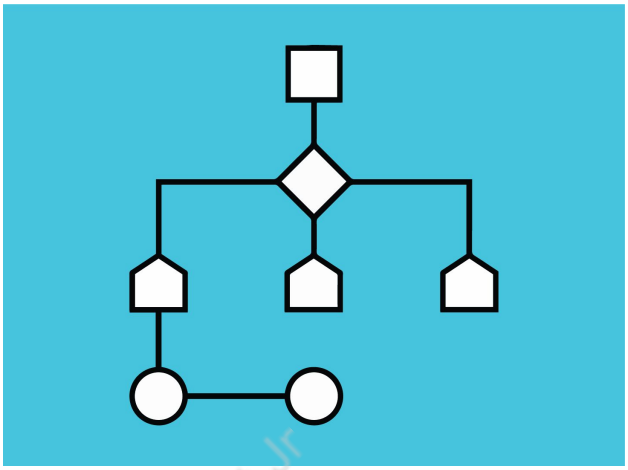
Designing Algorithms



What is our GOAL for this MODULE?

We used our knowledge algorithms to write a collision detection algorithm and used boilerplate code.

What did we ACHIEVE in the class TODAY?

- Downloaded the Boilerplate code.
- Designed an algorithm for collision detection, wrote code and tested the program.

Which CONCEPTS/ CODING BLOCKS did we cover today?

- Usage of boilerplate code
- Usage of touches

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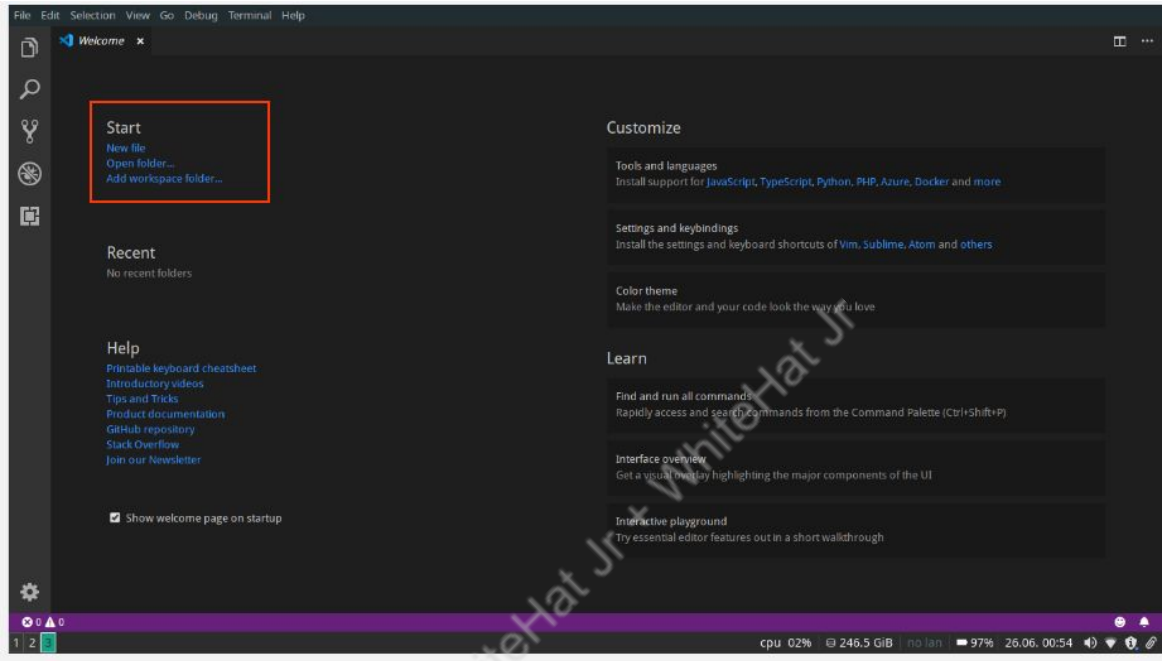
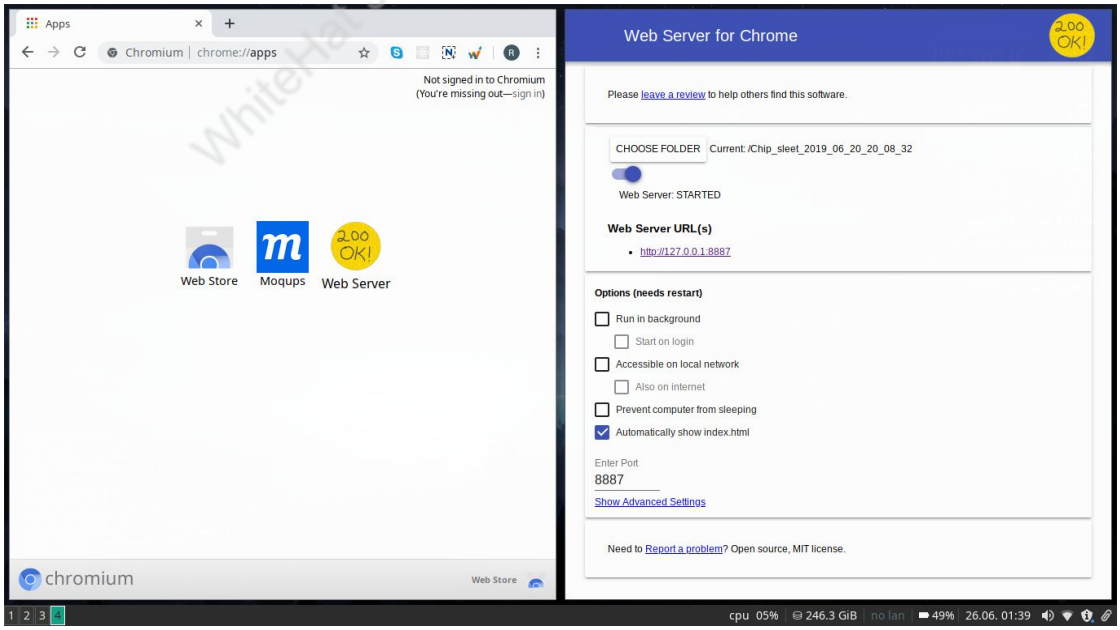
How did we DO the activities?

