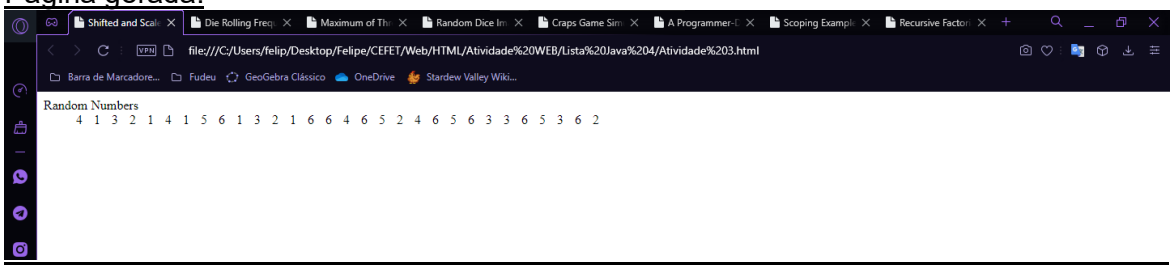
1 – Código:

```
<!DOCTYPE html>
<!-- Fig. 9.2: SquareInt.html -->
<!-- Programmer-defined function square. -->
<html>

<head>
    <meta charset="utf-8">
    <title>A Programmer-Defined square Function</title>
    <style type="text/css">
        p {
            margin: 0;
        }
    </style>
    <script>
        document.writeln("<h1>Square the numbers from 1 to 10</h1>
");

        // square the numbers from 1 to 10
        for (var x = 1; x <= 10; ++x)
            document.writeln("<p>The square of " + x + " is " +
                square(x) + "</p>");

        // The following square function definition's body is exec
uted
        // only when the function is called explicitly as in line
19
        function square(y) {
            return y * y;
        } // end function square
    </script>
</head>

<body></body> <!-- empty body element -->

</html>
```

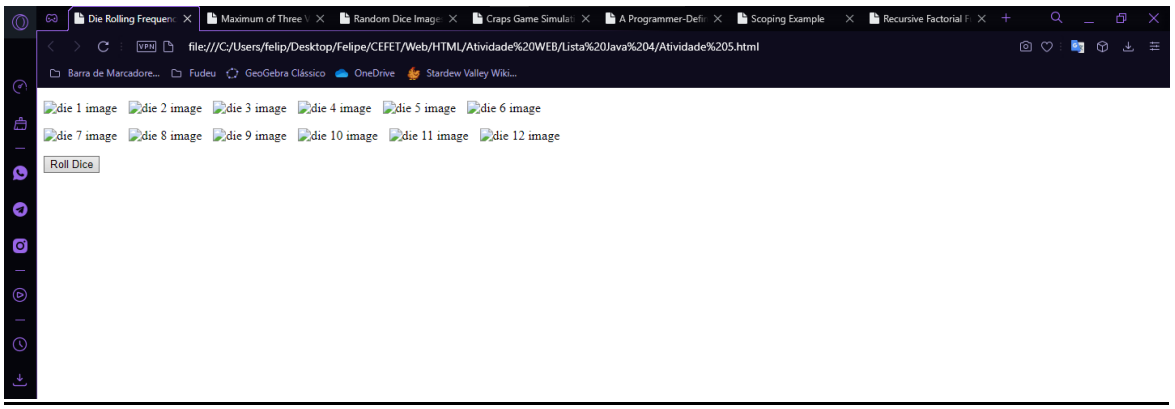
Página gerada:



2 – Código:

```html
<!DOCTYPE html>
<!-- Fig. 9.3: maximum.html -->
<!-- Programmer-Defined maximum function. -->
<html>

<head>
    <meta charset="utf-8">
    <title>Maximum of Three Values</title>
    <style type="text/css">
        p {
            margin: 0;
        }
    </style>
    <script>
        var input1 = window.prompt("Enter first number", "0");
        var input2 = window.prompt("Enter second number", "0");
        var input3 = window.prompt("Enter third number", "0");
        var value1 = parseFloat(input1);
        var value2 = parseFloat(input2);
        var value3 = parseFloat(input3);
        var maxValue = maximum(value1, value2, value3);
        document.writeln("<p>First number: " + value1 + "</p>" +
            "<p>Second number: " + value2 + "</p>" +
            "<p>Third number: " + value3 + "</p>" +
            "<p>Maximum is: " + maxValue + "</p>");

        // maximum function definition (called from line 22)
        function maximum(x, y, z) {
            return Math.max(x, Math.max(y, z));
        } // end function maximum
    </script>
</head>

<body>

</body>

</html>
```

