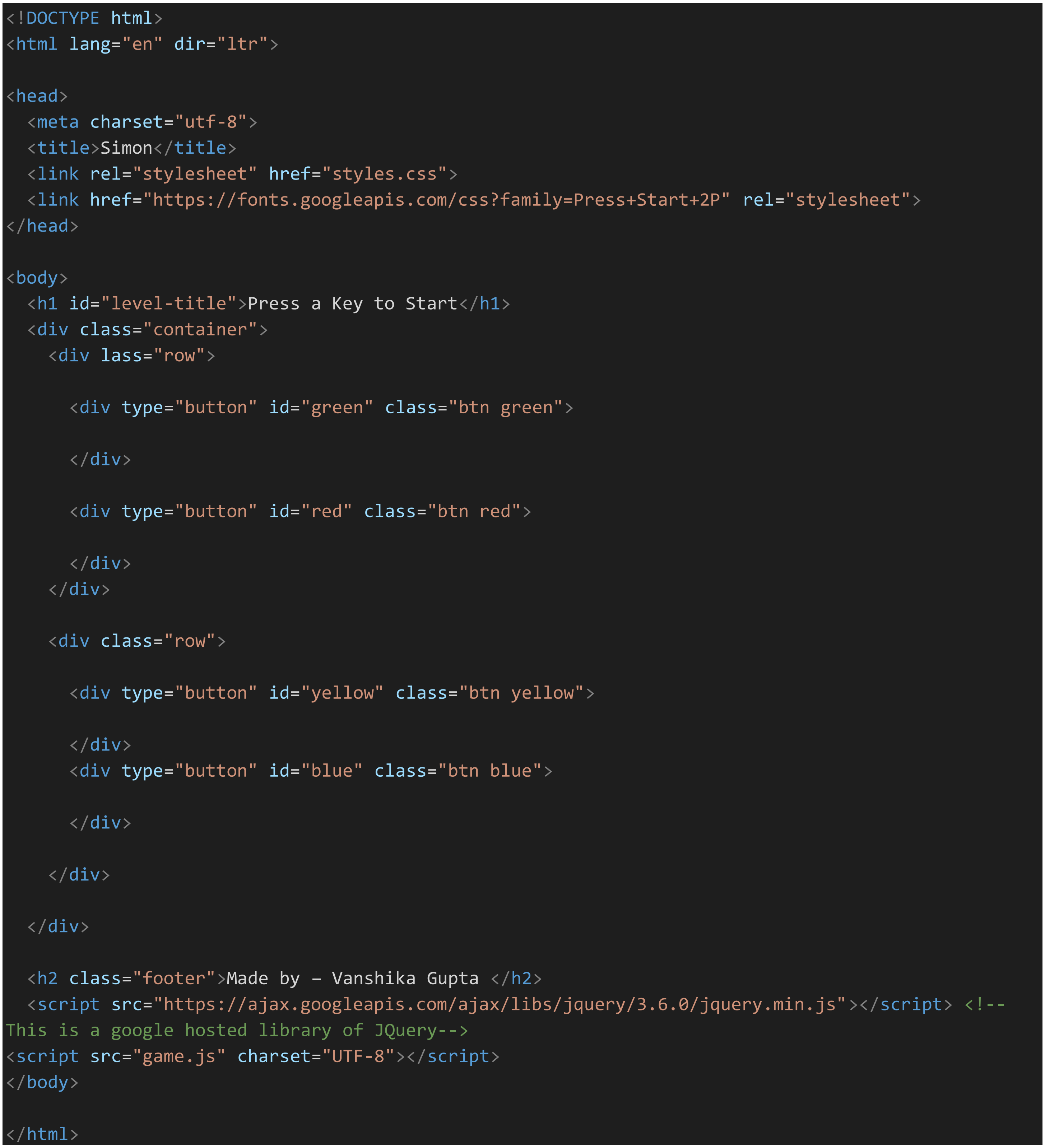
By: Aayushmaan Rawat   B-Tech CSE (2019-23)

SIMON GAME PROJECT

Index.html



```
<!DOCTYPE html>
<html lang="en" dir="ltr">

<head>
  <meta charset="utf-8">
  <title>Simon</title>
  <link rel="stylesheet" href="styles.css">
  <link href="https://fonts.googleapis.com/css?family=Press+Start+2P" rel="stylesheet">
</head>

<body>
  <h1 id="level-title">Press a Key to Start</h1>
  <div class="container">
    <div lass="row">

      <div type="button" id="green" class="btn green">

      </div>

      <div type="button" id="red" class="btn red">

      </div>
    </div>

    <div class="row">

      <div type="button" id="yellow" class="btn yellow">

