

Assignment 4: Penultimate banking

The assignment

Modify your banking page in the following ways.

- (1) Use Bootstrap to beautify the page. How it should look is up to you, but you must employ at least Bootstrap tables, tooltips, buttons, and grid layout.
- (2) Introduce a loan calculation function. It should accept input for amount of loan, number of years (a drop-down menu with options for 5, 15, and 30 years), and the percentage yearly interest. It should compute the monthly payment (which is the same every month). This function should be entirely programmed in JavaScript; it should not make calls to the back-end program. Round the result to the nearest cent.
- (3) Let the user move a range slider to see how the monthly payment varies with interest rate.

Some formulas

Let r be the yearly interest rate, in percent (such as 3%). Let m be the monthly interest rate; $m=r/12$. Let p be the principal amount (such as \$100,000). Let y be the number of years for the loan. Compute $c = (1+m/100)^{(12*y)}$. Then the monthly payment $f = p * (m/100) * c/(c-1)$.

Extra-credit ideas

- (1) Build a chart showing the breakdown of each monthly payment into principal and interest.
- (2) Disallow usurious interest rates or rates that are lower than the Applicable Federal Rate.

Requirements

- (3) You must use *jQuery* 3.6.0, *Bootstrap* 4.6.0, and *Popper* 1.16.1.
- (4) You may not use any other JavaScript packages.
- (5) All other restrictions from the previous assignment still hold. The web page must still have all the previous features.

Turn in

Turn in your PHP program (a single file called `bank-4.php`) via Canvas.