Página gerada:



3 – Código:

```
<!DOCTYPE html>
<!-- Fig. 9.4: RandomInt.html -->
<!-- Random integers, shifting and scaling. -->
<html>

<head>
    <meta charset="utf-8">
    <title>Shifted and Scaled Random Integers</title>
    <style type="text/css">
        p,
        ol {
            margin: 0;
        }

        li {
            display: inline;
            margin-right: 10px;
        }
    </style>
    <script>
        var value;

        document.writeln("<p>Random Numbers</p><ol>");

        for (var i = 1; i <= 30; ++i) {
            value = Math.floor(1 + Math.random() * 6);
            document.writeln("<li>" + value + "</li>");
        } // end for

        document.writeln("</ol>");
    </script>
</head>

<body></body>
```

```
</html>
```

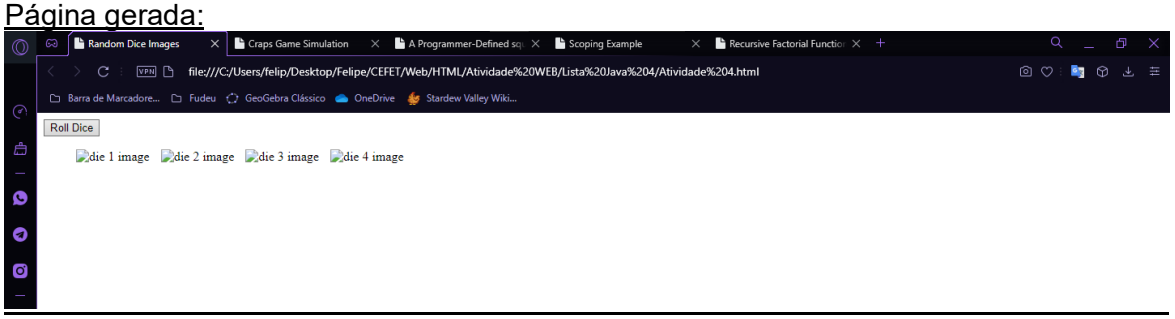
Página gerada:

4 – Código:

```
<!DOCTYPE html>

<!-- Fig. 9.5: RollDice.html -->
<!-- Random dice image generation using Math.random. -->
<html>

<head>
    <meta charset="utf-8">
    <title>Random Dice Images</title>
    <style type="text/css">
        li {
            display: inline;
            margin-right: 10px;
        }

        ul {
            margin: 0;
        }
    </style>
    <script>
        // variables used to interact with the i mg elements
        var die1Image;
        var die2Image;
        var die3Image;
        var die4Image;

        // register button listener and get the img elements
        function start() {
            var button = document.getElementById("rollButton");
            button.addEventListener("click", rollDice, false);
            die1Image = document.getElementById("die1");
            die2Image = document.getElementById("die2");
            die3Image = document.getElementById("die3");
            die4Image = document.getElementById("die4");
```

```
        } // end function rollDice

        // roll the dice
        function rollDice() {
            setImage(die1Image);
            setImage(die2Image);
            setImage(die3Image);
            setImage(die4Image);
        } // end function rollDice

        // set image source for a die
        function setImage(dieImg) {
            var dieValue = Math.floor(1 + Math.random() * 6);
            dieImg.setAttribute("src", "die" + dieValue + ".png");
            dieImg.setAttribute("alt",
                "die image with " + dieValue + " spot(s)");


        } // end function setImage
    </script>
</head>

<body>
    <form action="#">
        <input id="rollButton" type="button" value="Roll Dice">
    </form>
    <ol>
        <li><img id="die1" src="blank.png" alt="die 1 image"></li>
        <li><img id="die2" src="blank.png" alt="die 2 image"></li>
        <li><img id="die3" src="blank.png" alt="die 3 image"></li>
        <li><img id="die4" src="blank.png" alt="die 4 image"></li>
    </ol>
</body>

</html>
```