      </div>
      <div type="button" id="blue" class="btn blue">

      </div>

    </div>

  </div>

  <h2 class="footer">Made by - Vanshika Gupta </h2>
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.0/jquery.min.js"></script> <!--
This is a google hosted library of JQuery-->
<script src="game.js" charset="UTF-8"></script>
</body>

</html>
```

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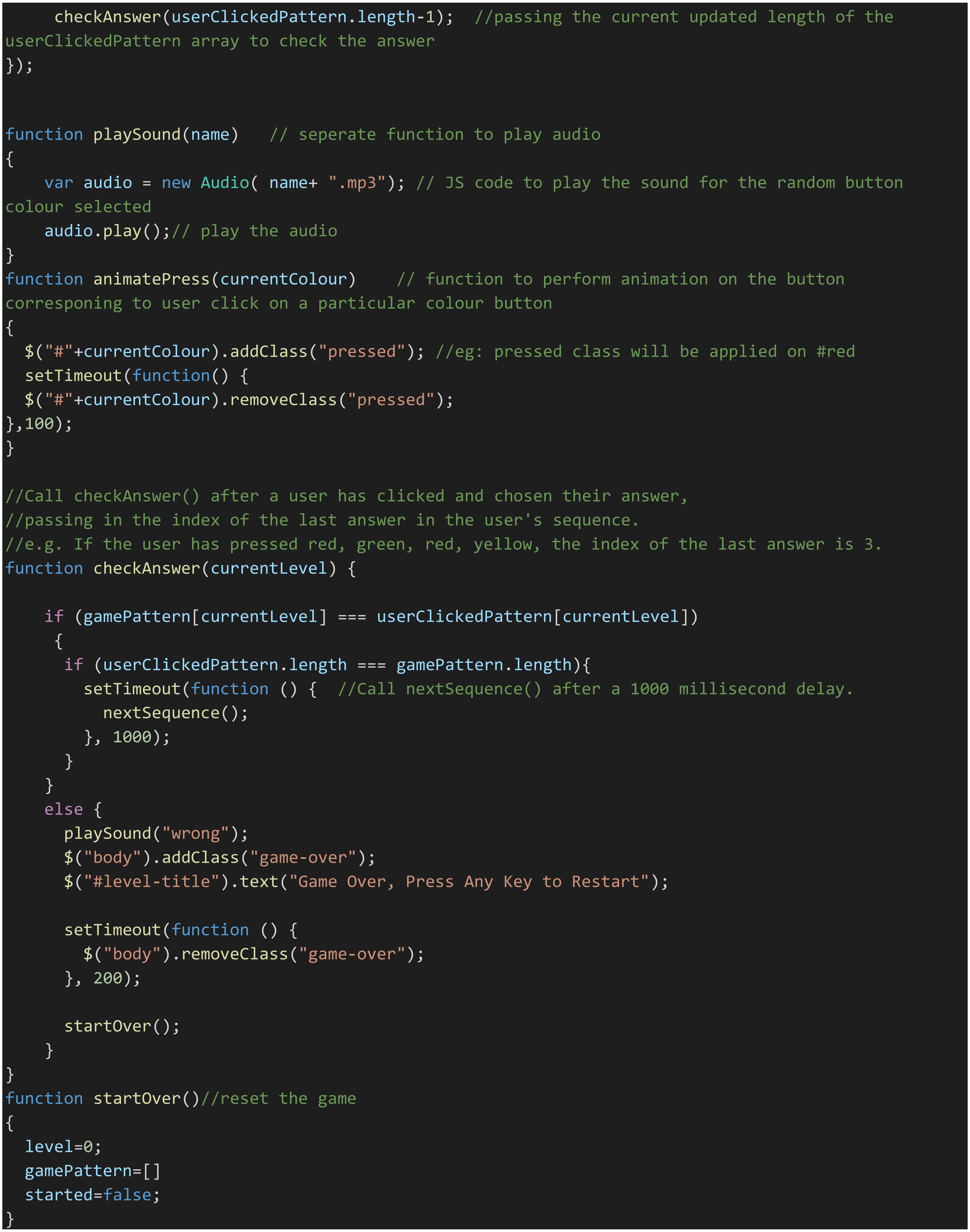
game.js

```
var buttonColours=["red","blue","green","yellow"];  //array to hold the colours
var gamePattern=[];//stores system generated colour pattern.
var userClickedPattern=[];//stores user entered colour pattern.

