



FACULTY OF INFORMATION TECHNOLOGY

**WEB TECHNOLOGY 512 ASSIGNMENT**

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ASSESSMENT CRITERIA	MARK ALLOCATION	EXAMINER MARKS	MODERATOR MARKS
MARKS FOR CONTENT			
QUESTION ONE	30		
QUESTION TWO	30		
QUESTION THREE	30		
TOTAL	90		
MARKS FOR TECHNICAL ASPECTS			
TABLE OF CONTENTS Accurate numbering according to the numbering in text and page numbers.	2		
CODE Program text indentation Use of constant, variable and structure names Comments	5		
REFERENCES According to the Harvard Method	3		
TOTAL	10		
<b>TOTAL MARKS FOR ASSIGNMENT</b>	<b>100</b>		
Examiner's Comments:			
Moderator's Comments:			
Signature of Examiner: <b>N. Mujuji</b>		Signature of Moderator:	

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### QUESTION 1

## CODES

[illegible]

## **Loan Repayment Information:**

<label for="monthlyPayment">4. Your monthly payment will be:</label>

                          <input type="text" id="monthlyPayment" readonly>

<br>

<br>

<label for="totalPayment">5. Your total payment will be: </label>

<br>

<br>

6. Your total interest payments will be:

&lt;/form&gt;

<script>

```
function calculateLoan() {
```

```
const loanAmount = parseFloat(document.getElementById("loanAmount").value);
```

```
const interestRate = parseFloat(document.getElementById("interestRate").value) / 100;
```

```
const loanTerm = parseInt(document.getElementById("loanTerm").value);
```

```
const monthlyInterestRate = interestRate / 12;
```

```
const monthlyPayment = (loanAmount * monthlyInterestRate) / (1 - Math.pow(1 +
monthlyInterestRate, -loanTerm));
```

```
const totalPayment = monthlyPayment * loanTerm;
```

```
const totInterest = totalPayment - loanAmount;
```

```
document.getElementById("monthlyPayment").value = monthlyPayment.toFixed(2);
```

```
        document.getElementById("totalPayment").value = totalPayment.toFixed(2);  
        document.getElementById("totInterest").value = totInterest.toFixed(2);  
    }  
  

```

```
    </script>  
    <style>  
        label{  
            display: inline-block;  
        }  
    </style>  
  

```

```
</body>
```

```
</html>
```

## RESULTS



## Enter Loan Information:

1. Amount of the Loan(ZAR):
2. Annual percentage rate of interest:
3. Repayment period in years:

## Loan Repayment Information:

4. Your monthly payment will be:
5. Your total payment will be:
6. Your total interest payments will be:

## QUESTION 2

### CODES

#### Style.css

```
* {  
    margin: 0;  
    padding: 0;  
    box-sizing: border-box;  
    font-family: sans-serif;  
}
```

```
.app {
```

```
display: flex;
justify-content: center;
align-items: center;
height: 100vh;
}
```

```
.calculator {
background-color: #22252D;
width: 100%;
max-width: 375px;
min-height: 640px;
display: flex;
flex-direction: column;
border-radius: 1.5rem;
overflow: hidden;
}
```

```
.display {
min-height: 200px;
padding: 1.5rem;
display: flex;
justify-content: flex-end;
align-items: flex-end;
color: white;
text-align: right;
flex: 1 1 0%;
}
```

```
.display .input {
font-size: 1.25rem;
```

```
margin-bottom: 0.5rem;
}
```

```
.display .output {
  font-size: 3rem;
  font-weight: 700;
  width: 100%;
  max-width: 100%;
  overflow: auto;
}
```

```
.display .operator {

  color: #EB6666;
}
```

```
.display .brackets,
.display .percent {

  color: #26FED7;
}
```

```
.keys {
  background-color: #292D36;
  padding: 1.5rem;
  border-radius: 1.5rem 1.5rem 0 0;
  display: grid;
  grid-template-columns: repeat(4, 1fr);
  grid-template-rows: repeat(5, 1fr);
  grid-gap: 1rem;
  box-shadow: 0px -2px 16px rgba(0, 0, 0, 0.2);
}
```



```
}
```

```
.keys .key {
```

```
    position: relative;
```

```
    cursor: pointer;
```

```
    display: block;
```

```
    height: 0;
```

```
    padding-top: 100%;
```

```
    background-color: #262933;
```

```
    border-radius: 1rem;
```

```
    transition: 0.2s;
```

```
    user-select: none;
```

```
}
```

```
.keys .key span {
```

```
    position: absolute;
```

```
    top: 30%;
```

```
    left: 30%;
```

```
    transform: translate(-50% -50%);
```

```
    font-size: 2rem;
```

```
    font-weight: 700;
```

```
    color: #FFF;
```

```
}
```

```
.keys .key:hover {
```

```
    box-shadow: inset 0px 0px 8px rgb(0, 0, 0, 0.2);
```

```
}
```

```
.keys .key.operator span {
```

```
    color: #EB6666;
}
```

```
.keys .key.action span {
    color: #26FED7;
}
```

