FACULTY OF Engineering & Technology

Objects and Classes in Java

Objects: An entity that has state and behaviour is known as an object e.g. chair, bike etc object has three characteristics:
State: represents the data (value) of an object at any instant.
Behavior: represents the behavior (functionality) of an object such as deposit, withdraw, etc.
Identity:

Classes in java: A class is a group of objects which have common properties.
It is a template or blueprint from which objects are created.
It is a logical entity. It can't be physical.
A class in Java can contain:
Fields
Methods
Constructors
Blocks
Nested class and interface

Syntax for declaring a class:

```
class <class_name>
{
    field;
   method;
}
```

A keyword **class** is used for defining a new user defined class

```
Class student
{
    int rollno=1;
     void display()
      {
       }
}
```

Here the name of the class is student and it has a variable name rollno and a method display()

Instance variable in Java

1. A variable which is created inside the class but outside the method is known as an instance variable.
2. Instance variable doesn't get memory at compile time it get memory at the time of object creation.
3. It gets memory at runtime when an object or instance of the class is created.
4. They can accessed only by the use of the objects of its class

Method in Java

In Java, a method is like a function which is used to represent the behaviour of an object

new keyword

The new keyword is used to allocate memory at runtime.
All objects get memory in Heap memory area.