var started = false; //initially
var level = 0; // initially

$(document).keypress(function() { //This targets the whole document for a key press (for the very first time only)
  if (!started) {
    $("#level-title").text("Level " + level);
    nextSequence();
    started = true;
  }
});


function nextSequence() //flashes a random colour
{
    userClickedPattern = [];
    level++; //we increase the level by 1 every time nextSequence() is called.
    $("#level-title").text("Level " + level);
  var x=Math.random();   //generates random numbers from 0 to 0.999...
  x=x*4;                 //generates no's from  0 to 3.999...
  var randomNumber=Math.floor(x);       //generates whole no's 0,1,2 and 3 only
  var randomChosenColour=buttonColours[randomNumber]; //to select a random colour from the buttonColours array

     gamePattern.push(randomChosenColour); //to add the new randomChosenColour generated to the end of the gamePattern array

     $("#"+randomChosenColour).fadeIn(100).fadeOut(100).fadeIn(100);  //jQuery code jQuery to animate a flash to the button
     playSound(randomChosenColour); //to play audio on pressing doing refresh...i.e- randomly a button is chosen
}


$(".btn").click(function() // whenever the user clicks on a button then this function is triggered.
{
   var userChosenColour= $(this).attr("id");    // to get the particular colour corresponding to the user click
   userClickedPattern.push(userChosenColour);  // Add the contents of the variable userChosenColour to the end of this new userClickedPattern array

     playSound(userChosenColour); // call playSound function
     animatePress(userChosenColour);  //call animatePress function
```



```
     checkAnswer(userClickedPattern.length-1);  //passing the current updated length of the
userClickedPattern array to check the answer
});


function playSound(name)   // seperate function to play audio
{
    var audio = new Audio( name+ ".mp3"); // JS code to play the sound for the random button
colour selected
    audio.play();// play the audio
}
function animatePress(currentColour)    // function to perform animation on the button
corresponing to user click on a particular colour button
{
  $("#"+currentColour).addClass("pressed"); //eg: pressed class will be applied on #red
  setTimeout(function() {
  $("#"+currentColour).removeClass("pressed");
},100);
}

//Call checkAnswer() after a user has clicked and chosen their answer,
//passing in the index of the last answer in the user's sequence.
//e.g. If the user has pressed red, green, red, yellow, the index of the last answer is 3.
function checkAnswer(currentLevel) {

    if (gamePattern[currentLevel] === userClickedPattern[currentLevel])
     {
      if (userClickedPattern.length === gamePattern.length){
        setTimeout(function () {  //Call nextSequence() after a 1000 millisecond delay.
          nextSequence();
        }, 1000);
      }
    }
    else {
      playSound("wrong");
      $("body").addClass("game-over");
      $("#level-title").text("Game Over, Press Any Key to Restart");

      setTimeout(function () {
        $("body").removeClass("game-over");
      }, 200);

      startOver();
    }
}
function startOver()//reset the game
{
  level=0;
  gamePattern=[]
  started=false;
}
```

styles.css

```
body {
  text-align: center;
  background-color: #011F3F;
}

#level-title {
  font-family: 'Press Start 2P', cursive;
  font-size: 3rem;
  margin:  5%;
  color: #FEF2BF;
}

.container {
  display: block;
  width: 50%;
  margin: auto;

}

.btn {
  margin: 25px;
  display: inline-block;
  height: 200px;
  width: 200px;
  border: 10px solid black;
  border-radius: 20%;
}

.game-over {
  background-color: red;
  opacity: 0.8;
}

.red {
  background-color: red;
}

.green {
  background-color: green;
}

.blue {
  background-color: blue;
}

.yellow {
  background-color: yellow;
}

.pressed {
  box-shadow: 0 0 20px white;
  background-color: grey;
}

.footer{
  color:#fff;
}
```