1. Download the boilerplate code and open it in the VS code.



- We ran the server and pointed it to the same folder.



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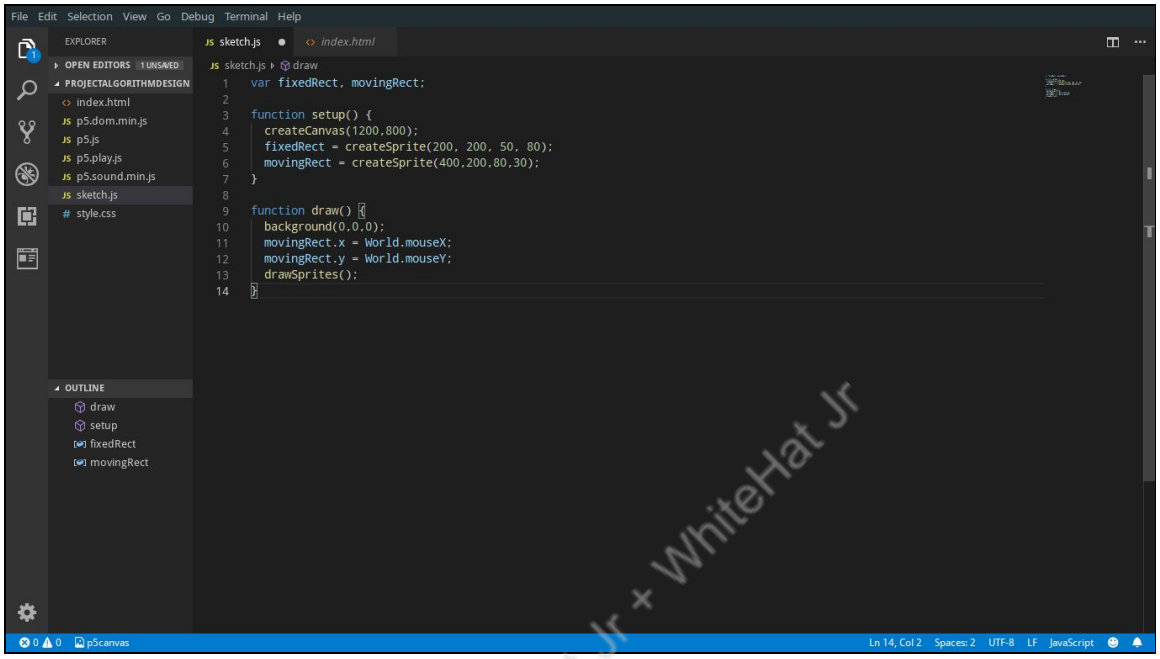
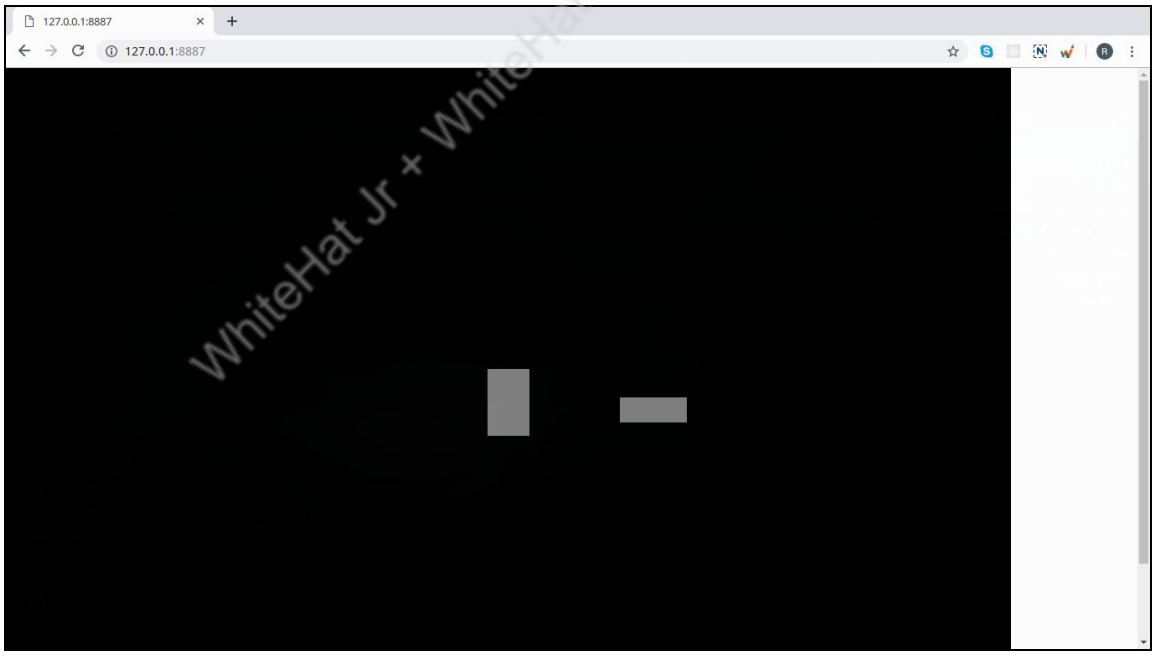
2. We created two rectangles with different widths and heights- one rectangle fixed, and the other moving, we also added controls to move the rectangle.





