Lesson 4: Conditional Statements

1. Conditional statements- allows a program to take action based on the given condition; compares two values so the program can decide what action to take.
2. Relational operators- defines some kind of relation between two entities. These include numerical equality and inequalities.

Operator	Description	True example	False example
<	Less than	3 < 8	8 < 3
>	Greater than	4 > 2	2 > 4
==	Equal to	7 == 7	3 == 9
<=	Less than or equal to	5 <= 5	8 <= 6
>=	Greater than or equal to	7 >= 3	1 >= 2
!=	Not equal to	5 != 6	3 != 3

3. IF statement- handles one conditional expression; does either SOMETHING or NOTHING
   - if condition evaluates to true, statements are executed
   - if condition evaluates to false, statements are skipped

4. IF-ELSE statement- handles two conditional expressions; does either first code block or second code block. If the test expression is evaluated to false, it does nothing.

5. IF - ELSE IF - ELSE statement- handles three or more conditional expressions; possibility of these statements are limitless

6. Nested conditional statements- a conditional statement within a conditional statement (can be any type of conditional statement)

```
if(age >= 18){

   if(isVerified){
      System.out.println("Qualified");
   }

}
```

7. Java Control structures are programming blocks that can change the path we take through those instructions. In programming, we use the if...else statement to run a block of code among more than one alternative.

8. Equals function- compares strings more efficiently
   - string.equalsIgnoreCase- ignores case of letters

```
public static void main(String[] args) {

    Scanner s = new Scanner(System.in);

    System.out.print("Enter Greetings : ");
    String greet = s.nextLine();

    if(greet.equals("Hello")) {
        System.out.println("Hi");
    }

}
```

Equals Function

```
String x = "Hello";

if(x.equals("Hello")){
  System.out.println("Hi");
}
```

9. Logical Operators - is a symbol or word used to connect two or more expressions such that the value of the compound expression produced depends only on that of the original expressions and on the meaning of the operator.s

Logical Operators

LABEL	SYMBOL	SYNTAX	DESCRIPTION
AND	&&	condition && condition	Both Conditions Needs To Be True
OR	||	condition || condition	Either Conditions Needs To Be True
NOT	!	!condition	Inverts the Current Condition