```
//  Austin Matel
//    10/31/19
//  This is a comment
//  The setup function function is called once when your program
begins
var cubeWidth, food, direction, temp;
var highscore = 0;
var score = 0;
var columns;
var rows;
var snake;
var oneCube = 0;
var gameOver = 0;
var snakeNum = 1;
function setup() {
  var cnv = createCanvas(800, 800);
  cnv.position((windowWidth-width)/2, 30);
  background(5, 5, 5);
  fill(200, 30, 150);
  cubeWidth = 20;
  columns = width / cubeWidth;
  rows = height / cubeWidth;
  snake = new Snake(columns, rows);
  food = new Food(cubeWidth * int(random(0,800/cubeWidth)),cubeWidth *
int(random(0,800/cubeWidth)));
}
function runObjects(){//runs the snake and food
  snake.run();
  food.run();
}
function keyPressed(){//detects when the arrow keys are pressed
  if(keyCode === RIGHT_ARROW && direction !== 2){
    snake.vel.y = 0;
    snake.vel.x = cubeWidth;
    direction = 1;
  }
  if(keyCode === LEFT_ARROW && direction !== 1){
    snake.vel.y = 0;
    snake.vel.x = -cubeWidth;
    direction = 2;
  }
  if(keyCode === UP_ARROW && direction !== 4){
    snake.vel.x = 0;
    snake.vel.y = -cubeWidth;
    direction = 3;
  }
  if(keyCode === DOWN_ARROW && direction !== 3){
      snake.vel.x = 0;
      snake.vel.y = cubeWidth;
      direction = 4;
  }
}
//  The draw function is called @ 30 fps
function draw() {//pauses and ends game when snake dies
  if(gameOver === 0){
    background(5,5,5);
    runObjects();
    keyPressed();
    textSize(20);
    text("Score = "+score,10,20);
    frameRate(15);
    text("Highscore = "+highscore, 660, 20);
  }
  if(gameOver === 1){
    fill(255);
    textSize(90);
    text("Game Over!!!", 100, 100);
    textSize(40);
    text("Press Spacesbar", 220, 600);
    if(score > highscore){
      highscore = score;
    }
    if(keyCode === 32){
      gameOver = 0;
      snake = new Snake(columns, rows);
      food = new Food(cubeWidth *
int(random(0,800/cubeWidth)),cubeWidth *
int(random(0,800/cubeWidth)));
      snake.body = [];
    }
    score = 0;
  }
}
//Austin Matel
//10/31/19
class Snake{
  constructor(x,y){
    this.loc = createVector(x,y);
    this.w = cubeWidth;
    this.clr = color(random(0,255), random(0,255), random(0,255));
    this.vel = createVector(0, 0);
    this.body = [];
  }
  run(){
    this.render();
    this.loadSegments();
    this.update();
    this.checkEdges();
    this.tangle();
  }
  render(){//displays the head and segments of the snake
    //render head
    fill(this.clr);
    rect(this.loc.x, this.loc.y, this.w, this.w);
    //render body
    for(var i = 0; i < this.body.length; i++){
      rect(this.body[i].x, this.body[i].y, this.w, this.w);
    }
  }
  update(){//makes sure the head moves and the segments follow the
head
    for(var i = this.body.length - 1; i > 0; i--){
      this.body[i].y = this.body[i - 1].y;
      this.body[i].x = this.body[i - 1].x;
    }
    if(this.body.length > 0){
      this.body[0].x = this.loc.x;
      this.body[0].y = this.loc.y;
    }
    this.loc.add(this.vel);
  }
  loadSegments(){//fills the list of segments with vectors
    if(this.body.length / 3 < score){
      this.body.push(createVector(this.loc.x, this.loc.y));
      }
    }
  checkEdges(){//makes you lose when the snake head hits the edges
    if(this.loc.x > width - this.w || (this.loc.x < 0) || (this.loc.y
> height - this.w) || (this.loc.y < 0)){
      gameOver = 1;
    }
  }
  tangle(){
    if(this.body.length > 3){
      for(var i = 0; i < this.body.length; i++){
          if (this.loc.x === this.body[i].x && this.loc.y ===
this.body[i].y){
            gameOver = 1;
          }
        }
      }
    }
}
//Austin Matel
//10/31/19
class Food{
  constructor(x,y){
    this.loc = createVector(x,y);
    this.clr = color(255,0,0);
    this.w = cubeWidth;
  }
  run(){
    this.render();
    this.touchingSnake();
  }
  render(){//shows the red food
    fill(this.clr);
    rect(this.loc.x, this.loc.y, this.w, this.w);
  }
  touchingSnake(){
    if(snake.loc.x === this.loc.x && snake.loc.y ===
this.loc.y){//puts the food in a random place

      this.loc.x = cubeWidth * int(random(0,800/cubeWidth));
      this.loc.y = cubeWidth * int(random(0,800/cubeWidth));
      for(var i = 0; i < snake.body.length; i++){
        if(this.loc.x === snake.body[i].x){
          this.loc.x = cubeWidth * int(random(0,800/cubeWidth));
        }
        if(this.loc.y === snake.body[i].y){
          this.loc.y = cubeWidth * int(random(0,800/cubeWidth));
        }
      }
      score = score + 1;
    }
  }
}
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <title>Snake Game</title>
    <script src="libraries/p5.js" type="text/javascript"></script>
    <script src="libraries/p5.dom.js" type="text/javascript"></script>
    <script src="libraries/p5.sound.js"
type="text/javascript"></script>
    <script src="sketch.js" type="text/javascript"></script>
    <script src="snake.js" type="text/javascript"></script>
    <script src="food.js" type="text/javascript"></script>
    <style> body {padding: 0; margin: 0;} canvas {vertical-align:
top;} </style>
  </head>


  <body>
  </body>
</html>
```