Lesson 04 Demo 03

Demonstrating Control Flow Statements

Objective: To demonstrate control flow concepts and conditional statements in JavaScript for illustrating decision-making structures and looping mechanisms

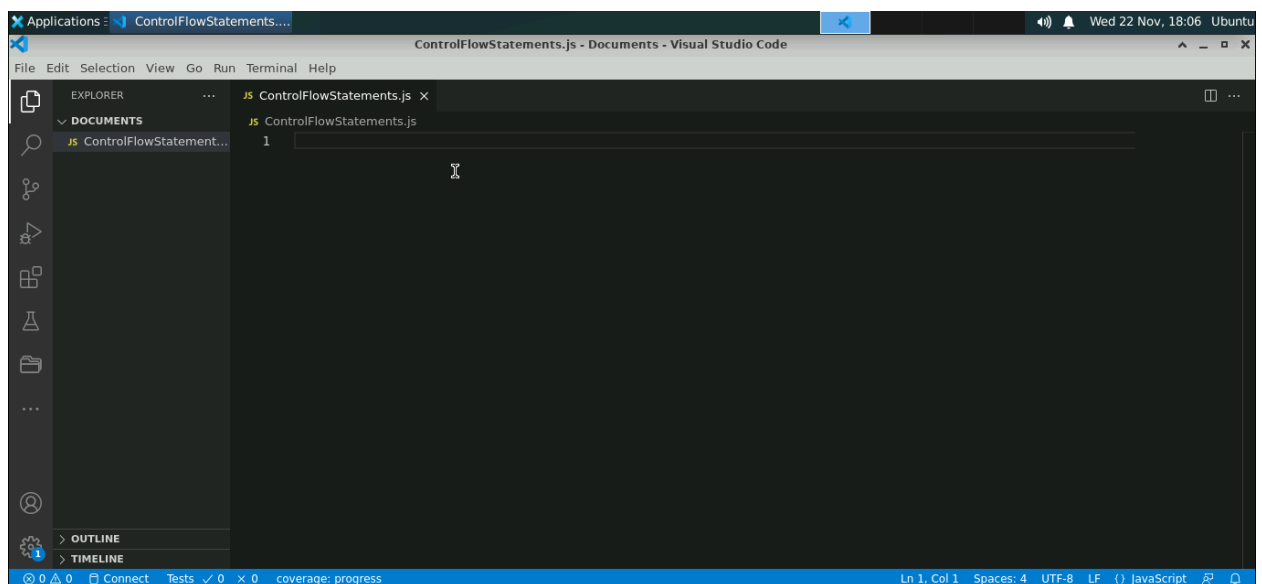**Tools required:** Visual Studio Code and Node.js

