

FED home assignment

Implement a javascript calculator as specified below:

- The calculator has 3 modes
 - Standard - Basic arithmetic operations: “+”, “-”, “*”, “/”
 - Scientific - Basic arithmetic operations, and also: “ x^y ” (e.g. $2^3 = 8$) , “x root y($x\sqrt[y]{}$)” (e.g. $3\sqrt[3]{8} = 2$)
 - Programmer - Basic operations, and also: “x mod y” (e.g. $2 \bmod 2 = 0$, $5 \bmod 3 = 2$)

Calculator

☒ Standard ☐ Scientific ☐ Programmer

+

-

*

/

 = 1000

Calculator

☐ Standard ☒ Scientific ☐ Programmer

+

-

*

/

x^y

x root y

 = 1000

Calculator

☐ Standard ☐ Scientific ☒ Programmer

+

-

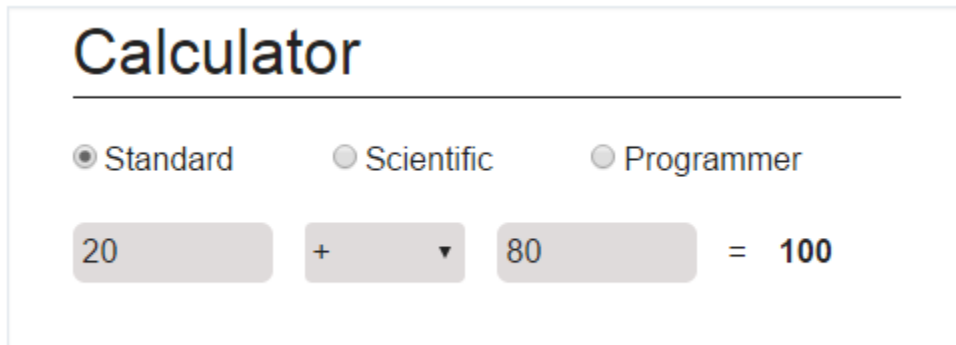
*

/

x mod y

 = 1000

- The calculator should look as close as the possible to the following screenshot:



Calculator

☒ Standard ☐ Scientific ☐ Programmer

20 + ▼ 80 = 100

- The calculator should be placed in the center of the screen.
- The calculation result should be changed in the following cases:
 - Selecting a different operation.
 - Changing any of the inputs.
- Changing mode should clear selected operation and inputs values.

General guidelines:

- **Write modular and reusable javascript. Follow MVC or MVVM or alike design patterns.**
- Use only native JS or jQuery (other libraries/frameworks are not allowed).
- You may use any front-end layout framework you like (e.g. bootstrap, foundation).
- Use javascript best practices.
- Write unit test to your code (no need to run it, just create the test class).
- Write the code as if you are writing production code.
- If anything in the question is unclear, make assumptions, write them down as comments in the code and continue.
- At the end of 2 hours (or earlier), please email back your code.
- If you would like to dedicate up to 1 additional hour, you are welcome to do so and send your revised code.