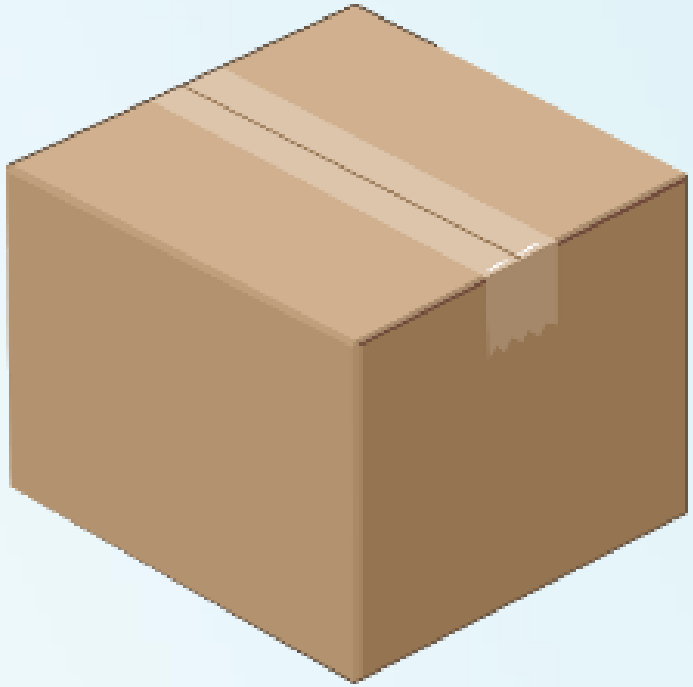
Todays Topic

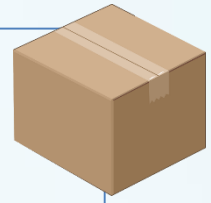
- Oops Basic Practice Programs

- Design a class Box containing
  - data member
    - Length
    - Breadth
    - height
  - member functions
    - volume ( )
    - setDimension(x, y, z)



//program to create 2 boxes a and b of size 3 x 4 x 5 and 7 x 8 x 2. display volume of both boxes.

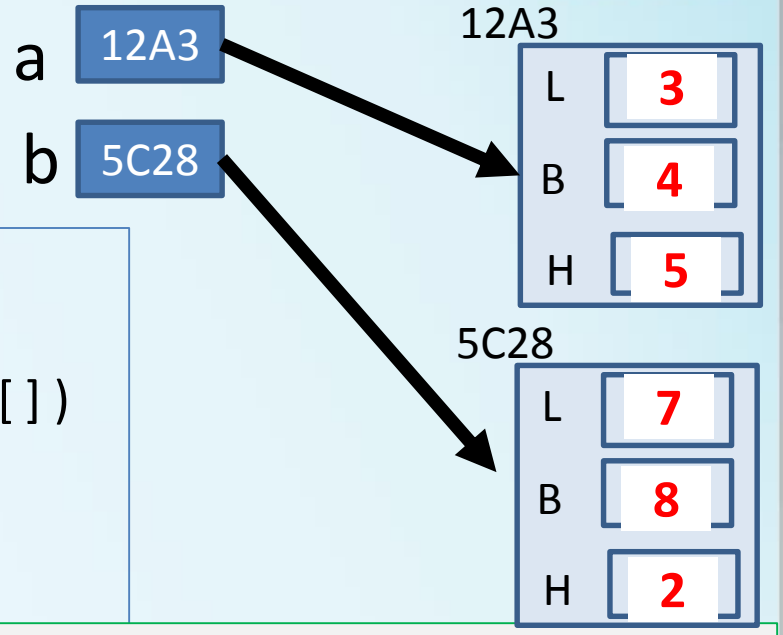
```
class Box
{
 private  int L, B, H;
 public  void volume( )
   {
    int v = L * B * H ;
    System.out.println("Volume is " + v )
   }
public  void setDimension(int x,int y,int z)
   {
    L = x ;
    B = y ;
    H = z ;
    }
}
```



