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SE 319
HW3 - Snake and Node.js

Solution Approach

My solution approach was to follow the guidelines of the lab and to have an html, js, and css file for the snake game. For the snake game, I changed the line color to green and made an alert pop up to end the timer if the snake touches the edge of the canvas. The second part was a little bit challenging, but the approach that I took was to create number variables and result variables for each of the four numbers. I also created functions for the last two requirements of part 2. The output of both parts is shown below.

Required Output

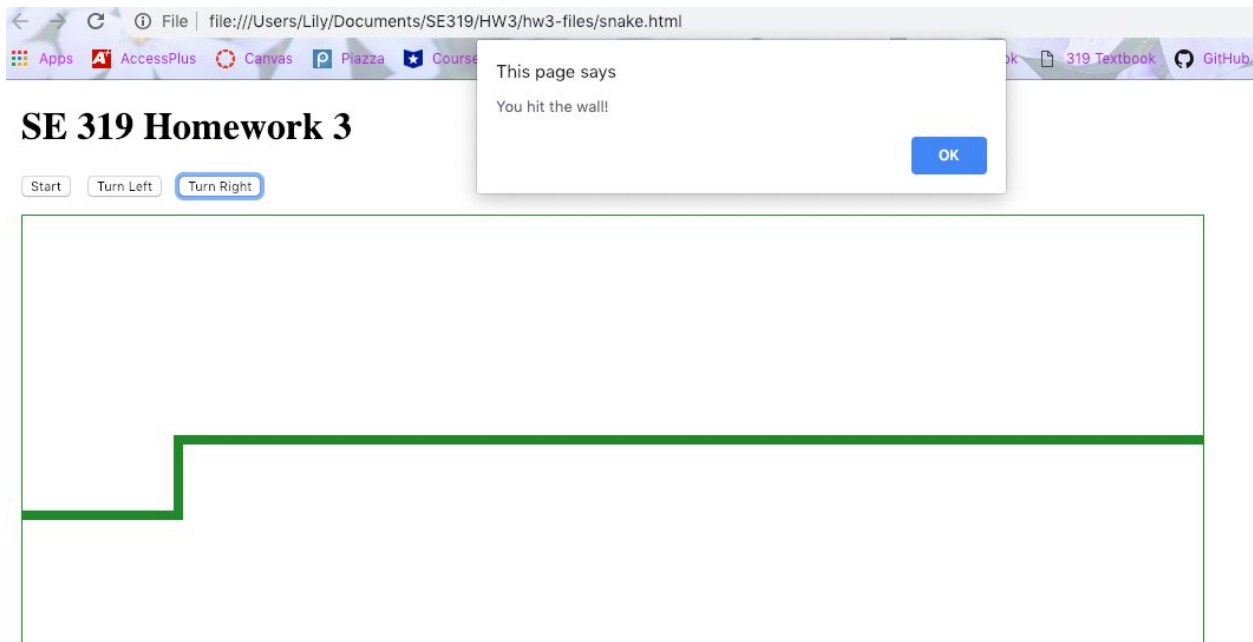
Part 1

1. Create the snake game:

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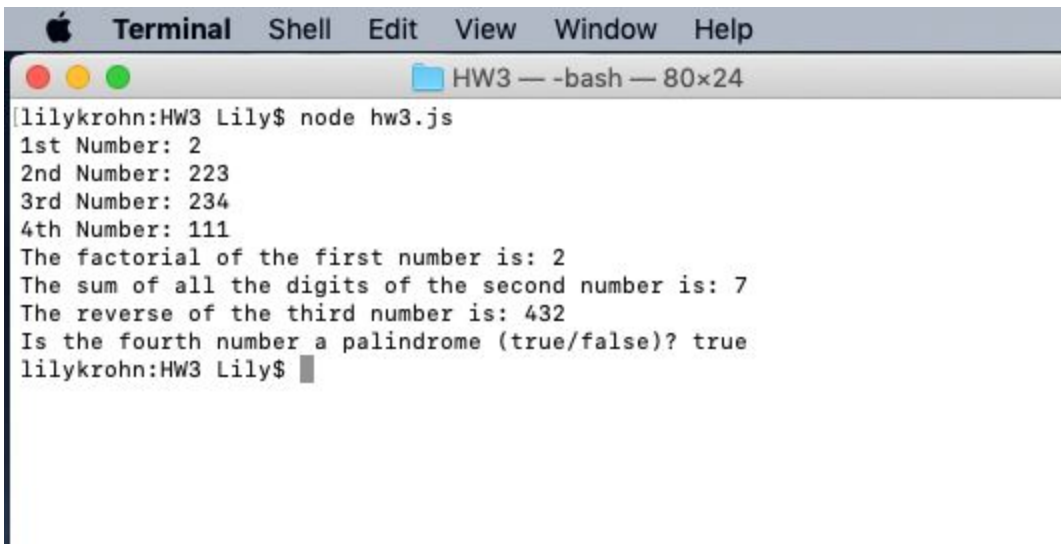
2. An alert will pop up if the snake touches the edge:



Part 2

Below are screenshots of the required output using Node.js:

```
Terminal  Shell  Edit  View  Window  Help
HW3 — -bash — 80x24
lilykrohn:HW3 Lily$ node hw3.js
1st Number: 3
2nd Number: 2341
3rd Number: 12345
4th Number: 54467
The factorial of the first number is: 6
The sum of all the digits of the second number is: 10
The reverse of the third number is: 54321
Is the fourth number a palindrome (true/false)? false
lilykrohn:HW3 Lily$
```



A screenshot of a macOS Terminal window. The title bar at the top shows the Apple logo, the word "Terminal", and menu items: "Shell", "Edit", "View", "Window", and "Help". Below the title bar is a light gray bar with three colored window control buttons (red, yellow, green) on the left and a folder icon followed by the text "HW3 — -bash — 80x24" on the right. The main area of the terminal is white and contains the following text: a prompt "lilykrohn:HW3 Lily\$" followed by the command "node hw3.js", and then the output of the script: "1st Number: 2", "2nd Number: 223", "3rd Number: 234", "4th Number: 111", "The factorial of the first number is: 2", "The sum of all the digits of the second number is: 7", "The reverse of the third number is: 432", "Is the fourth number a palindrome (true/false)? true", and finally the prompt "lilykrohn:HW3 Lily\$" with a cursor.

```
lilykrohn:HW3 Lily$ node hw3.js
1st Number: 2
2nd Number: 223
3rd Number: 234
4th Number: 111
The factorial of the first number is: 2
The sum of all the digits of the second number is: 7
The reverse of the third number is: 432
Is the fourth number a palindrome (true/false)? true
lilykrohn:HW3 Lily$
```