Prerequisites: A basic understanding of control flow statements in JavaScript

Steps to be followed:
1. Create and execute the JS file

Step 1: Create and execute the JS file

1.1 Open the Visual Studio Code editor and create a JavaScript file named **ControlFlowStatements.js**

1.2 Add the following code to the **ControlFlowStatements.js** file:

```javascript
// Control Flow Statements
// Conditional Statements: if, else if, switch
let condition = true;

if (condition) {
  console.log("The condition is true.");
} else {
  console.log("The condition is false.");
}

let value = 2;

if (value === 1) {
  console.log("Value is 1.");
} else if (value === 2) {
  console.log("Value is 2.");
} else {
  console.log("Value is neither 1 nor 2.");
}

let fruit = "apple";

switch (fruit) {
  case "banana":
    console.log("It's a banana.");
    break;
  case "apple":
    console.log("It's an apple.");
    break;
  default:
    console.log("It's something else.");
}

// Looping: for, while, do...while, for...in, for...of
// For Loop
console.log("For Loop:");
for (let i = 1; i <= 5; i++) {
  console.log(i);
}

// While Loop
console.log("While Loop:");
```

```
let counter = 3;

while (counter > 0) {
  console.log(counter);
  counter--;
}

// Do...While Loop
console.log("Do...While Loop:");
let doWhileCounter = 2;
do {
  console.log(doWhileCounter);
  doWhileCounter--;
