

*"There is no blue without yellow and without orange."*

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## Socket Space

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1

**Demonstration**

snake game

## Demonstration

2

Principle

canvas & logic

3

Conclusion

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1 **Demonstration**  
snake game

2 Principle  
canvas & logic

3 Conclusion

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## Principle

Snake game has a long history in programming world. In 1997, Snake met the people for the first time on Nokia 6110. I remember when I was a child, I was crazy about

playing Snake on my grandpa's Nokia. The shape of a tiny black snake and its food stuck in my heart.

- 1 **Demonstration**  
snake game
- 2 Principle  
canvas & logic
- 3 Conclusion

The purpose of the game is to survive as far as you can, and snake will grow longer after eating a food. Only four keys to operate the snake, they are UP, DOWN, LEFT, RIGHT. In theory, the ending of this game is to fill all the space with snake's body, in fact, as snake growing longer, the harder people could manipulate it without making mistake. Once there's a mistake happen, then game over.

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Creating the snake game in javascript with canvas, in my opinion, there're some principles:

1. Using an Array to store snake's body.
2. To realize snake's moving, pop the tail and unshift the new position to the head.
3. Before generating food randomly, check the whole

body's array item to make sure food will not occupy the position of every node of body.

4. Make collision tests, such as striking the wall and snake itself.

1 **Demonstration**  
snake game

2 Principle  
canvas & logic

3 Conclusion

How to make it move?

Using an array to store head and bodies *let bodies =*

*[body[0], body[1], body[2]]*. Of course the first item is the

head. Every item is an object has coordinate *x: .., y:*

*..*. This object records position of the snake's body real time.

*setInterval(animation, interval)* can make snake move. Add an *addEventListener* to monitor user's action of pressing keys. Using global variable to store directions that user want snake to move and it can change the snake's moving direction dynamically.

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# Conclusion

*In* this demo, I just used pure javascript less than 100 lines. I think it contains all the basic features that a Snake should have.

- 1 **Demonstration**  
snake game
- 2 Principle  
canvas & logic
- 3 Conclusion

There are still some notes:

1. To realize a composite motion, an important point is to find out the regulation of motion's cycle and add another cycle on the cycle's variable of previous one.
2. Choosing a proper refreshing method could lead a awesome result.
3. While creating complex canvas or something else, `dat.gui` is a wonderful tool and handy one. It allows developers set any arguments and visualize them on the screen.
4. Using interval to control the speed of snake.

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- 1 **Demonstration**  
snake game
- 2 **Principle**  
canvas & logic
- 3 **Conclusion**

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