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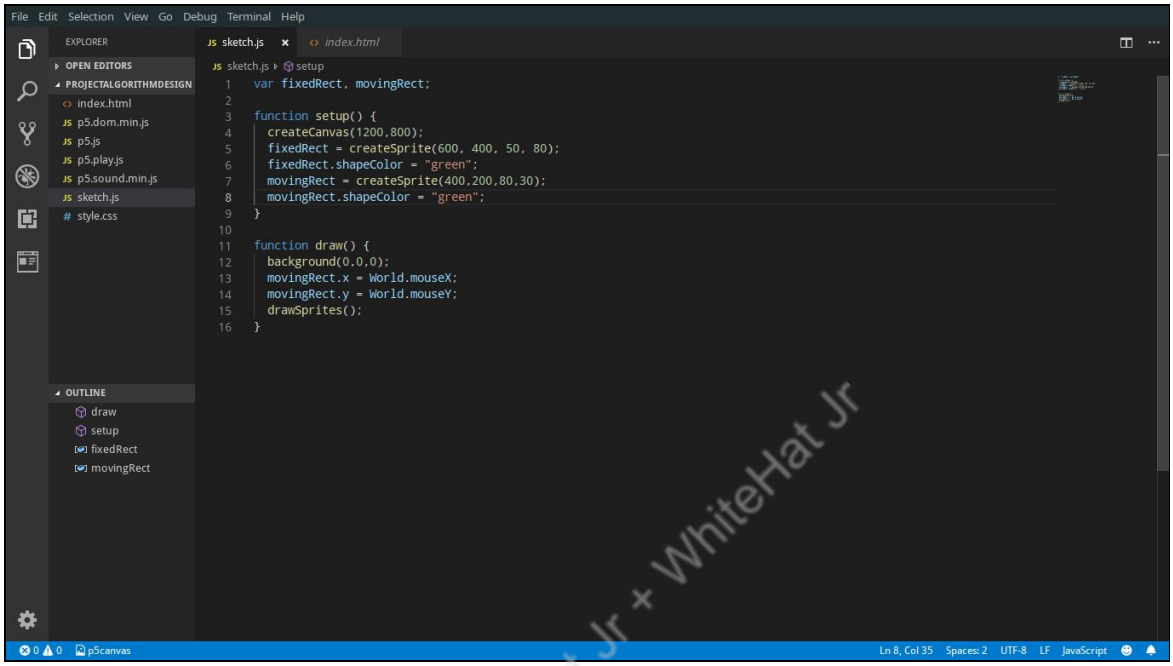
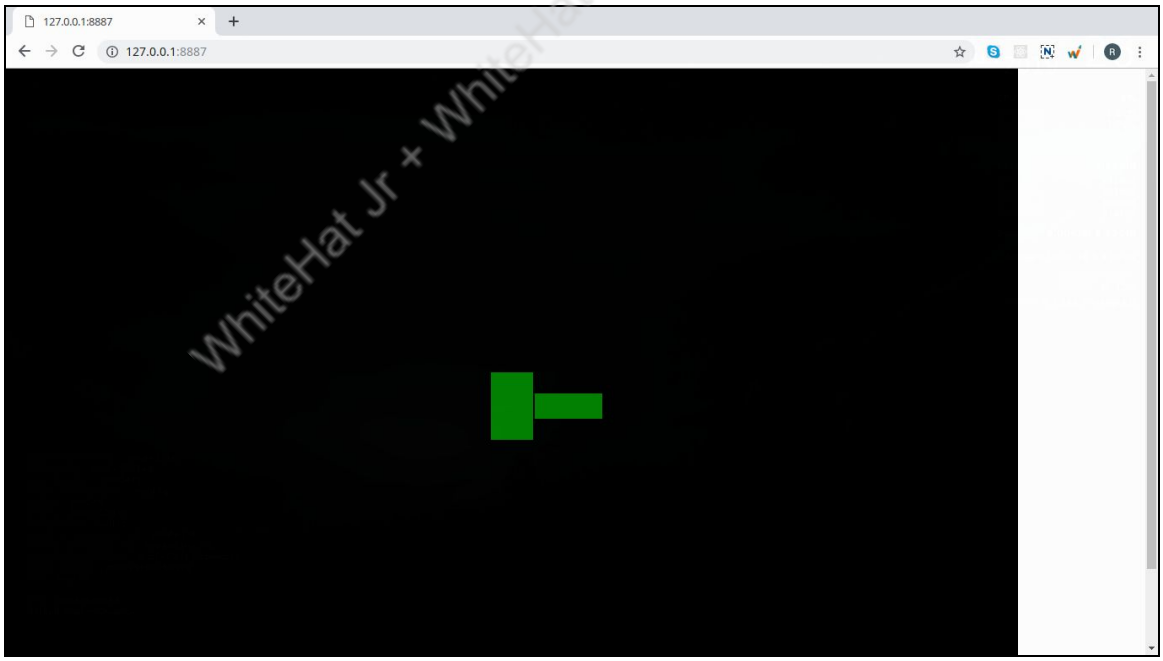
3. We wrote a collision detection algorithm so that when the two objects/rectangles collide, their color changes to green.





