Multilevel Inheritance-

1.Armstrong Nmuber 2.Prime Number 3.Greater of 3 number

```
class Armstrong {

	int num,number,temp,total=0;
	int no1,no2,no3;

}

class Arm_child extends Armstrong {
		public void show_arm(int a)
		{

			num=a;
		number=num;
		while(number!=0)
		{
		temp=number%10;
		total =total + (temp*temp*temp);
		number=number/10;
		}
		if(total==num)

		System.out.println(num + " is an armstrong number");
		else
			System.out.println(num + " is not an armstrong number");
		}
		public void cal1()
		{
			show_arm(153);
		}
	}

	class Prime_child extends Arm_child {
	public void show_Prime(int b)
	{

		num=b;
	number=num;
	for(int i=2;i<=num-1;i++)
	{
		if(num%i==0)
		{
			total=total+1;
		}
	}

	if(total==0)

	System.out.println(num + " is prime number");
	else
		System.out.println(num + " is not prime number");
```

```
	}
	public void cal2()
	{
		show_Prime(2);
	}
}
	class Greatest_child extends Prime_child {
		public void show_Sum(int m,int n,int o)
		{
			no1=m;
			no1=n;
			no1=o;

			if(m>n)
			{

				if(m>o)
					System.out.println(m + " is the greater number.");
				else
					System.out.println(o + " is the greater number.");
				}
			else
				{
				if(n>o)
					System.out.println(n + " is the greater number.");
				else
					System.out.println(o + " is the greater number.");
				}
			}
			public void cal()
			{
			show_Sum(10,20,30);
			}
		}
class Multilevel extends Greatest_child {

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

		Greatest_child g=new Greatest_child();
		g.cal1();
		g.cal2();
	    g.cal();

	}
}
```

OUTPUT-

```
<terminated> Multilevel [Java Application] C:\Users\
153 is an armstrong number
2 is not prime number
30 is the greater number.
```

Single Inheritance-

1.Sum of Digit

```
class number
{
	int digit,n,sum;
}
 class sum extends number {
	void show(int a)
	{
		n=a;

		while(n>0)
		{
		digit=n%10;
		sum =sum + digit;
		n=n/10;
		}
		System.out.println("Sum of digit="+sum);
	}

public static void main(String[] args) {
		// TODO Auto-generated method stub
		sum s=new sum();
		s.show(123);

	}

}
```

OUTPUT-