

Object Oriented Programming

✓ What is OOPs

Static keyword

Classes & Objects

Packages

Access Specifiers

Final Keyword

Constructor & this pointer

Practice Problems on OOPS

Encapsulation

Polymorphism

Inheritance & its types

Abstraction & Inheritance

What is OOPs



OOPs is a programming technique which mainly revolve around real life objects

fan
laptop / mobile

Something which
Really exist
in world

Classes & Objects

Class

It is user defined data type, which contains data members (variables) & methods (functions).

Syntax:

```
class ClassName
{
    // data members

    // methods
}
```

```
class Person
{
    int age
    String name

    void info()
    {
        // age, name
    }
}
```

Compiler

```
class Person — dataType
```

```
{ int age
```

```
  String name
```

```
  void info()
```

```
  }
```

```
    // age, name
```

```
}
```

```
}
```

AB

```
int x
```

dataType

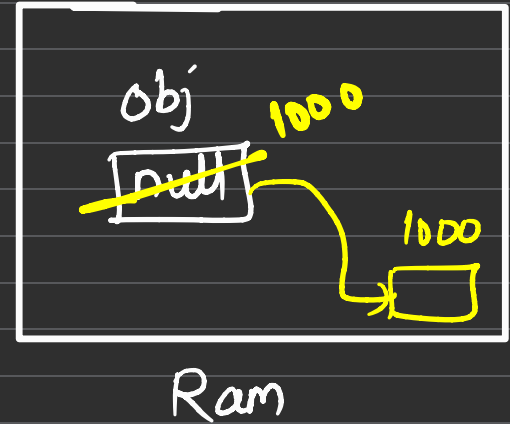
Elements of
Empty class

Object

It is an instance of the class – which tells what kind of operation we can perform on the class.

```
className objNm;
```

```
objNm = new className();
```



```
class Person{ no usages
    // data members
    int age; 1 usage
    String name; 1 usage

    // member function
    public void info(){ no usages
        System.out.println("Age of the person is: " + age);
        System.out.println("Name of the person is: " + name);
    }
}
```

Person yash = new Person()

yash.age

How to access members of the class

Members of class can be accessed
using **dot (.)** operator

ObjName.memberOfClass

variable function

Access Specifiers

Mainly decides the scope of accessibility of members of the class

default

private

public

Protected

- default :
 - When no access specifier mentioned
 - Outside of class but in same package

- public:

can be accessed anywhere
outside the class & outside the package

- private

cannot be accessed outside of class

- protected

same package but through inheritance

Constructor & this pointer