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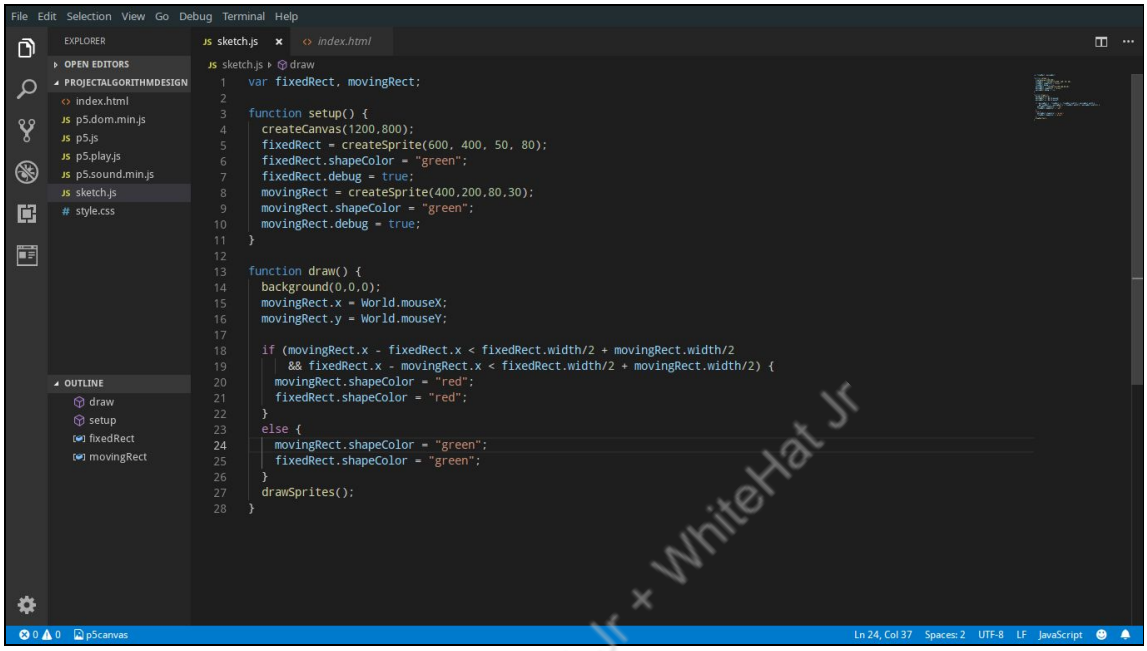
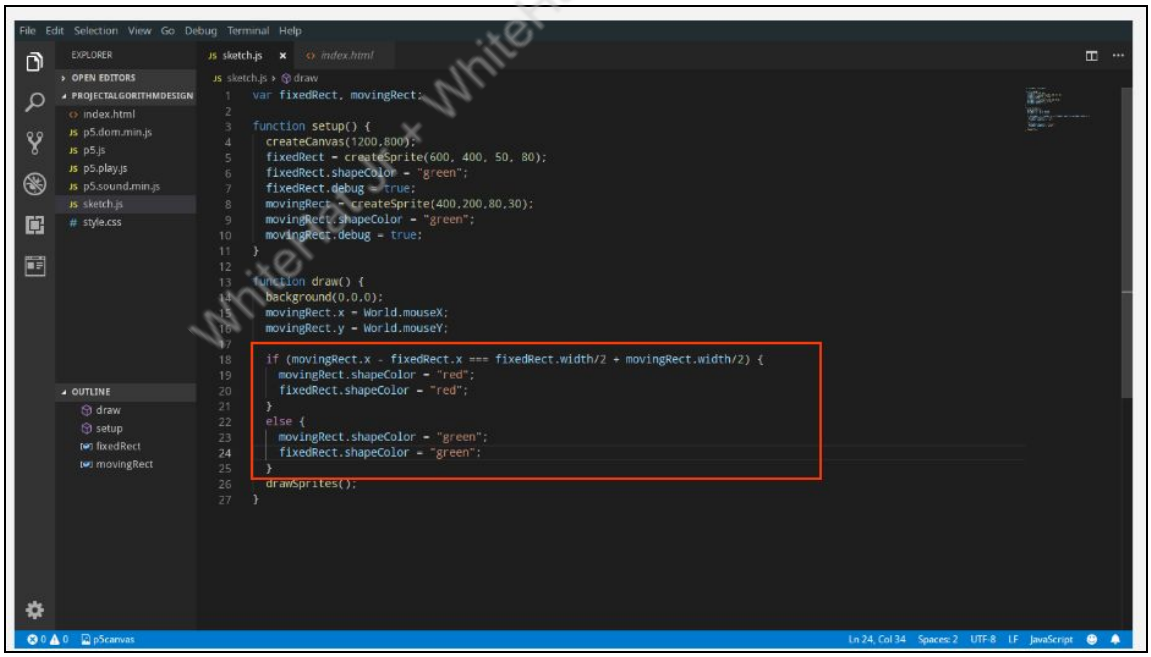
4. Then we added a condition to our code and changed the color of rectangles to red when the object touched each other, else kept it green.





