University of Science and Technology Chittagong

Department of Computer Science and Engineering

Lab Task 4

Object Oriented Programming (Java)

Programming Basics

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Java If ... Else

```java
public class AllIfElse {
    public static void main(String[] args) {
        boolean isRaining = true;

        if (isRaining) {
            System.out.println("Bring an umbrella!");
        }
    }
}
```

Code & Output

```
Bring an umbrella!
```

Conditions and if statements let you control the flow of your program - deciding which code runs, and which code is skipped.

Think of it like real life: *If it rains, take an umbrella. Otherwise, do nothing.*

Every `if` statement needs a condition that results in `true` or `false`.

This means `if` statements work hand-in-hand with [boolean] values.

```java
public class AllIfElse {
    public static void main(String[] args) {
        int x = 20;
        int y = 18;
        if (x > y) {
            System.out.println("x is greater than y");
        }
    }
}
```

Code & Output

```
x is greater than y
```

In the example above we use two variables, **x** and **y**, to test whether x is greater than y (using the > operator). As x is 20, and y is 18, and we know that 20 is greater than 18, we print to the screen that "x is greater than y".

Comparison is also often used to check if two values are *equal*, using the == operator.

```java
public class AllIfElse {
  Run | Debug
  public static void main(String[] args) {
    boolean isRaining = false;

    if (isRaining) {
      System.out.println(x: "Bring an umbrella!");
    } else {
      System.out.println(x: "No rain today, no need for an umbrella!")
    }
```

Code & Output

```
No rain today, no need for an umbrella!
```

```java
public class AllIfElse {
  Run | Debug
  public static void main(String[] args) {
   int weather = 2; // 1 = raining, 2 = sunny, 3 = cloudy

    if (weather == 1) {
      System.out.println(x: "Bring an umbrella.");
    } else if (weather == 2) {
      System.out.println(x: "Wear sunglasses.");
    } else {
      System.out.println(x: "Just go outside normally.");
    }
```

```
Wear sunglasses.
```

Since `weather` is 2, the first condition (`weather == 1`) is not met, so the `if` block is skipped. The program then checks the `else if` condition (`weather == 2`), which is `true`. That means the `else if` block runs and prints "Wear sunglasses."

END