### **script.js**

```
const keys = document.querySelectorAll('.key');
const display_input = document.querySelector('.display .input');
const display_output = document.querySelector('.display .output');
```

```
let input = "";
```

```
for (let key of keys) {
    const value = key.dataset.key;
```

```
    key.addEventListener('click', () => {
```

```
        if (value == "clear") {
```

```
            input = "";
```

```
            display_input.innerHTML = "";
```

```
            display_output.innerHTML = "";
```

```
        } else if (value == "backspace") {
```

```
            input = input.slice(0, -1);
```

```
            display_input.innerHTML = input;
```

```
        } else if (value == "=") {
```

```
            let result = eval(input);
```

```
            display_output.innerHTML = result;
```

```

    } else if (value == "brackets") {
        if (input.indexOf("(") == -1 ||
            input.indexOf(")") != -1 &&
            input.indexOf("(") != -1 &&
            input.lastIndexOf("(") < input.lastIndexOf(")"))
        ) {
            input = "(";
        } else if (
            input.indexOf("(") != -1 &&
            input.indexOf(")") == -1 ||
            input.indexOf("(") != -1 &&
            input.lastIndexOf("(") > input.lastIndexOf(")")
        ) {
            input += ")"
        }

        display_input.innerHTML = input;

    } else {

        input += value;
        display_input.innerHTML = input;
    }
})
}

```

### **Html**

<!DOCTYPE html>

<html lang="en">

```
<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Calculator</title>

  <link rel="stylesheet" href="main.css">

</head>
```

```
<body>
```

```
  <div class="app">
```

```
    <div class="calculator">
```

```
      <div class="display">
```

```
        <div class="content">
```

```
          <div class="input">
```

```
        </div>
```

```
        <div class="output">
```

```
      </div>
```

```
    </div>
```

```
  </div>
```

```
  <div class="keys">
```

```
    <div data-key="clear" class="key action">
```

```
      <span>AC</span>
```

```
    </div>
```

```
    <div data-key="brackets" class="key action">
```

<span>( )</span>

</div>

<div data-key="%" class="key action">

<span>%</span>

</div>

<div data-key="/" class="key operator">

<span>/</span>

</div>

<div data-key="7" class="key">

<span>7</span>

</div>

<div data-key="8" class="key">

<span>8</span>

</div>

<div data-key="9" class="key">

<span>9</span>

</div>

<div data-key="\*" class="key operator">

<span>X</span>

</div>

<div data-key="4" class="key">

<span>4</span>

</div>

<div data-key="5" class="key">

<span>5</span>

</div>

```
<div data-key="6" class="key">
```

```
  <span>6</span>
```

```
</div>
```

```
<div data-key="-" class="key operator">
```

```
  <span>-</span>
```

```
</div>
```

```
<div data-key="1" class="key">
```

```
  <span>1</span>
```

```
</div>
```

```
<div data-key="2" class="key">
```

```
  <span>2</span>
```

```
</div>
```

```
<div data-key="3" class="key">
```

```
  <span>3</span>
```

```
</div>
```

```
<div data-key="+" class="key operator">
```

```
  <span>+</span>
```

```
</div>
```

```
<div data-key="backspace" class="key action">
```

```
  <span>&lt;</span>
```

```
</div>
```

```
<div data-key="0" class="key">
```

```
  <span>0</span>
```

```
</div>
```

```
<div data-key="." class="key">
```

```
  <span>.</span>
```

```
</div>
<div data-key="=" class="key operator">
  <span>=</span>
</div>
</div>
```