Página gerada:



---

5 – Código:

```
<!DOCTYPE html>
```

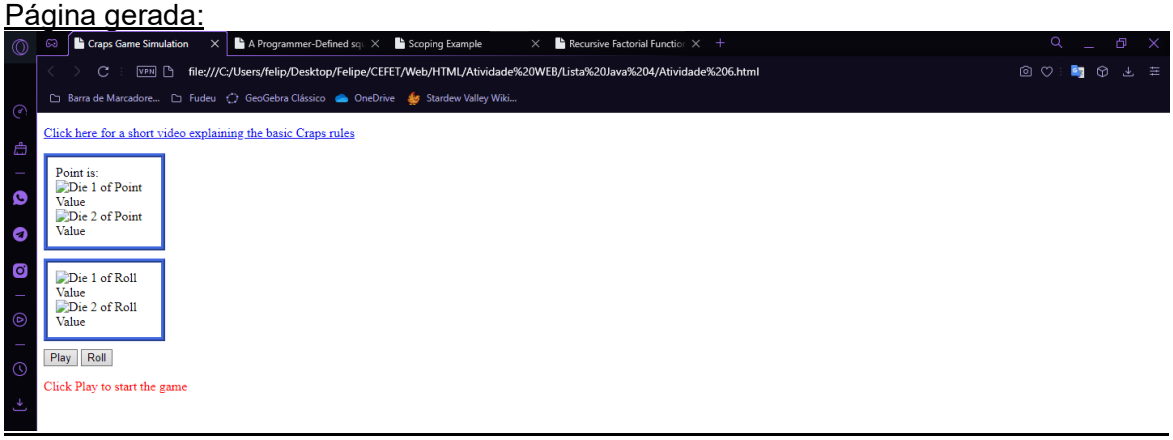
```
<!-- Fig. 9.6: RollDice.html -->
<!-- Rolling 12 dice and displaying frequencies. -->
<html>

<head>
    <meta charset="utf-8">
    <title>Die Rolling Frequencies</title>
    <style type="text/css">
        img {
            margin-right: 10px;
        }

        table {
            width: 200px;
            border-collapse: collapse;
            background-color: lightblue;
        }

        table,
        td,
        th {
            border: 1px solid black;
            padding: 4px;
            margin-top: 20px;
        }

        th {
            text-align: left;
            color: white;
            background-color: darkblue;
        }
    </style>
    <script>
        var frequency1 = 0;
        var frequency2 = 0;
        var frequency3 = 0;
        var frequency4 = 0;
        var frequency5 = 0;
        var frequency6 = 0;
        var totalDice = 0;

        // register button event handler
        function start() {
            var button = document.getElementById("rollButton");
            button.addEventListener("click", rollDice, false);
```

```
        } // end function start

        // roll the dice
        function rollDice() {
            var face; // face rolled

            // loop to roll die 12 times
            for (var i = 1; i <= 12; ++i) {
                face = Math.floor(1 + Math.random() * 6);

                setImage(i, face); // display appropriate die imag
e
                ++totalDice; // increment total
            } // end die rolling loop

            updateFrequencyTable();
        } // end function rollDice

        // increment appropriate frequency counter
        function tallyRolls(face) {
            switch (face) {
                case 1:
                    ++frequency1;
                    break;
                case 2:
                    ++frequency2;
                    break;
                case 3:
                    ++frequency3;
                    break;
                case 4:
                    ++frequency4;
                    break;
                case 5:
                    ++frequency5;
                    break;
                case 6:
                    ++frequency6;
                    break;
            } // end switch
        } // end function tallyRolls

        // set image source for a die
        function setImage(dieNumber, face) {
```

```
            var dieImg = document.getElementById("die" + dieNumber
);
            dieImg.setAttribute("src", "die" + face + ".png");
            dieImg.setAttribute("alt", "die with " + face + " spot
(s)");
        } // end function setImage

        // update frequency table in the page
        function updateFrequencyTable() {

            var tableDiv = document.getElementById("frequencyTable
Div");

            tableDiv.innerHTML = "<table>" +
                "<caption>Die Rolling Frequencies</caption>" +
                "<thead><th>Face</th><th>Frequency</th>" +
                "<th>Percent</th></thead>" +
                "<tbody><tr><td>1</td><td>" + frequency1 + "</td><
td>" +
                formatPercent(frequency1 / totalDice) + "</td></tr
>" +
                "<tr><td>2</td><td>" + frequency2 + "</td><td>" +
                formatPercent(frequency2 / totalDice) + "</td></tr
>" +
                "<tr><td>3</td><td>" + frequency3 + "</td><td>" +
                formatPercent(frequency3 / totalDice) + "</td></tr
>" +
                "<tr><td>4</td><td>" + frequency4 + "</td><td>" +
                formatPercent(frequency4 / totalDice) + "</td></tr
>" +
                "<tr><td>5</td><td>" + frequency5 + "</td><td>" +
                formatPercent(frequency5 / totalDice) + "</td></tr
>" +
                "<tr><td>6</td><td>" + frequency6 + "</td><td>" +
                formatPercent(frequency6 / totalDice) + "</td></tr
>" +
                "</tbody></table>";
        } // end function updateFrequencyTable

        // format percentage
        function formatPercent(value) {
            value *= 100;
            return value.toFixed(2);
        } // end function formatPercent

        window.addEventListener("load", start, false);
```

```
    </script>
</head>

<body>
    <p><img id="die1" src="blank.png" alt="die 1 image">
        <img id="die2" src="blank.png" alt="die 2 image">
        <img id="die3" src="blank.png" alt="die 3 image">
        <img id="die4" src="blank.png" alt="die 4 image">
        <img id="die5" src="blank.png" alt="die 5 image">
        <img id="die6" src="blank.png" alt="die 6 image"></p>
    <p><img id="die7" src="blank.png" alt="die 7 image">
        <img id="die8" src="blank.png" alt="die 8 image">
        <img id="die9" src="blank.png" alt="die 9 image">
        <img id="die10" src="blank.png" alt="die 10 image">
        <img id="die11" src="blank.png" alt="die 11 image">
        <img id="die12" src="blank.png" alt="die 12 image"></p>
    <form action="#">
        <input id="rollButton" type="button" value="Roll Dice">
    </form>
    <div id="frequencyTableDiv"></div>
</body>

</html>
```