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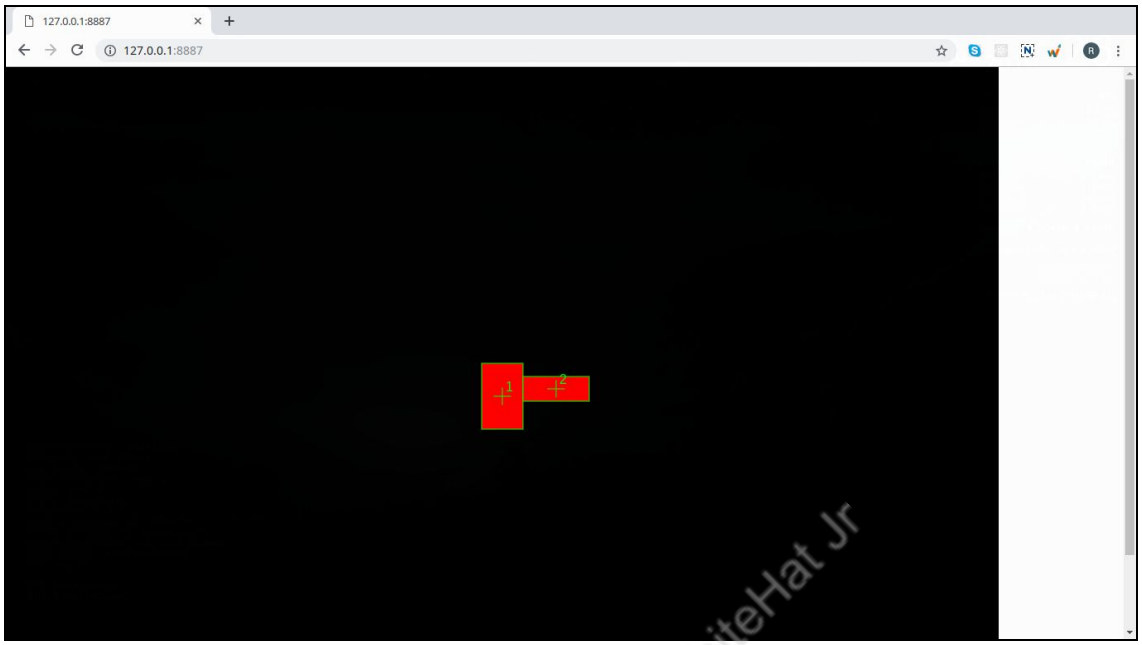
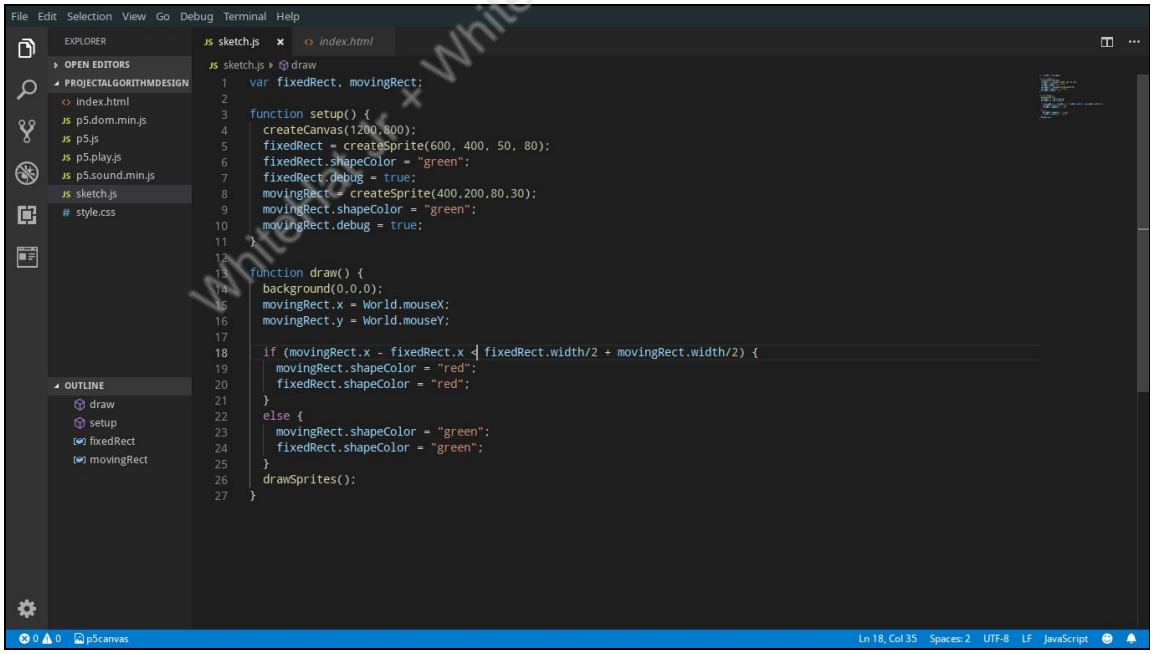