L=3 B=4 H=5

L=7 B=8 H=2

CCIT



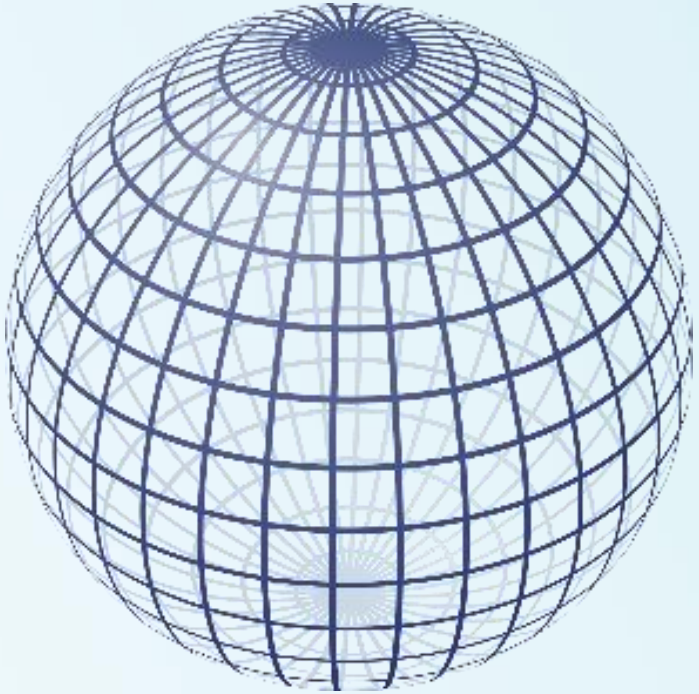

```
class demo
{
public static void main( String args[ ] )
   {
   Box a, b ;
   a = new Box( ) ;
   b=new Box( ) ;
   a.setdimension(3 , 4, 5 ) ;
   b.setdimension( 7 , 8 , 2 ) ;
   a.volume( ) ;
   b.volume( ) ;
  }
}
```

Output :

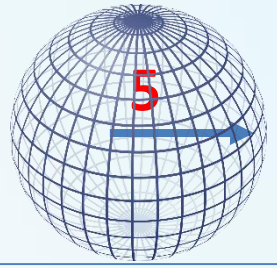
Volume is 60

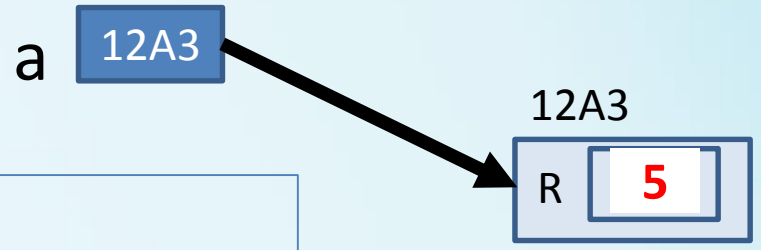
Volume is 112

- Design a class Sphere containing
  - Data members
    - Radius
  - Member functions
    - Volume( )
    - setRadius(n)



//program to create a sphere type of object of radius 5. display its volume






```
class Sphere
{
 private  int R ;
 public  void volume( )
   {
    double v = 4/3.0 * 3.14 * R * R * R ;
    System.out.println("Volume is " + v )
   }
public  void setRadius( int n )
   {
    R = n ;
    }
}
```

```
class demo
{
public static void main( String args[ ] )
   {
   Sphere a ;
   a = new Sphere( ) ;
   a.setRadius( 5 ) ;
   a.Volume( ) ;
   }
}
```

Output :

Volume is 523.333333

[AS] [M] datatype memberName [=value] ;

[AS] [M] returntype fName(datatype arg1, , .)
{
Statements…..
……
return value;
}

- Design a class Set
  - Data members
    - N1
    - N2
    - n3
  - Member functions
    - sum( )
    - mean( )
    - setData(x , y , z)

