**JFSD: A-Z of Back-end and Database Development**

**Day 1 : 13 Jul. 24**

Java Java is pure object oriented programming language.

Java was belong to sun micro system. Now is a part of oracle.

Java developed by James Gosling and Team. The initial name of the Java is Oak.

Java developed Nove 1995.

Version of Java

1.0,1.2,1.4, Java 7, Java 8 ( From Java 8 onward java also known as functional programming language).

From java 11 onward is not a open source.

Java 22 release.

Java 8, 11, 15 and 17.

OOPs

object : object is any real world entity.

Property -🡪 have -🡪 variable / fields

Person

Behaviour 🡪do/does -🡪 functions / methods

Bank

Animal

Customer

Account

Car

Object is concept.

class : class is a blue print of object or template of object or user defined data type which help to describe objects.

Syntax of class

class className {

fields;

methods;

}

class Test {

public static void main(String args[]) {

System.out.println(“Welcome to Java”);

}

}

Class name must be follow pascal naming.

1. If class contains one word first letter upper case.
2. If it contains more than one world each word first letter upper case.

Data types :Data types is a type of data which tells what type of data it can hold.

In Java data types are divided into 2 types

1. Primitive data types : it is use to hold only values

It divided into 8 types.

1. byte 1 byte
2. short 2 byte
3. int 4 byte
4. long 8 byte without decimal
5. float 4 byte
6. double 8 byte with decimal
7. char 2 byte single character
8. boolean 1 bit true or false.

1. Non primitive types or reference data types: it is use to hold value as well as reference of another data types.
   1. array :
   2. class : pre defined or user defined
   3. interface : pre defined or user defined
   4. enum : pre defined or user defined

variable declaration sytax

datatype variableName;

type casting

converting one data type to another data types is known as type casting.

2 types

1. implicit type casting
2. explicit type casting

int family

---------------------🡪implicit type casting ---------------------🡪

byte short int long

🡨--------------explicit type casting

Int to float

Implicit

Int float

Explicit

By default in java every decimal number consider as double. Size of double is 8 byte.

Operator :

If statement

Switch statement

Looping

While loop

Do while loop

For while

For each loop or enhanced loop. This loop we need to use with array.

Array

Array is a type of reference data types which is use to store same types of values.

Syntax

datatype arrayName[];

int abc[];

declaration with initialization

datatype arrayname[]={v1,v2,v3};

int abc[]={10,20,30,40,50};

abc[0];

abc[1];

for each loop or enhanced loop

for(datatype variableName:arrayName) {

}

Syntax to create memory size for array

datatype arrayname[]=new datatype[size];

int abc[]=new int[10];

abc.length -🡪 size 10 and default value for all position is by default 0.

Taking the value through keyboards

1st option : using Scanner class. Scanner is a pre defined class part of util package. Which provided lot of pre defined method which help to scan value through keyboards.

Syntax to create the scanner class object.

Scanner obj = new Scanner(System.in);

We need to import util package.

**import** java.util.Scanner;

method syntax

returnType methodName(parameterlist){

method body;

}

void hello() { // no passing parameter and no return type.

coding

}

int add(int x, int y) { // passing 2 parameter and return int result.

int sum = x+y;

return sum;

}

Method follow camel naming rule.

1. One word. All letter in lower case.
2. If more than one word from 2nd word onward first letter upper case.

Syntax to create the object of particular class.

className objectReferenceName = new ClassName();

types of variables or property

in java variable are divided into 3 types.

1. Instance variable
   1. The variable which declared inside a class but outside a method including main method is known as instance variable.
   2. Instance variable hold default value with respective their data types.

Int family 0, float family 0.0, char space, boolean false, String null

* 1. We can access all instance variable directly inside a method but method must be part of same class as it must be non static method.

1. Local variable
   1. The variable which declared inside a method including main method or user defined method is known as local variable.
   2. The local variable doesn’t hold default value we need to initialize.
   3. The scope of that variable within that block where it declared.
2. Static variable