

## EXPERIMENT NO. 2

### 1. What is object-oriented programming?

Ans: Object-Oriented Programming is a paradigm that provides many concepts such as **inheritance, data binding, polymorphism, etc.**

The main aim of object-oriented programming is to implement real-world entities for example object, classes, abstraction, inheritance, polymorphism, etc. The popular object-oriented languages are Java, C#, PHP, Python, C++, etc.

### 2. What is class and Objects? Give an at-least two valid examples.

Ans: Class is

- 1) **blueprint or template** from which objects are created,
- 2) **group of similar objects**
- 3) **logical entity**
- 4) **declared using class keyword**
- 5) **declared once**
- 6) **doesn't allocated memory when it is created**

Object is

- 1) **instance of class**
- 2) **real world entity**
- 3) **physical entity**
- 4) **created using new keyword** mainly
- 5) **created many times as per requirement**
- 6) **allocates memory** when it is created

e.g. **Class:** Human **Object:** Man, Woman

**Class:** Fruit **Object:** Apple, Banana, Mango, Guava etc.

### 3. What are different Object-Oriented Programming concepts? Explain with example.

Ans: The OOPs in java are,

- 1) class
- 2) Object
- 3) Inheritance
- 4) Polymorphism
- 5) Abstraction
- 6) Encapsulation

For e.g. **food is an class.**

**dog is an object.**

**Inheritance is, Teacher is super class, mathTeacher is sub class.**

**Polymorphism is a cat speaks meow, dog barks woof.**

**Abstraction is when two classes extending the same class.**

**Encapsulation is, keeping 'student.java' and 'test.java' separately**



#### 4. What are the different types of constructor in JAVA?

Ans: Types of constructors are,  
Default constructor  
Parameterless constructor  
Parameterized constructor

#### 5. Why destructor for class is not present in JAVA?

Ans: Destructor for class is not present in Java because "garbage collector" itself does the work of freeing memory.

The `java.lang.System.gc()` method runs the garbage collector i.e. it can be called explicitly.

#### 6. What are the different value types and reference data types in JAVA. List out values types along with its SIZE.

Ans:

Datatypes	Default value	Size(default)
boolean	false	1 bit
char	"\u0000"	2 bytes
byte	0	1 byte
short	0	2 bytes
int	0	4 bytes
long	0l	8 bytes
float	0.0f	4 bytes
double	0.0d	8 bytes

#### 7. Why JAVA is known as Strongly Type Checked Language?

Ans: Java is a strongly typed programming language because every variable must be declared with a data type. A variable cannot start off life without knowing the range of values it can hold, and once it is declared, the data type of the variable cannot change.



### 8. What is use of Wrapper classes?

Ans: Wrapper class is used to convert the primitive data type into object type, as below

Primitive data types	Object data types
boolean	Boolean
char	Character
int	Integer
byte	Byte
short	Short
long	Long
float	Float
double	Double

### 9. What is Command Line argument?

Ans: The command line arguments are the arguments handled using main () function argument where argc [] refers to the number of arguments and argv [] refers to a pointer array which points to each argument passed to the program.

### 10. What is POJO class pattern?

Ans: POJO - Plain Old JAVA Object

POJO is usually describe a class that doesn't need to be a subclass of anything or implement specific interfaces or follow specific pattern.

It is Java equivalence of "C Struct", for e.g.

```
class Point {
    private double x;
    private double y;
    public double getX ()
    {
        return x;
    }
    public double getY ()
    {
        return y;
    }
    public double setX (double x)
    {
        x=x;
    }
    public double setY (double y)
    {
        y=y;
    }
}
```