Página gerada:



---

6 – Código:

```
<!DOCTYPE html>
<!-- Fig. 9.7: Craps.html -->
<!-- Craps game simulation. -->
<html>

<head>
    <meta charset="utf-8">
    <title>Craps Game Simulation</title>
    <style type="text/css">
        p.red {
```

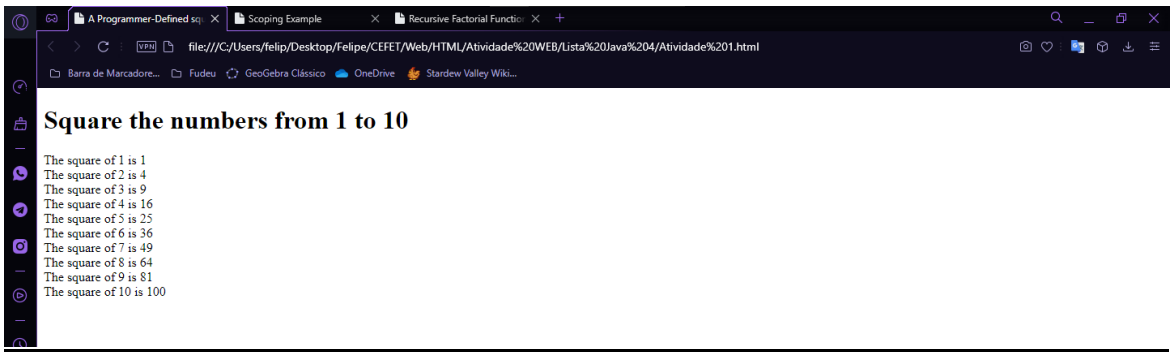
```
            color: red
        }

        img {
            width: 54px;
            height: 54px;
        }

        div {
            border: 5px ridge royalblue;
            padding: 10px;
            width: 120px;
            margin-bottom: 10px;
        }

        .point {
            margin: 0px;
        }
    </style>
    <script>
        // variables used to refer to page elements
        var pointDie1Img; // refers to first die point img
        var pointDie2Img; // refers to second die point img
        var rollDie1Img; // refers to first die roll img
        var rollDie2Img; // refers to second die roll img
        var messages; // refers to "messages" paragraph
        var playButton; // refers to Play button
        var rollButton; // refers to Roll button
        var dicerolling; // refers to audio clip for dice

        // other variables used in program
        var myPoint; // point if no win/loss on first roll
        var die1Value; // value of first die in current roll
        var die2Value; // value of second die in current roll

        // starts a new game
        function startGame() {
            // get the page elements that we'll interact with
            dicerolling = document.getElementById("dicerolling");
            pointDie1Img = document.getElementById("pointDie1");
            pointDie2Img = document.getElementById("pointDie2");
            rollDie1Img = document.getElementById("rollDie1");
            rollDie2Img = document.getElementById("rollDie2");
            messages = document.getElementById("messages");
            playButton = document.getElementById("play");
            rollButton = document.getElementById("roll");
```

```
            // prepare the GUI
            rollButton.disabled = true; // disable rollButton
            setImage(pointDie1Img); // reset image for new game
            setImage(pointDie2Img); // reset image for new game
            setImage(rollDie1Img); // reset image for new game
            setImage(rollDie2Img); // reset image for new game

            myPoint = 0; // there is currently no point
            firstRoll(); // roll the dice to start the game
        } // end function startGame
        // perform first roll of the game
        function firstRoll() {
            // determine if the user won, lost or must continue ro
lling
            switch (sumOfDice) {
                case 7:
                case 11: // win on first roll
                    messages.innerHTML =
                        "You Win!!! Click Play to play again.";
                    break;
                case 2:
                case 3:
                case 12: // lose on first roll
                    messages.innerHTML =
                        "Sorry. You Lose. Click Play to play again
.";
                    break;
                default: // remember point
                    myPoint = sumOfDice;
                    setImage(pointDie1Img, die1Value);
                    setImage(pointDie2Img, die2Value);
                    messages.innerHTML = "Roll Again!";
                    rollButton.disabled = false; // enable rollBut
ton
