Practical 5

CODE:

```
Practical 5
import java.util.*;
class shape
{
 int side_cube;
 int l_cub, b_cub,h_cub;
 int r_c,h_c;
 public shape(int a)
{
 side_cube=a;
 l_cub=-1;       //for other values
 r_c=-1;
}
 public shape(int l, int b, int h)
{
 l_cub=l;
 b_cub=b;
 h_cub=h;
 side_cube=-1;
 r_c =-1;
}
public shape(int r, int h)
{
 r_c=r;
 h_c=h;
 side_cube=-1;
 l_cub=-1;
}
 public static void main(String args[])
{
 shape cube= new shape(5);
 shape cuboid= new shape(2,3,5);
 shape cylinder= new shape(3,5);//random values assigned, values can be taken from user
as well
 volume(cube);
 volume(cuboid);
 volume(cylinder);
}
 public static void volume(shape obj)
{
 if(obj.side_cube<0 && obj.r_c<0)
{
 System.out.println("Volume of the cuboid: "+(obj.l_cub*obj.b_cub*obj.h_cub));
}
```

```
else if(obj.side_cube<0 && obj.l_cub<0)
{
System.out.println("Volume of the cylinder: "+(double)(3.14*Math.pow(obj.r_c,2)*obj.h_c));
}
else
{
 System.out.println("Volume of the cube: "+(Math.pow(obj.side_cube,3)));
}
}
}
```

OUTPUT:

```
Volume of the cube: 125.0
Volume of the cuboid: 30
Volume of the cylinder: 141.3
```