should contain a minimum of 250-words and provide a backstory on the fictitious company, Loan_App. Give this backstory life by including images, humor, something interesting about the house you selected.
 - ii. The Contact Us page should contain at least two icons (address and phone) with their address, phone numbers, and the best way for contacting them.
- b. Display text for “Your monthly payment” and “Interest paid.” Set the font size of the monthly payment value to 48px. Set the font size of the interest paid value to 48px. You can either display the results in a dialog window (reference: in-n-out-books), new component (reference: composer app), or in the same page (reference: gpa-calculator-app).

Special note. The exhibits below are examples of one solution. This does not mean your solution has to mirror it. I am simply providing these images as a baseline to get you started. Remember, you have three options for displaying the results: dialog, new component, or same component. The projects I referenced in step b. have examples on how to: create and pass data to a dialog component (in-n-out-books), how to create and pass data to a component (composer-app), and how to pass data to another component in the same component (gpa-calculator-app).

Exhibit 1. Loan Calculator

The screenshot shows a web application for a loan calculator. At the top, there is a purple navigation bar with links for Home, About, and Contact Us. The main content area has a dark gray background. On the left, there are three input fields: 'Loan amount' with a value of \$5,316.00, 'Interest rate (ex: 4.5):' with a value of 5.74, and 'Number of years:' with a value of 4. Below these fields is a purple 'Submit' button. On the right, the results are displayed: 'Your monthly payment:' at \$124.21 and 'Interest paid:' at \$646.08. A welcome message 'Welcome to the Loan Application!' is centered at the top of the main area.

Exhibit 2. About Us

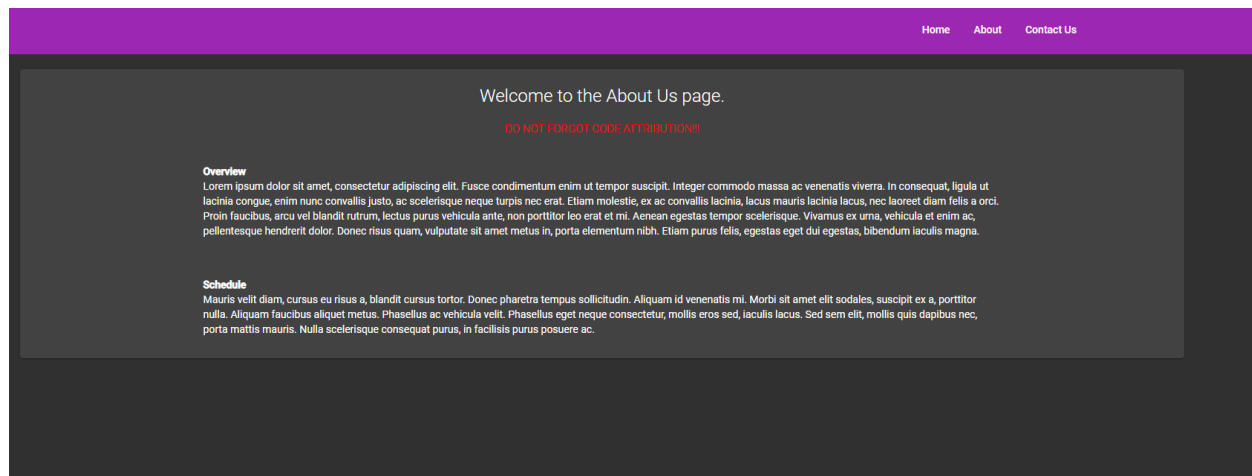


Exhibit 3. About

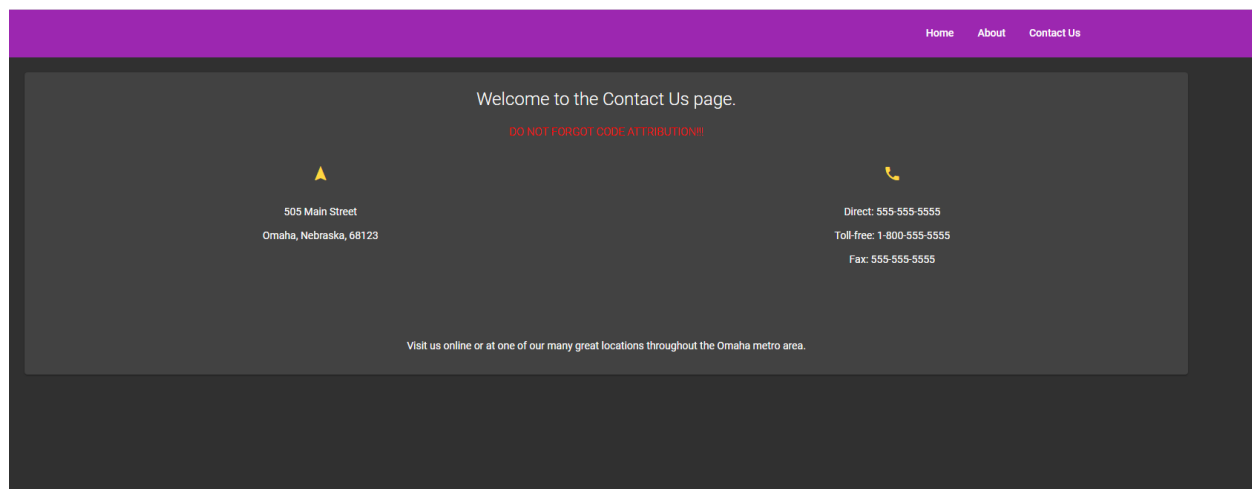


Exhibit 4. Loan formula (you will need to Zoom in to see it)

```
this.monthlyPayment = this.principle * (this.ratePerPeriod * Math.pow((this.ratePerPeriod + 1), this.numberOfPayments)) / (Math.pow((1 + this.ratePerPeriod), this.numberOfPayments) - 1);
```

Special note. To test the formula, I recommend searching the Internet for loan calculators and comparing your results to theirs. When I run your program, I will be testing the accuracy of the calculation and it should match mine.