                    playButton.disabled = true; // disable playBut
ton
                    break;
            } // end switch
        } // end function firstRoll

        // called for subsequent rolls of the dice
        function rollAgain() {
            var sumOfDice = rollDice(); // subsequent roll of the
dice
```

```
            if (sumOfDice == myPoint) {
                messages.innerHTML =
                    "You Win!!! Click Play to play again.";
                rollButton.disabled = true; // disable rollButton
                playButton.disabled = false; // enable playButton
            } // end if
            else if (sumOfDice == 7) // craps
            {
                messages.innerHTML =
                    "Sorry. You Lose. Click Play to play again.";
                rollButton.disabled = true; // disable rollButton
                playButton.disabled = false; // enable playButton
            } // end else if
        } // end function rollAgain
        // roll the dice
        function rollDice() {
            dicerolling.play(); // play dice rolling sound
            // clear old die images while rolling sound plays
            die1Value = NaN;
            die2Value = NaN;
            showDice();
            die1Value = Math.floor(1 + Math.random() * 6);
            die2Value = Math.floor(1 + Math.random() * 6);
            return die1Value + die2Value;
        } // end function rollDice
        // display rolled dice
        function showDice() {
            setImage(rollDie1Img, die1Value);
            setImage(rollDie2Img, die2Value);
        } // end function showDice
        // set image source for a die
        function setImage(dieImg, dieValue) {
            if ()
                dieImg.src = "die" + dieValue + ".png";
            else
                dieImg.src = "blank.png";
        } // end function setImage
        // register event liseners
        function start() {
            var playButton = document.getElementById("play");
            playButton.addEventListener("click", startGame, false)
;
            var rollButton = document.getElementById("roll");
            rollButton.addEventListener("click", rollAgain, false)
;
```

```
            var diceSound = document.getElementById("dicerolling")
;
            diceSound.addEventListener("ended", showDice, false);

        } // end function start

        window.addEventListener("load", start, false);
    </script>
</head>

<body>
    <audio id="dicerolling" preload="auto">
        <source src="http://test.deitel.com/dicerolling.mp3" type=
"audio/mpeg">
        <source src="http://test.deitel.com/dicerolling.ogg" type=
"audio/ogg">
        Browser does not support audio tag</audio>
    <p><a href="CrapsRules.html">Click here for a short video
            explaining the basic Craps rules</a></p>
    <div id="pointDiv">
        <p class="point">Point is:</p>
        <img id="pointDie1" src="blank.png" alt="Die 1 of Point Va
lue">
        <img id="pointDie2" src="blank.png" alt="Die 2 of Point Va
lue">
    </div>
    <div class="rollDiv">
        <img id="rollDie1" src="blank.png" alt="Die 1 of Roll Valu
e">
        <img id="rollDie2" src="blank.png" alt="Die 2 of Roll Valu
e">
    </div>
    <form action="#">
        <input id="play" type="button" value="Play">
        <input id="roll" type="button" value="Roll">
    </form>
    <p id="messages" class="red">Click Play to start the game</p>
</body </html>
```

