

OBJECT

OBJECT :

- Any substance which has existed in the real world is known as an object.
- Every object will have attributes and behaviours.

OBJECT IN JAVA :

- According to object-oriented programming, the object is a block of memory created in the heap area during the runtime, it represents a real-world object.
- A real-world object consists of attributes and behaviour.
- Attributes are represented with the help of non-static variables.
- Behaviours are represented with the help of non-static methods,

CLASS :

- According to real-world situations before constructing an object blueprint of the object must be designed, it provides the specification of the real-world object.
- Similarly in object-oriented programming before creating an object the blueprint of the object must be designed which provides the specification of the object, this is done with the help of class.

DEFINITION OF CLASS :

- It is a user-defined non-primitive data type, it represents the blueprint of the real-world object.
- The class provides the specification of real-world objects.

NOTE :

We can create any number of objects for a class, it is known as an instance of a class.

STEPS TO CREATE AN OBJECT :

STEP 1: Create a class or use an existing class if already created.

STEP 2: Instantiation

INSTANTIATION :

The process of creating an object is known as instantiation.

Syntax to create an object :

```
new className();
```

new :

- new is a keyword.
- It is a unary operator.
- It is used to create a block of memory inside a heap area during runtime.
- Once the object is created it returns the reference of an object.

EXAMPLE :

Step 1: Designing a class

```
class Employee  
{  
    String ename ;  
    int eld;  
}
```

Step 2: Instantiation

```
new Employee();
```

NON PRIMITIVE DATA TYPE:

- Every class name in java is a non-primitive data type.
- Non-primitive data types are used to create a non-primitive variable to store the reference of an object.

EXAMPLE :

```
class Employee
{
    String ename ;
    int eid ;
}
```

```
Employee e = new Employee();
```

```
S.o.pln(e); // Employee@0x1
```