# The IF-ELSE Statement

A byte size lesson in Java programming.

# Why use an IF statement?

- In Java, the IF statement allows us to run a block of code based on a **condition**.
- If it is sunny, play outside.

```
if (condition) {
  // play outside
}
```

# Breaking it down

```
if (condition) {
...
}
```

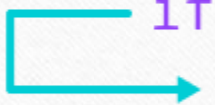
- The first part has the condition.
- If the condition is TRUE, then the block is run.

## Condition is true

```
int number = 10;

if (number > 0) {
  // code
}

// code after if
```



## Condition is false

```
int number = 10;

if (number < 0) {
  // code
}

// code after if
```

# Let's test your understanding!

- What will the output of the following code be?

```
int number = 10;

// checks if number is less than 0
if (number < 0) {
   System.out.println(“Number is negative.");
}

System.out.println("Statement outside if block");
```

# Taking it further, IF-ELSE

```
if (condition) {
  // codes in if block
}
else {
  // codes in else block
}
```

- Sometimes we want to have a different block for what to do if the condition is NOT met.
- **If** sunny, play outside, **else** stay inside.

## Condition is true

```
int number = 5;

if (number > 0) {
  // code
}
else {
  // code
}

// code after if...else
```

## Condition is false

```
int number = 5;

if (number < 0) {
  // code
}
else {
  // code
}

// code after if...else
```

# Let's test your understanding!

- What will the output of the following code be?

```
int number = 10;

// checks if number is greater than 0
if (number > 0) {
  System.out.println("The number is positive.");
}

// execute this block
// if number is not greater than 0
else {
  System.out.println("The number is not positive.");
}

System.out.println("Statement outside if...else block");
```

- What will this code output?

```
String name = “Mark”;

if (name == “John”) {
   System.out.println(“Hello John");
}
else {
   System.out.println(“Hi there!");
}

System.out.println(“Welcome");
```

# Taking it further, IF-ELSE-IF

```
if (condition1) {
  // codes in if block
}
else if (condition2) {
  // codes in else block
}
else{
  // codes in else block
}
```

- We can create an IF-ELSE-IF ladder to create a number of condition checks
- **If** sunny, play outside, **else if** cloudy play outside but take an umbrella **else** stay inside.

- What will this code output?

```
int score = 55;

if (score < 10) {
  System.out.println(“Poor score");
}
else if (score < 50) {
  System.out.println(“Almost passed");
}
else {
  System.out.println(“Passed!");
}
```