

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 = 1000000000000L; // 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. Lottry 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."