} while (doWhileCounter > 0);

// For...In Loop (Object Iteration)
console.log("For...In Loop:");
let person = { name: "John", age: 30, job: "Developer" };
for (let key in person) {
  console.log(key + ": " + person[key]);
}

// For...Of Loop (Iterable Objects)
console.log("For...Of Loop:");
let numbers = [1, 2, 3, 4, 5];
for (let num of numbers) {
  console.log(num);
}

// Break and Continue Statements
console.log("Break Statement:");
for (let i = 1; i <= 5; i++) {
  if (i === 3) {
    break;
  }
  console.log(i);
}

console.log("Continue Statement:");
for (let i = 1; i <= 5; i++) {
  if (i === 3) {
    continue;
  }
```
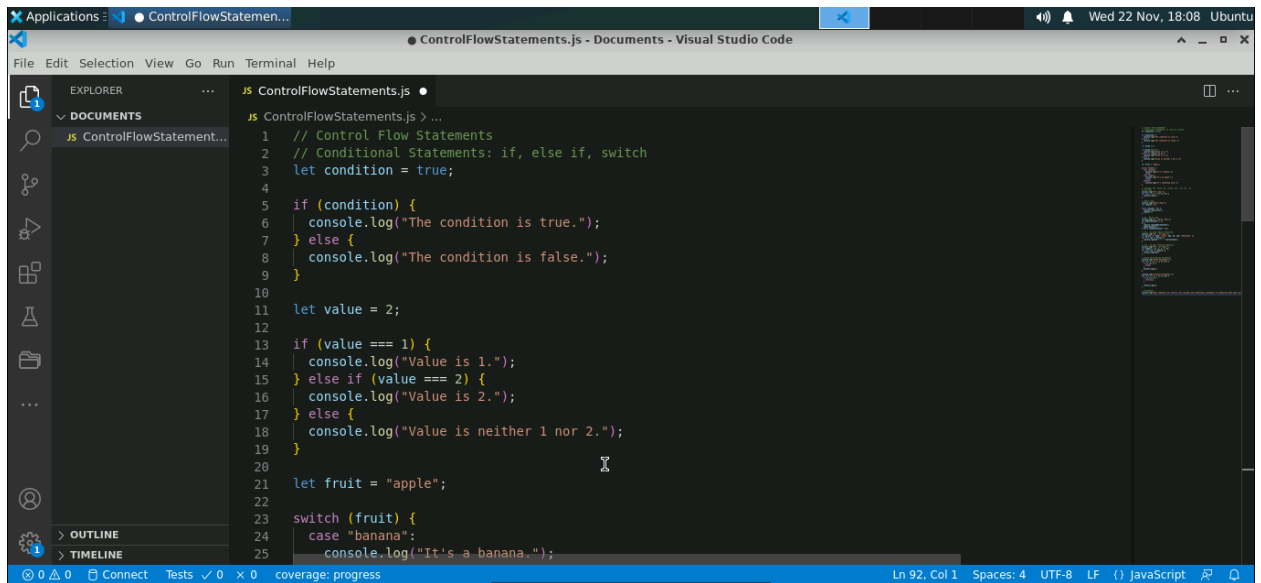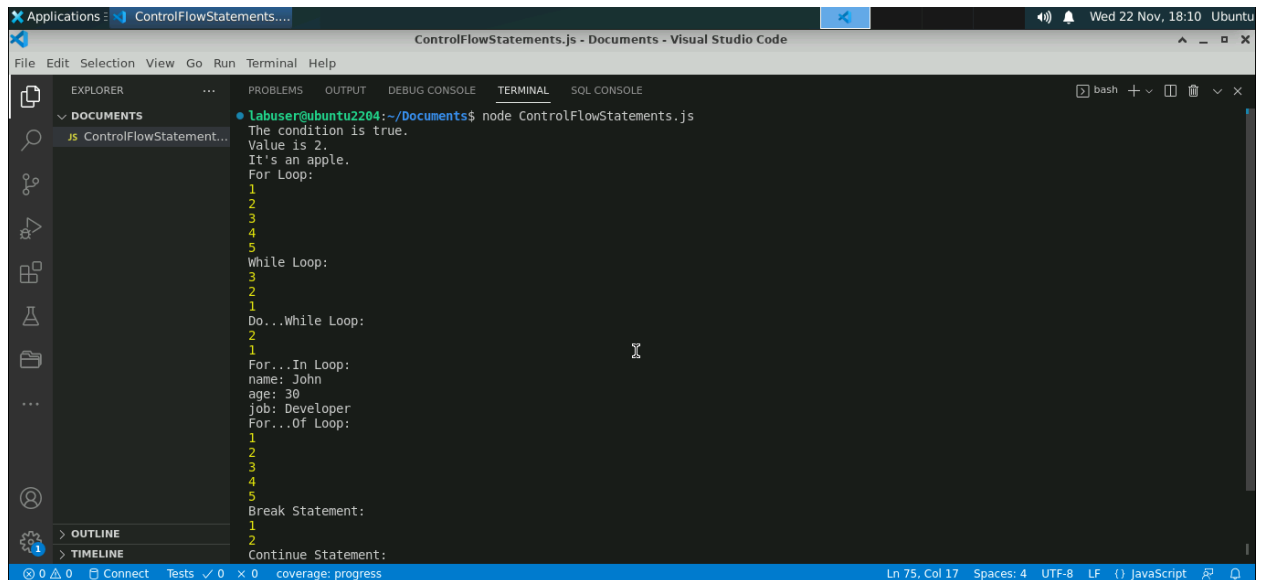
```
  console.log(i);
}

// Validation
console.log("Demo Complete! All control flow concepts and conditional statements in
JavaScript have been successfully demonstrated.");
```
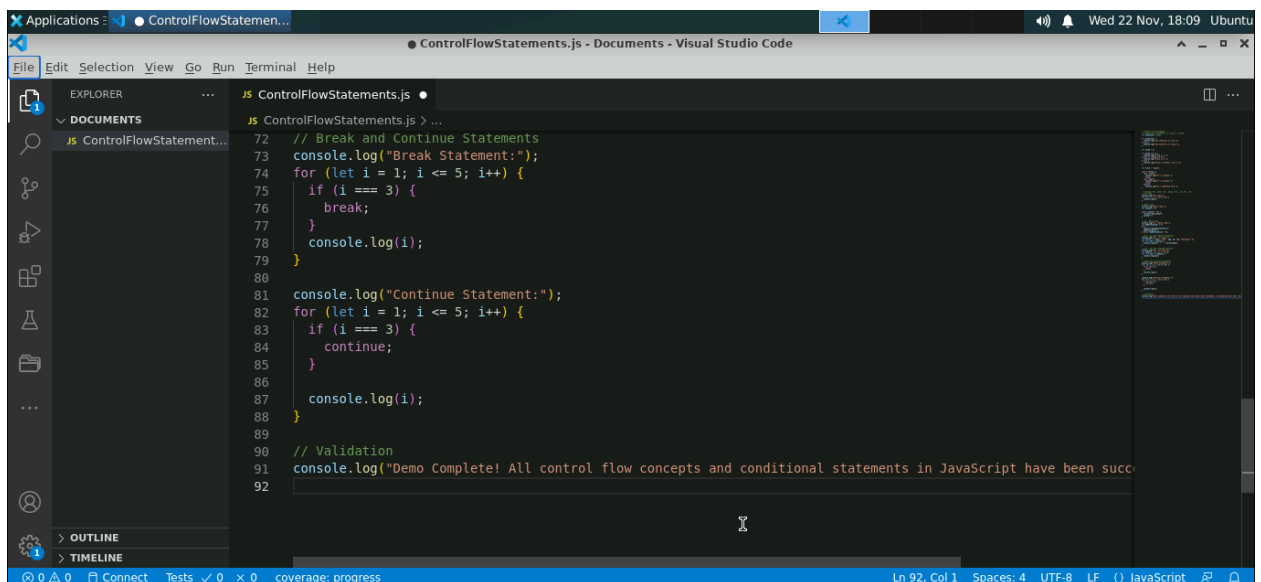
1.3 Save the file and run it using Node.js in the terminal:
node ControlFlowStatements.js

In the provided code, control flow concepts and conditional statements in JavaScript are demonstrated, including if, else if, switch statements, and various looping constructs.

By following these steps, you have successfully demonstrated these fundamental control flow concepts in JavaScript for illustrating decision-making structures and looping mechanisms.