Abstraction-

WAP to do the process of Fibonacci series(abstract method) & factorial (Normal function)

```
import java.util.Scanner;

abstract class abstraction {

	int n,a=0,b=0,c=1,fact=1,num;

	Scanner sc=new Scanner(System.in);

	public void fact() {

		System.out.println("Enter a number:");
		num=sc.nextInt();
		for(int i=1;i<=num;i++)
		{
		fact=fact*i;
		}
		System.out.println("factorial of "+num+" = "+fact);
	}

	public abstract void abs();
}
class abs2 extends abstraction {

	@Override
	public void abs() {
		// TODO Auto-generated method stub
		System.out.println("\nEnter value of n:");
		n=sc.nextInt();
		System.out.println("Fibonacci Series:");
		for(int i=1;i<=n;i++)
		{
			a=b;
			b=c;
			c=a+b;
			System.out.println(a+ " ");
		}
	}
}
public class Fibonacci_Series {

	public static void main(String[] args) {
		// TODO Auto-generated method stub

		abstraction obj=new abs2();
		obj.fact();
		obj.abs();

	}
```

```
}
```

OUTPUT-

```
Enter a number:
5
factorial of 5 = 120

Enter value of n:
10
Fibonacci Series:
0
1
1
2
3
5
8
13
21
34
```

Interface-

WAP to calculate AC, CC, AR, PR

```
import java.util.Scanner;

interface area {

	public void accept();
	public void area();
	public void circle();
}

public class interface_pro implements area {

     int l,b,area,perimeter,radius;

	@Override
	public void accept() {
		// TODO Auto-generated method stub
		Scanner sc=new Scanner(System.in);
		System.out.println("Enter the length:");
		l=sc.nextInt();
		System.out.println("Enter the breadth:");
		b=sc.nextInt();
		System.out.println("Enter the radius:");
		radius=sc.nextInt();

	}

	@Override
	public void area() {
		// TODO Auto-generated method stub
		area=l*b;
		System.out.println("\nArea of Rectangle:"+area);
		perimeter=2*(l*b);
		System.out.println("\nPerimeter of Rectangle:"+perimeter);

	}
	@Override
	public void circle() {
		// TODO Auto-generated method stub
		double area=Math.PI * (radius*radius);
		System.out.println("\nArea of Circle is:"+area);
		double circumfernce=Math.PI*2*radius;
		System.out.println("\nCircumfernce of Circle is:"+circumfernce);
	}
	public static void main(String[] args)
	{
		interface_pro obj=new interface_pro();
		obj.accept();
		obj.area();
```

```
            obj.circle();
        }


}
```

OUTPUT-

```
Enter the length:
5
Enter the breadth:
6
Enter the radius:
3

Area of Rectangle:30

Perimeter of Rectangle:60

Area of Circle is:28.274333882308138

Circumfernce of Circle is:18.84955592153876
```