

Web-based Calculator

lab2

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How to Run (the environment) :

- create a spring file from spring boot and open it using any IDE intellij or eclipse (to prepare the back end).
- Make sure you downloaded NodeJs and download Angular-CLi using command line “**npm install -g @angular/cli**” (to prepare the front end).
- Then write “ng serve” in the cmd window to open the project, on port 4200.
- then link the back-end with the front-end .

Port:

the angular runs on port 4200

the spring runs on port 8080

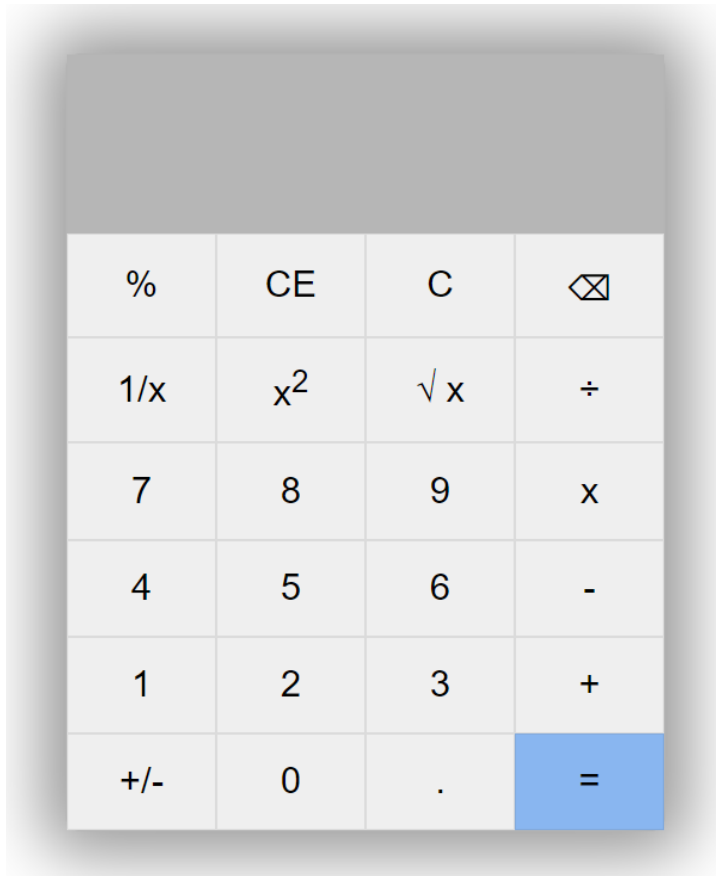
-Problem Statement:

-Design for web based calculator like standard calculator for windows10

this video for more understanding to my calculator

<https://drive.google.com/file/d/1ezeHNxhdWjP2J-ZPbbTRGNoLPVLYRg1/view?usp=sharing>

-The Design of my calculator:



-Assumptions and Details necessary:

- Guideline for The User & features:

- The user input by using a mouse(cursor)clicking on the buttons.
- Users enter to calculate from left to right not by precedence .as standard windows calculators do.
- When input -ve value for square root will output “Invalid input”.
- If choose the operation at the beginning will consider by first operand =0.
- (-/+) can't be in the beginning, must enter value first like windows calculator.
- If a user enters `sqr()` it will appear first as `sqr` then if done any other operation it's result will appear.
- The (C) button used to clear all the calculations.
- The (CE) button used to clear the last operand only and also if it is `sqr` or root
- The(`<X`) button used to delete the last input but can't delete `sqr` or root or any one operand function like windows.
- The (`1/x`) will get the inverse of the value.
- If the user presses(`1/x`) button at the beginning will consider my initial value of `x=0` and will output the message “cannot divide by zero” .
- If users divide by 0 will output the message “cannot divide by zero” .
- The user will be able to calculate standard calculations for all what he wants
- The (%) button it works like windows i make it using this algorithm
<https://devblogs.microsoft.com/oldnewthing/20080110-00/?p=23853#:~:text=When%20the%20user%20enters%20a%20value%2C%20an%20operator%2C%20a%20second,value%20in%20the%20ongoing%20computation>