

# Class No : 3

Installation of Java (JDK) & eclipse

JDK = JVM + Compiler + Libraries + Tools

IDE? Integrated Development Environment

IDE vs Editor

Can we use VS Code

Creating a new project in Eclipse

Writing your first program –

main- public static void main(String[] args) {}

sout- System.out.println("Welcome to coding Blocks");

Running a Java program

Comments

Single Line //

Multi line /\* comments \*/

Understanding the need of a variable

## Variables

can contain Data or Object References

Variable declaration, Initialization

Naming Convention for Class/Variable/Method name - identifiers

Must start with an alphabet or \_ or \$ or not with numbers

Can end with an alphabet or \_ or \$ or numeric digit

Spaces are not allowed

No reserved keyword

Intro to data types

Data Types :

## Primitive or Pre-defined

### Primitive :

Integer :

```
byte a = 127;           // 1 byte, range: -128 to 127
short b = 32000;         // 2 bytes, range: -32,768 to 32,767
int c = 100000;          // 4 bytes, range: -2 billion to 2 billion
long d = 10000000000L;   // 8 bytes, very large numbers (add L at end)
```

Decimal :

```
float e = 3.14f; // 4 bytes, 6-7 decimal digits (add f at end)  
double f = 3.14159; // 8 bytes, 15 decimal digits
```

Others

```
char g = 'H'; // 2 bytes, single character  
boolean h = true; // 1 bit, true or false
```

### **Non-Primitive :**

User defined or Custom data types

String literals

String name = "Hansraj"

String - stores combination of characters Ex - "Coding Blocks"

Arrays,

### **Game of brackets**

( ) - Methods - Parentheses

{ } - Scope/body - Curly

[ ] - Array - Square

### **Operators :**

**Arithmetic** +, -, \*, /, %, ++, --

++/-- operators can only be applied on variables, not on constants

Special **powers of** / & % by powers of 10

/ to reduce the number

% to get last digit(s) of number

**Relational**, <= , >= , == , !=

**Assignment** = , += , -= , \*= , /= , %=

**Logical** &&, || , !

Used to combine multiple conditions

Rest to be covered later like bitwise and shift operators

## **Questions :**

Code for All Flowcharts in Lecture 2

Q1. Lottery game

You are given a number n.

You have to determine what the person wins based on the following conditions:

If  $n \geq 300$  and  $n \leq 460$ , the prize is MacBook.

If  $n \geq 200$  and  $n \leq 280$ , the prize is Kurkure.

If  $n \geq 1100$  and  $n \leq 1500$ , the prize is Cycle.

If  $n > 50$  and  $n \leq 80$ , the prize is Bike.

For all other values of n, print "Better luck next time."

## **Q2. Lottery Game – Part 2**

You are given a number n.

Based on the value of n, print what the person wins using the following conditions:

MacBook Range

If  $n \geq 300$  and  $n \leq 460$ ,

Print "You won a MacBook!"

Then check:

If  $n \geq 300$  and  $n \leq 380$ , print "Model: M1 Mac"

If  $n \geq 381$  and  $n \leq 460$ , print "Model: M2 Mac"

Kurkure Range

If  $n \geq 200$  and  $n \leq 280$ ,

Print "You won a pack of Kurkure!"

Then check:

If  $n \geq 200$  and  $n \leq 240$ , print "Flavor: Chilli Kurkure"

If  $n \geq 241$  and  $n \leq 280$ , print "Flavor: Onion Kurkure"

Cycle Range

If  $n \geq 1100$  and  $n \leq 1500$ ,

Print "You won a Cycle!"

Then check:

If  $n \geq 1100$  and  $n \leq 1300$ , print "Brand: Avon Cycle"

If  $n \geq 1301$  and  $n \leq 1500$ , print "Brand: Hero Cycle"

Bike Range

If  $n > 50$  and  $n \leq 80$ ,

Print "You won a Bike!"

Then check:

If  $n > 50$  and  $n \leq 65$ , print "Model: Bullet"

If  $n > 65$  and  $n \leq 80$ , print "Model: Rajdoot"

Otherwise

For all other values of  $n$ ,

Print "Better luck next time."