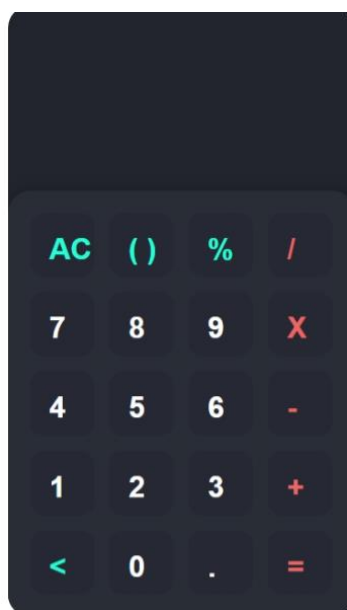
```
</div>
```

```
</div>
```

```
<script src="man.js"></script>
</body>
```

```
</html>
```

## RESULTS



## QUESTION 3

### 3.1 CODES

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>Change Input Field Background Color on the button click</title>
```

```
  <style>
```

```
    /* Style the input field with an initial background color */
```

```
    input {
```

```
      background-color: #ffffff;
```

```
    }
```

```
  </style>
```

```
</head>
```

```
<body>
```

```
  <form>
```

```
    <h1>Change Input Field Background Color on the button click</h1>
```

```
    <input type="text" id="myInput" placeholder="Enter text"><br /><br />
```

```
    <button type="button" id="submitButton">Submit</button>
```

```
  </form>
```

```
<script>
```

```
  // Get references to the input field and submit button
```

```
  let inputField = document.getElementById("myInput");
```

```
  let submitButton = document.getElementById("submitButton");
```

```
  // Add an event listener to the submit button
```

```
  submitButton.addEventListener("click", function () {
```



```
// Change the background color of the input field
inputField.style.backgroundColor = "#FFD700"; //giving an input a new color
});
</script>
</body>

</html>
```

## Results

### Change Input Field Background Color on the button click

A screenshot of a web form. It features a single-line text input field with a yellow background and a thin black border. The text "I love Javascript" is entered into the field. Below the input field is a rectangular button with a light gray background and a thin black border, containing the word "Submit" in a small, black, sans-serif font.

## 3.2

### CODES

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Sign Up Form</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <h1>Sign Up for School Email Account</h1>
  <form id="signupForm" action="#" method="POST">
    <label for="name">Name:</label>
    <br>
```

```
<input type="text" id="name" name="name" required>
<br>
<label for="email">Email:</label>
    <br>
<input type="email" id="email" name="email" required>
<br>
<label for="password">Password:</label>
    <br>
<input type="password" id="password" name="password" required>
<br>
<label for="confirm-password">Confirm Password:</label>
    <br>
<input type="password" id="confirm-password" name="confirm-password" required>
</form>
<input type="checkbox" id="agree" name="agree" required>
<label for="agree">By signing up for this account, you agree to our <a href="terms.html">Terms of
Service</a> and <a href="privacy.html">Privacy Policy</a></label>
    <br>
<input type="submit" value="Setup Account">

<script>
document.getElementById("signupForm").addEventListener("submit", function(event) {
    event.preventDefault(); // Prevent form submission
    // Perform form validation and submission logic here
    // For demonstration, display an alert upon successful submission
    alert("Account setup successful!");
});
</script>

</body>
</html>
```

## RESULTS

# Sign Up for School Email Account

Name:

Email:

Password:

Confirm Password:

☐ By signing up for this account, you agree to our [Terms of Service](#) and [Privacy Policy](#).

## REFERENCES

RICHFIELD WEB TECHNOLOGY 512(SEMESTER 2) LEARNER GUIDE

NIKOLAY KOSTOV TELERINK CORPORATION [www.telerink.com](http://www.telerink.com)

Internet and World Wide Web (How to Program) 5th ed 2012 PJ Deitel, MH Deitel

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