WDD 131

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JavaScript: Fundamental Programming Constructs

Overview

Through the prerequisite programming course requirements for this course, you have established a foundational understanding of the common, programming building blocks or constructs including operators, expressions, decision structures, looping, and functions. This activity focuses on a few of the common control structures in programming.

▶ Associated Course Learning Outcomes

Prepare

Some of the common controls structures or building blocks in JavaScript include:

> This is not an exhaustive list of JavaScript programming constructs. This is a list of some of the most common used. You will learn more about these constructs and others as you apply them throughout the course.

✓ **Conditional Statements**:

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

```
if (condition) {
  // Code to execute if the condition is true
}
```

> The condition is evaluated to a **boolean** value, i.e., true or false. Writing condition statements is a critical skill in programming. The use of operators and expressions is a key concept in writing condition statements that solve programming problems.

- **else** statement: Provides an alternative block of code to execute if the condition in the if statement is false.

```
if (condition) {
  // Code to execute if the condition is true
} else {
  // Code to execute if the condition is false
}
```

- **else if** statement: This structure allows for the checking of multiple conditions in sequence.

```
if (condition1) {
  // Code to execute if condition1 is true
} else if (condition2) {
  // Code to execute if condition2 is true
} else {
  // Code to execute if none of the conditions are true
}
```

✓ **Switch Statements**: Provides a way to execute selective blocks of code based on the value of an expression.

```
switch (expression) {
  case value1:
    // Code to execute if expression is equal to value1
    break;
  case value2:
    // Code to execute if expression is equal to value2
    break;
  // ... more cases ...
  default:
    // Code to execute if none of the cases match
}
```

✓ **Looping Statements**:

- **for** Loop: Repeats a block of coe a specified number of times.

```
for (let i = 0; i < 19; i++) {
  // Code to execute in each iteration
}
```

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

```
while (condition) {
  // Code to execute while the condition is true
}
```

- **forEach** Loop: This loop structure is for **arrays**. It iterates over each element of the array.

```
array.forEach(function(element) {
  // Code to execute for each element
});
```

Activity Instructions

1. Ponder: [Repitition Structures](#)

> ### References
>
> - [Making decisions in your code — conditionals](#) - MDN
>
> - [Looping code](#) - MDN