5. We saw that the rectangles turn red exactly at the point of touch when moving the rectangle to the LEFT. So we change the "===" sign in our condition to "<", we can detect when the moving rectangle has crossed over to the fixed rectangle.



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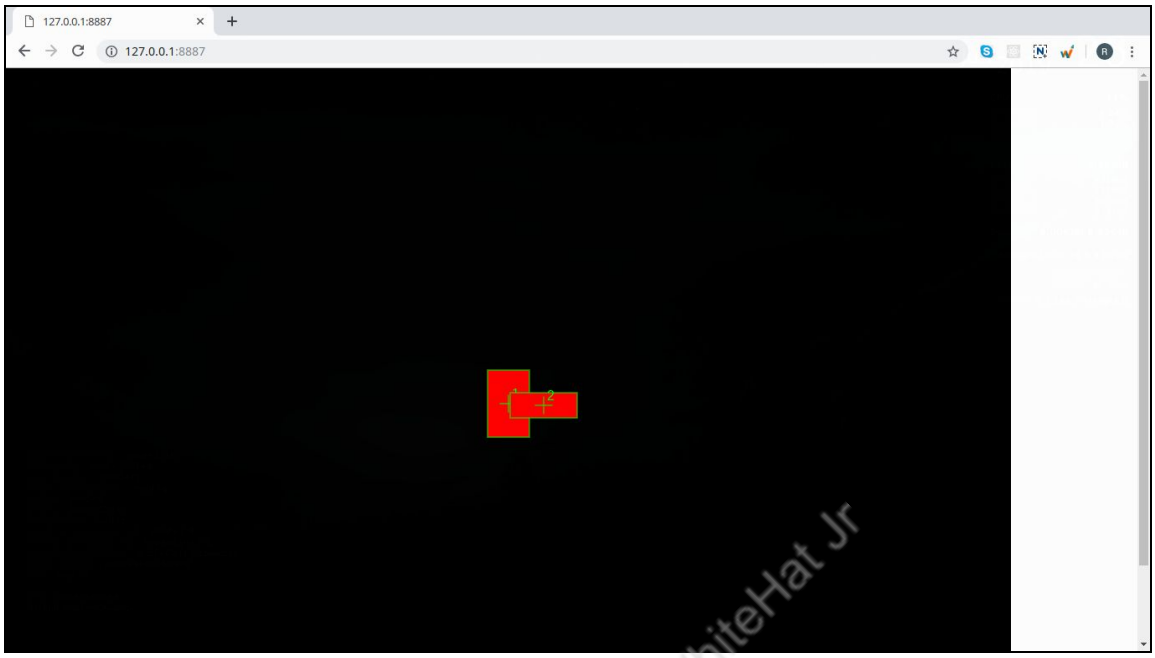
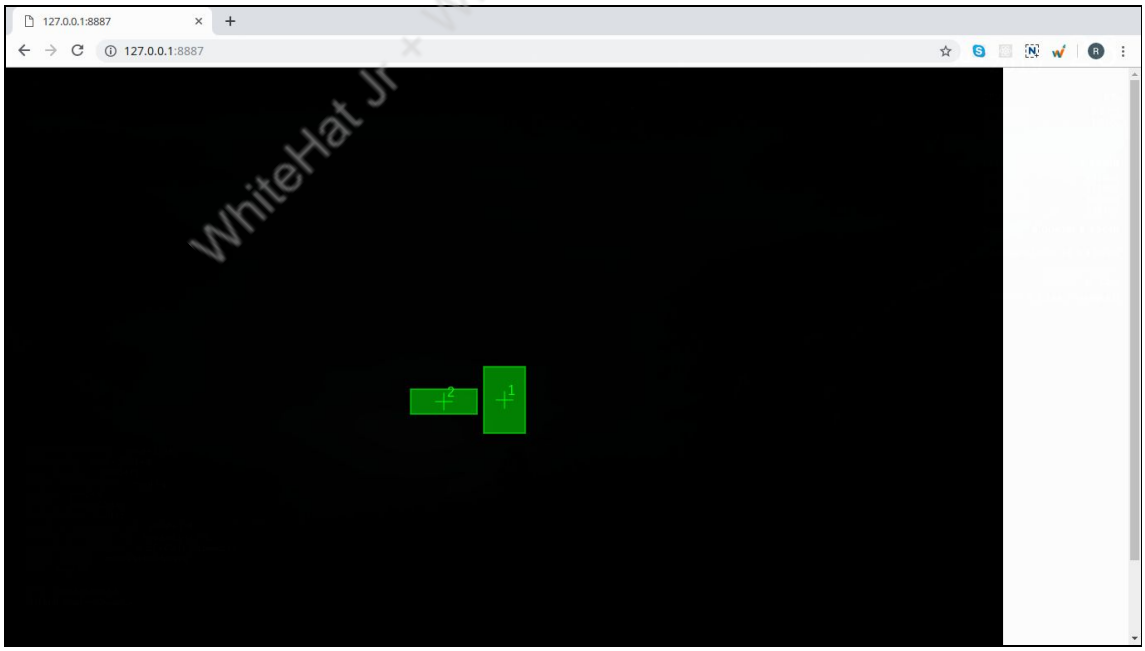