b = { 10 , 20 , 25 }

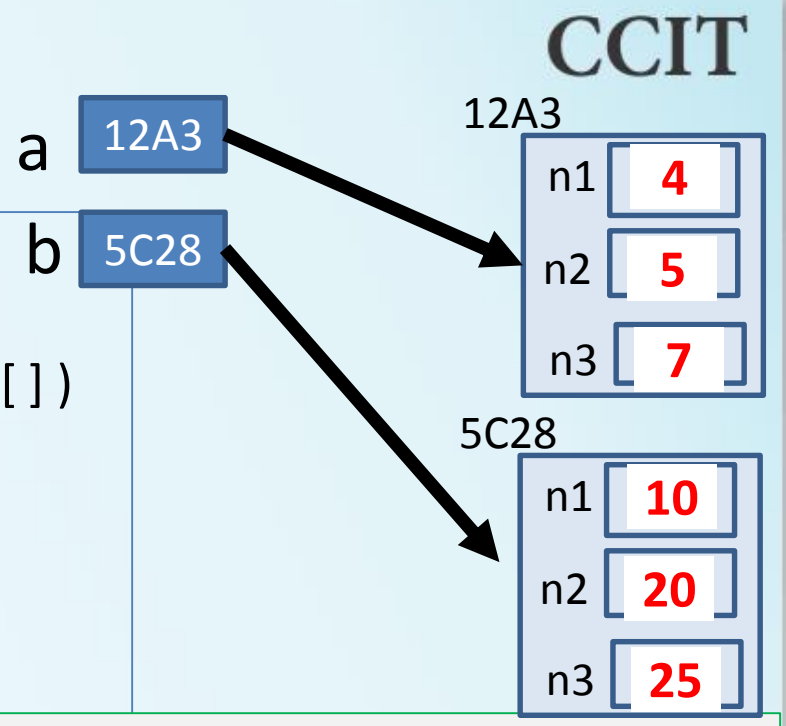
//program to create a 2 sets a = {4,5,7} and b={10,20,25}. display sum of set a and sum, mean of set b

```
class Set
{
 private  int n1 , n2 , n3 ;
 public  void sum( )
   {
    int s = n1 + n2 + n3 ;
    System.out.println("Sum is " + s );
   }
 public  void mean( )
   {
    double m = ( n1 + n2 + n3 )/3.0;
    System.out.println("Mean is " + m );
   }
public  void setData(int x,int y,int z)
   {
    n1 = x ;
    n2 = y ;
    n3 = z ;
   }
}
```

a = { 4 , 5 , 7 }

b = { 10 , 20 , 25 }

```
class demo
{
public static void main( String args[ ] )
   {
   Set a, b ;
   a = new Set( ) ;
   b=new Set( ) ;
   a.setData( 4, 5 , 7 ) ;
   b.setData( 10 , 20 , 25 ) ;
   a.sum( ) ;
   b.sum( ) ;
   b.mean( ) ;
  }
}
```



Output :

Sum is 16

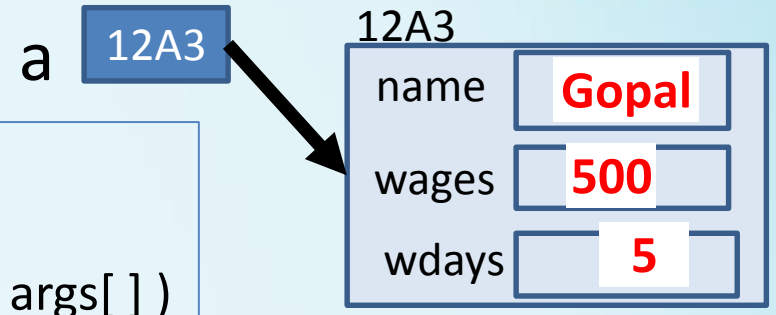
Sum is 55

Mean is 18.333333

- Design a class Worker
  - data member
    - name
    - wages
    - wdays
  - member functions
    - setdata (n , w , d)
    - showData( )
    - payment( )

program to create a worker type of object whose name is Gopal wages is 500 wdays are 5. display information of worker as well as payment

```
class Worker
{
 private String name;
 private  int wages, wdays ;
 public  void showData( )
   {
   System.out.println("Name is " + name );
   System.out.println("Wages is " + wages );
   System.out.println("Wdays are " + wdays );
   }
 public  void payment( )
   {
    int p = wages * wdays ;
    System.out.println("Payment  is " + p );
   }
public  void setData( String n, int w, int d )
   {
    name = n ;
    wages = w ;
    wdays = d ;
   }
}
```


```
class demo
{
public static void main( String args[ ] )
   {
   Worker a ;
   a = new Worker( ) ;
   a.setData( "Gopal", 500 , 5 ) ;
   a.showData( ) ;
   a.payment( ) ;
   }
}
```

Output :

```
Name is Gopal
Wages is  500
Wdays are 5
Payment is 2500
```