The if Statement

Example #1

☑ Question Statement

Write a C++ program that stores the value 2 in a variable x and checks whether the value is greater than 5, equal to 5, or less than 5. Display the appropriate message based on the condition.

```cpp
#include <iostream>
using namespace std;

int main() {
    // Store a number in the variable x
    int x = 2;

    // Check if x is greater than 5
    if (x > 5) {
        cout << "x is greater than 5." << endl;
    }
    // Check if x is equal to 5
    else if (x == 5) {
        cout << "x is equal to 5." << endl;
    }
    // If both above conditions are false, x must be less than 5
    else {
        cout << "x is less than 5." << endl;
    }

    return 0;
}
```

☑ Example #2 Finding the Maximum of Three Numbers

☑ Question Statement

Write a C++ program that takes three numbers as input from the user and determines which of the three is the largest. Display the maximum number using an if-else.

```cpp
#include <iostream>
using namespace std;

int main() {
    int a, b, c;

    // Input three numbers
```

```cpp
    cout << "Enter first number: ";
    cin >> a;

    cout << "Enter second number: ";
    cin >> b;

    cout << "Enter third number: ";
    cin >> c;

    if (a >= b && a >= c) {
        cout << "The maximum number is: " << a << endl;
    }
    else if (b >= a && b >= c) {
        cout << "The maximum number is: " << b << endl;
    }
    else {
        cout << "The maximum number is: " << c << endl;
    }

    return 0;
}
```

☑ Question Statement

Write a C++ program that asks the user to enter a test score (0–100). Based on the score, display the corresponding grade using if-else statements:

- **A** for 90–100
- **B** for 80–89
- **C** for 70–79
- **D** for 60–69
- **F** for below 60

☑ C++ Program: Display Grade Based on Test Score

```cpp
#include <iostream>
using namespace std;

int main() {
    int score;

    // Input test score from the user
    cout << "Enter your test score (0-100): ";
    cin >> score;

    // Determine and display grade
    if (score >= 90) {
        cout << "Your grade is: A" << endl;
```

```cpp
    }
    else if (score >= 80) {
        cout << "Your grade is: B" << endl;
    }
    else if (score >= 70) {
        cout << "Your grade is: C" << endl;
    }
    else if (score >= 60) {
        cout << "Your grade is: D" << endl;
    }
    else {
        cout << "Your grade is: F" << endl;
    }

    return 0;
}
```