6. We used && operator to add two conditions.

7. We saw that when the rectangle is moving from left to right it is green and as it touches each other it becomes red.



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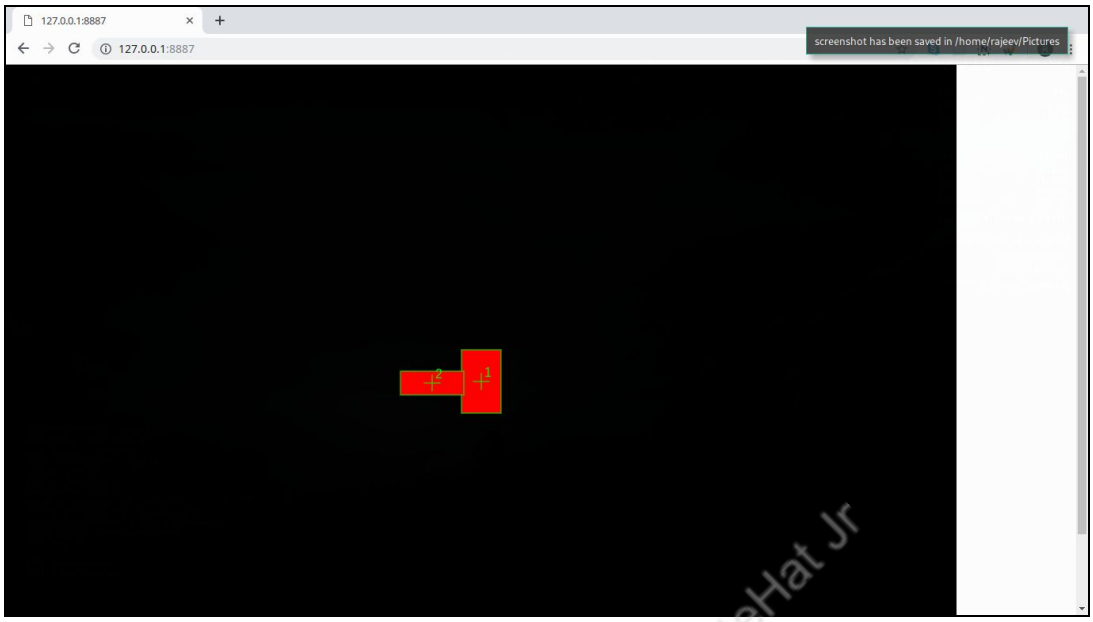
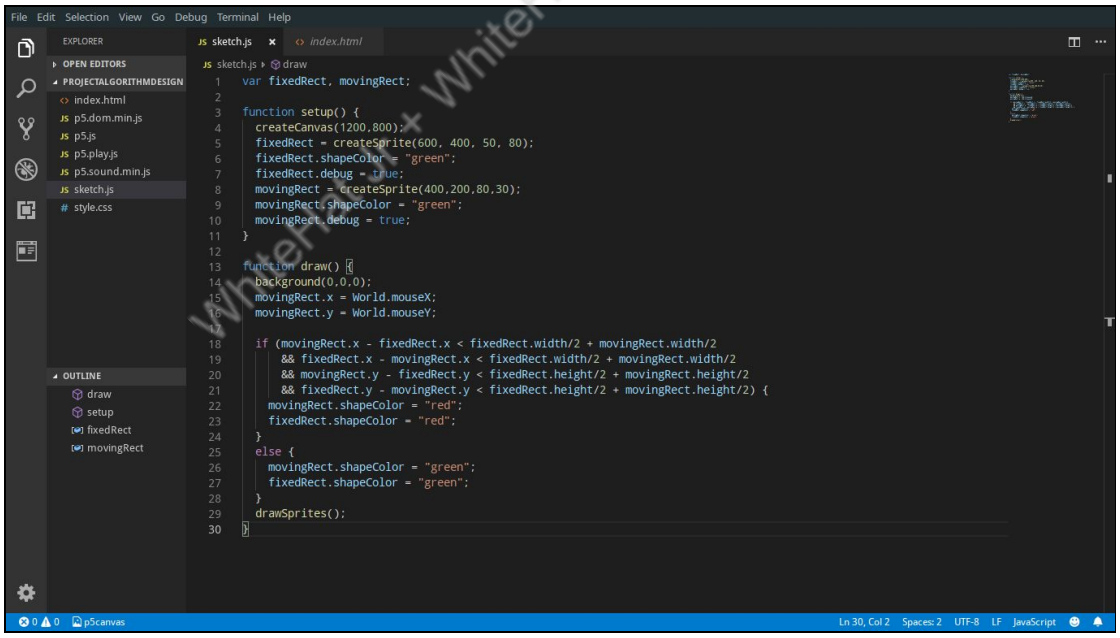


8. We wrote code to check if the vertical distance between the two rectangles is greater. We then set the rectangle color to green and if the distance is 0 then set the rectangle colour to red.



