## Training Report - Web Development Training

### *Day 18: JavaScript Control Structures*

**Date:** 3/7/24

**Summary of the Day:** On the eighteenth day of our web development training, we focused on JavaScript control structures. Control structures are fundamental in programming as they allow us to control the flow of execution of code based on certain conditions and to repeat certain blocks of code multiple times.

**Detailed Notes:**

**1. Conditional Statements:**

- **if Statement:** Executes a block of code if a specified condition is true.

```
let age = 18;
if (age >= 18) {
  console.log("You are an adult.");
}
```

- **if...else Statement:** Provides an alternative block of code if the condition is false.

```
let age = 17;
if (age >= 18) {
  console.log("You are an adult.");
} else {
  console.log("You are a minor.");
}
```

- **if...else if...else Statement:** Tests multiple conditions.

```
let score = 85;
if (score >= 90) {
  console.log("Grade: A");
} else if (score >= 80) {
  console.log("Grade: B");
} else {
  console.log("Grade: C");
}
```

- **Switch Statement:** Provides a way to execute different blocks of code based on different values of an expression.

```
let day = 3;
switch (day) {
  case 1:
    console.log("Monday");
    break;
  case 2:
    console.log("Tuesday");
    break;
  case 3:
    console.log("Wednesday");
    break;
  default:
    console.log("Another day");
}
```

**2. Loops:**

- **for Loop:** Used to repeat a block of code a specific number of times.

```
for (let i = 0; i < 5; i++) {
  console.log("Iteration:", i);
}
```

- **while Loop:** Repeats a block of code as long as a specified condition is true.

```
let i = 0;
while (i < 5) {
  console.log("Iteration:", i);
  i++;
}
```

- **do...while Loop:** Similar to the `while` loop, but it will execute the block of code at least once before checking the condition.

```
let i = 0;
do {
  console.log("Iteration:", i);
  i++;
} while (i < 5);
```

**Reflection:** Today's session on JavaScript control structures was highly valuable. Mastering conditional statements and loops is essential for creating logical and efficient code. The practical examples provided a clear understanding of how to implement these control structures in real-world scenarios. I am looking forward to applying these concepts in more complex projects and further enhancing my problem-solving skills.