Página gerada:



7 – Código:

```
<!DOCTYPE html>
<!-- Fig. 9.9: scoping.html -->
<!-- Scoping example. -->
<html>

<head>
    <meta charset="utf-8">
    <title>Scoping Example</title>
    <style type="text/css">
        p {
            margin: 0px;
        }

        p.space {
            margin-top: 10px;
        }
    </style>
    <script>
        var output; // stores the string to display
        var x = 1; // global variable

        function start() {
            var x = 5; // variable local to function start

            output = "<p>local x in start is " + x + "</p>";

            functionA(); // functionA has local x
            functionB(); // functionB uses global variable x
            functionA(); // functionA reinitializes local x
            functionB(); // global variable x retains its value

            output += "<p class='space'>local x in start is " + x
+
                "</p>";
            document.getElementById("results").innerHTML = output;
        } // end function start
```

```
        function functionA() {
            var x = 25; // initialized each time functionA is call
ed

            output += "<p class='space'>local x in functionA is "
+ x +
                " after entering functionA</p>";
            ++x;
            output += "<p>local x in functionA is " + x +
                " before exiting functionA</p>";
        } // end functionA

        function functionB() {
            output += "<p class='space'>global variable x is " + x
 +
                " on entering functionB";
            x *= 10;
            output += "<p>global variable x is " + x +
                " on exiting functionB</p>";
        } // end functionB

        window.addEventListener("load", start, false);
    </script>
</head>

<body>
    <div id="results"></div>
</body>

</html>
```

Página gerada:

8 – Código:

```
<!DOCTYPE html>

<!-- Fig. 9.12: FactorialTest.html -->
```

```
<!-- Factorial calculation with a recursive function. -->
<html>

<head>
    <meta charset="utf-8">
    <title>Recursive Factorial Function</title>
    <style type="text/css">
        p {
            margin: 0px;
        }
    </style>
    <script>
        var output = ""; // stores the output

        // calculates factorials of 0 - 10
        function calculateFactorials()
        for (var i = 0; i <= 10; ++i)
            output += "<p>" + i + "! = " + +"</p>";

        document.getElementById("results").innerHTML = output;
        } // end function calculateFactorials

        // Recursive definition of function factorial
        function factorial(number) {
            if (number <= 1) // base case
                return 1;
            else
                return number * factorial(number - 1);
        } // end function factorial
        window.addEventListener("load", calculateFactorials, false
);
    </script>
</head>

<body>
    <h1>Factorials of 0 to 10</h1>
    <div id="results"></div>
</body>

</html>
```

Página gerada:


Recursive Factorial Functio
file:///C:/Users/felip/Desktop/Felipe/CEFET/Web/HTML/Atividade%20WEB/Lista%20Java%204/Atividade%208.html
Barra de Marcadore...
Fudeu
GeoGebra Clássico
OneDrive
Stardew Valley Wiki...
Factorials of 0 to 10