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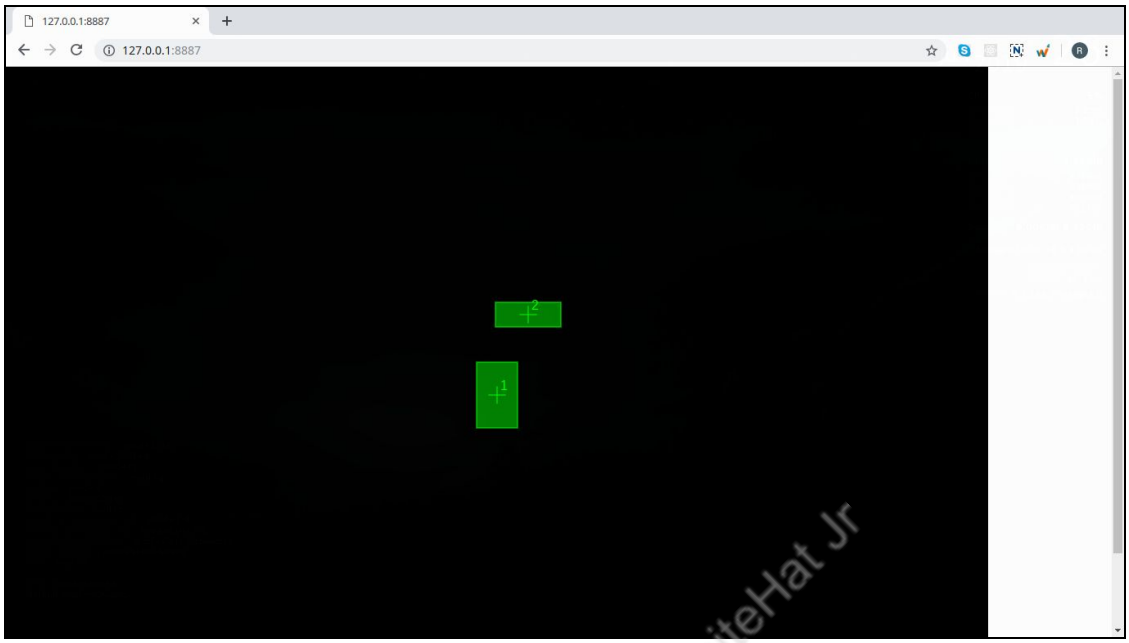

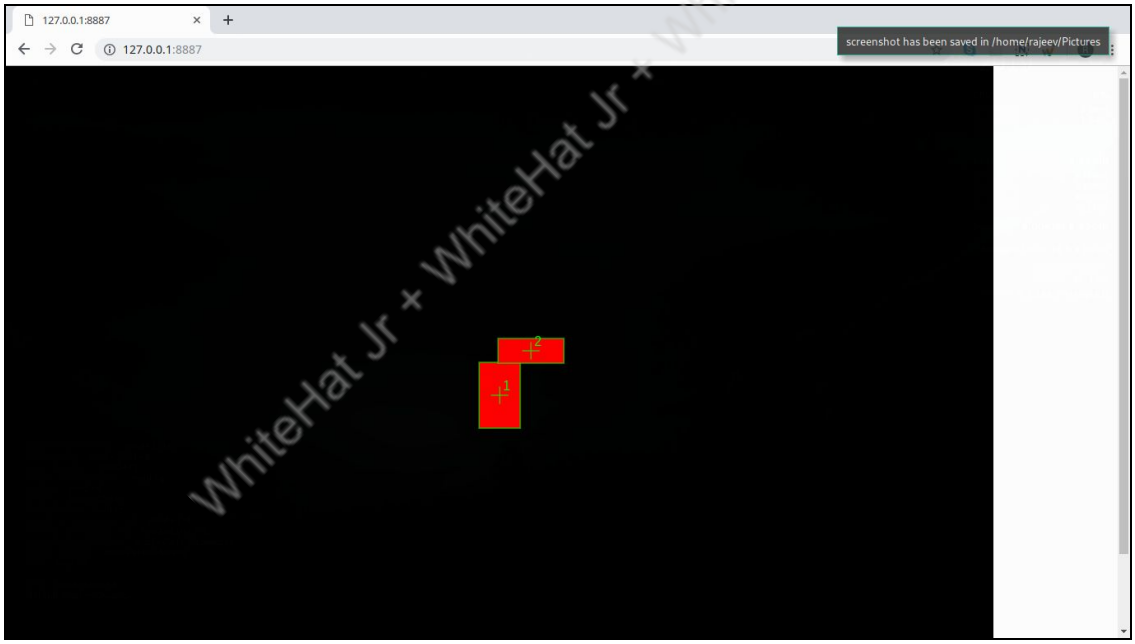

What's next?

We will start working on the angry birds game.

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