Taehun Calculator

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Taehun Calculator</title>
    <link rel="stylesheet" href="design.css">
</head>
<body>
    <div class="calculator">
        <input type="text" id="display" class="calculator-screen" disabled>
        <div class="calculator-buttons">
            <button onclick="addChar('A')">A</button>
            <button onclick="setHexMode()">HEX</button>
            <button onclick="setDecMode()">DEC</button>
            <button onclick="clearScreen()">AC</button>
            <button onclick="addChar('/')">÷</button>
            <button onclick="addChar('B')">B</button>
            <button onclick="addChar('7')">7</button>
            <button onclick="addChar('8')">8</button>
            <button onclick="addChar('9')">9</button>
            <button onclick="addChar('*')">×</button>
            <button onclick="addChar('C')">C</button>
            <button onclick="addChar('4')">4</button>
            <button onclick="addChar('5')">5</button>
            <button onclick="addChar('6')">6</button>
            <button onclick="addChar('-')">-</button>
            <button onclick="addChar('D')">D</button>
            <button onclick="addChar('1')">1</button>
            <button onclick="addChar('2')">2</button>
            <button onclick="addChar('3')">3</button>
            <button onclick="addChar('+')">+</button>
            <button onclick="addChar('E')">E</button>
            <button onclick="addChar('F')">F</button>
            <button onclick="addChar('0')">0</button>
            <button onclick="backspace()">⌫</button>
            <button onclick="calculate()" class="equal">=</button>
        </div>
    </div>
    <script src="func.js"></script>
</body>
</html>
```

CSS Code for Taehun Calculator

```css
body {
    font-family: 'Roboto', 'Arial', sans-serif;
    background-color: rgb(62, 62, 62);
    display: flex;
    justify-content: center;
    align-items: center;
    height: 90vh;
    margin: 0;
}

.calculator {
    background-color: rgb(35, 35, 35);
    padding: 20px;
    border-radius: 20px;
    box-shadow: 0 4px 10px rgba(24, 24, 24, 0.5);
}

.calculator-screen {
    width: calc(100% - 20px);
    height: 70px;
    background-color: black;
    color: white;
    font-size: 45px;
    text-align: right;
    padding: 13px;
    border: none;
    border-radius: 10px;
    margin-bottom: 20px;
}

.calculator-buttons {
    display: grid;
    grid-template-columns: repeat(5, 1fr);
    grid-gap: 8px;
}

button {
    font-size: 25px;
    padding: 10px;
    background-color: #484848;
    color: white;
    border: none;
    border-radius: 4px;
    cursor: pointer;
}

button:hover {
    background-color: rgb(119, 119, 122);
```

```css
}

button:nth-child(5n+5) {
    background-color: #3074ff;
}

button.equal {
    background-color: rgb(17, 166, 17);
}

button:nth-child(2), button:nth-child(3) {
    background-color: #666;
}

button.active-mode {
    background-color: rgb(135, 6, 6);
}
```

JavaScript Code for Taehun Calculator

```javascript
let input = "";
let isHexMode = false; // 기본은 10진수 모드

function addChar(character) {
    if (!isHexMode && ['A', 'B', 'C', 'D', 'E', 'F'].includes(character))
{
        return; // 10진수 모드에서 A~F 입력안되도록
    }
    input += character;
    document.querySelector('#display').value = input;
}

function calculate() {
    try {
        if (isHexMode) {
            // 16진수 문자를 10진수로 변환하여 eval로 계산
            let decimalValue = eval(input.replace(/([A-Fa-f0-9]+)/g,
                match => parseInt(match, 16)));
            // 계산된 10진수 결과를 다시 16진수로 변환하여 대문자로 출력
            input = decimalValue.toString(16).toUpperCase();
        } else {
            input = eval(input); // 10진수 계산
        }
        document.querySelector('#display').value = input;
    } catch (error) {
        document.querySelector('#display').value = "ERROR";
    }
}

// 화면 초기화
function clearScreen() {
    input = "";
    document.querySelector('#display').value = "";
}

// 마지막 입력값 지우기
function backspace() {
    input = input.slice(0, -1);
    document.querySelector('#display').value = input;
}

// HEX 모드로 전환
function setHexMode() {
    isHexMode = true;
    clearScreen();
    setActiveButton("hex");
}
```

```javascript
// DEX 모드로 전환
function setDecMode() {
    isHexMode = false;
    clearScreen();
    setActiveButton("dec");
}

// HEX 또는 DEC 눌렀을 때 빨간색으로 활성화
function setActiveButton(mode) {
    const hexButton = document.querySelector("button:nth-child(2)");
    const decButton = document.querySelector("button:nth-child(3)");

    if (mode === "hex") {
        hexButton.classList.add("active-mode");
        decButton.classList.remove("active-mode");
    } else if (mode === "dec") {
        decButton.classList.add("active-mode");
        hexButton.classList.remove("active-mode");
    }
}
```