Project 1 - JS Fundamentals

Objectives

Event Handling

DHTML

Modern JS Functions

Variables and Constants

Project Details

Create a page that allows a user to enter a gross salary amount. The gross salary amount should be numeric and validated using a pattern html attribute - no additional validation is necessary. Based on the gross salary amount, your job is to calculate the user's estimated taxes (assuming the user is filing as an individual). Tax calculations required include: federal, state, social security, and medicare. You are also required to figure out the user's net pay based on the formula net pay is equal to *gross pay - (federal tax + state tax + social security tax + medicare tax)*. Below is a list of rules that you should use to calculate the various taxes.

- **Federal tax calculation**. The chart below shows various federal tax brackets for 2020. Each row in the chart shows a different tax bracket. The user will be taxed according to the chart. The taxable income that reaches the various tax bracket thresholds will be tax at the threshold amount. Only the income above a certain threshold will be taxed at the higher rate.

  For example, a user making $45,000 / year would be taxed as follows:
  - First $9,875 of income would be taxed at 10% (*$9,875 taxed for $987.50*)
  - Next, the income past the $9,875 threshold up to the $40,125 threshold would be taxed at 12% (*$30,250 taxed for $3,630.00*)
  - Finally, income past the $40,125 threshold up to the $45,000 in earnings would be taxed at 22% (*$4,875 taxed for $1,072.50*)
  - To calculate the federal tax, you would need the sum of the above 3 calculations (*$987.50 + $3,630.00 + $1,072.50 = $5,690.00*)

Tax Rate	Taxable Income (Single)
10%	Up to $9,875
12%	$9,876 to $40,125
22%	$40,126 to $85,525
24%	$85,526 to $163,300
32%	$163,301 to $207,350
35%	$207,351 to $518,400
37%	Over $518,400

○ **WI State tax calculation**. The chart below shows the various state of Wisconsin tax brackets for 2020. The data is the WI State tax chart is displayed a little differently, but the calculations are essentially the same as the federal calculations.

  For example, a user making $45,000 / year would be taxed as follows:
  - First $11,970 of income would be taxed at 3.54% (*$11,970 taxed for $423.74*)
  - Next, the income past the $11,970 threshold up to the $23,930 threshold would be taxed at 4.65% (*$11,960 taxed for $556.14*)
  - Finally, income past the $23,930 threshold up to the $45,000 in earnings would be taxed at 6.27% (*$21,070 taxed for $1,321.09*)
  - To calculate the state tax, you would need the sum of the above 3 calculations (*$423.74 + $556.14 + $1,321.09 = $2,300.97*)

1. **What are the individual income tax rates?**
Wisconsin individual income tax rates vary from 3.54% to 7.65%, depending upon marital status and income.

For single taxpayers and taxpayers qualified to file as head of household with taxable income:

over	but not over	2020 tax is	of the amount over
$0	$11,970	3.54%	$0
$11,970	$23,930	$423.74 + 4.65%	$11,970
$23,930	$263,480	$979.88 + 6.27%	$23,930
$263,480		$15,999.67 + 7.65%	$263,480

○ **Social Security & Medicare tax calculation**. The paragraph (image) below shows the tax calculation for FICA taxes that includes both social security and medicare taxes.
  - Social Security is taxed at 6.2% up to $137,000. Any amount above the $137,000 threshold is not taxed for social security.
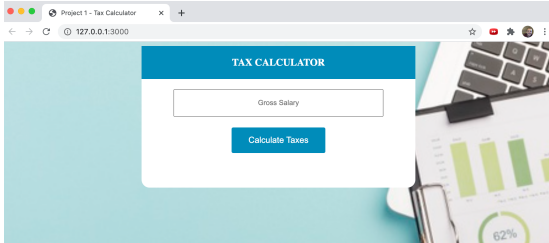   *For example:*
    - $137,000 / year a 6.2% social security tax (*$8,494.00*)
    - $138,000 / year a 6.2% social security tax (*$8,494.00 on the first $137,000 and no additional amount for the $1,000 above the $137,000 = $8,494*)
    - $200,000 / year a 6.2% social security tax (*$8,494.00 on the first $137,000 and no additional amount for the $63,000 above the $137,000 = $8,494*)
  - Medicare tax is calculated as 1.45% of your income up to $200,000. Above the $200,000 threshold, there is an additional tax of 0.9% which results in income above $200,000
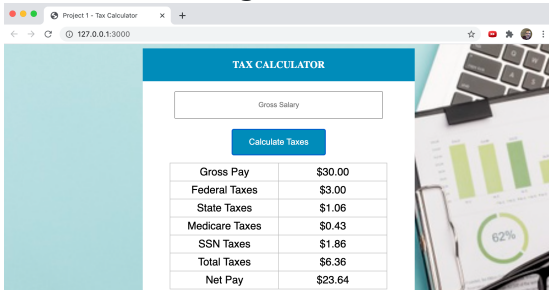
being taxed at a rate of 2.35%.

For example:

- $200,000 / year a 1.45% medicare tax = (*$2,900.00*)
- $250,000 / year a 1.45% medicare tax = *$2,900.00* on the first $200,000 and a 2.35% (1.45% + 0.9%) medicare tax amount of *$1,175.00* for the $50,000 above the

An example user interface without results.

An example detailed user interface with results. After running the applicaton, the user should be able to input a new gross salary and run the application again. This will results in the previous calculations being removed from the screen and the new calculations being displayed.

What did I learn?

Variables & Constants
Modern Functions
Working with DOM
DHTML