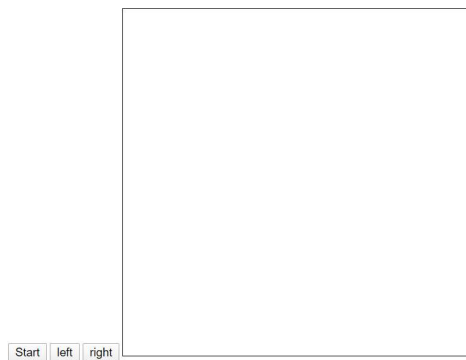


Snake:

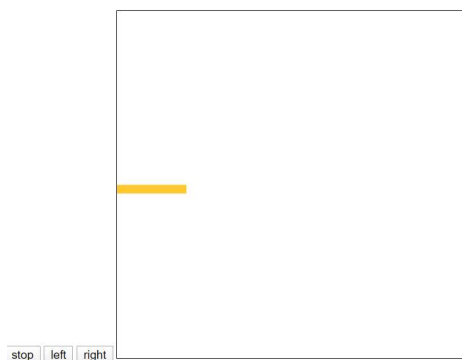
My snake.html is a very simple html file, that just makes a canvas and 3 buttons, start/stop, left and right. In these buttons attributes I pass in my functions from my javascript code in snake.js, in the onclick property. I pass in three functions btnswitch(),btnleft,btnright(). Btnswitch just starts or stops the game if possible, left and right make the snake go left or right based on it's current motion. The "snake" is just a canvas with a timer.

I use two arrays, to record the horizontal pixel and vertical pixel if the pixels I have visited, this way I know when my snake collides. Btnleft and btnright, change the increments of moving in the horizontal or vertical based on where the snake is moving. Our timer draws on the canvas every 1sec.

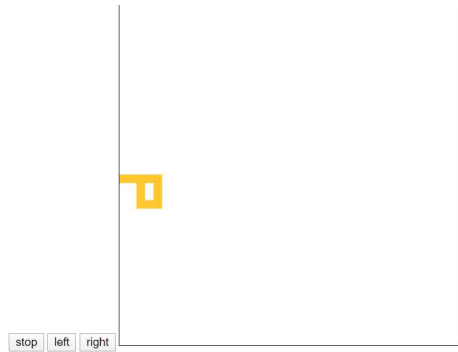
Initial condition of the game:



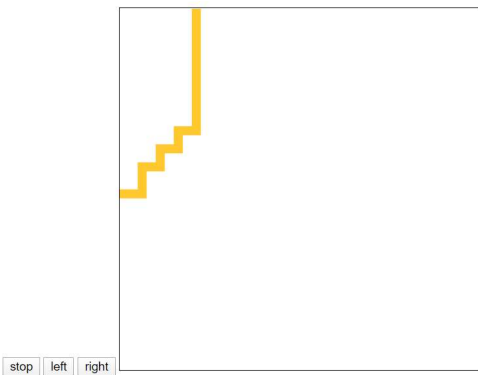
After starting it start changes to stop:



The snake stopping after collisions also you can see right button in action :



Left and right btn working and it stops if it hits canvas:



HW3.js: Working screenshot:

```
PS C:\Users\Raed\OneDrive\coms 319\homework4\HW4_SampleCodes\task2> node hw3.js
1st Number: 5
2nd Number: 1234
3rd Number: 1234567
4nd Number: 12321
factorial of a number 120
The Sum of all digits of the 2nd number is 10
The reverse of the 3rd number is 7654321
is the 4th number a palindrome ? true
PS C:\Users\Raed\OneDrive\coms 319\homework4\HW4_SampleCodes\task2>
```

For my approach, it is a simple 4 functions `factorize()` , `sum()`, `rev()`, `palindrome()`. That return a result and then I print the return values in the console. I use the `readline sync` function to read input from the console to which the numbers that I need to input into the program. Rev function I basically split the specific digits and store them in an array and then reverse their order in a string and convert that string to int, for palindrome I just call `rev()` and check if it is the same as the original, `factorize()` I have use a simple loop that multiplies if the number is not the basic 0 or 1. For sum I read out the specific digits and keep on adding them.