Program :

```
package LogicalProg;

public class Factorial {

	public static void main(String[] args) {

		//4! = 1 x 2 x 3 x 4 = 24
		int num = 5, fact = 1;
		for(int i=1;i<=num;i++) //i=5
		{
			fact = fact * i; //6 x 4 = 24
		}
		System.out.println("Factorial of " + num + " = " + fact);
	}
}
```

Program :

```
package LogicalProg;

public class PrimeNum {

	public static void main(String[] args) {

		//Prime = 3 5 7 11 13 17 19 23

		int num = 23,count=0;

		if(num>0)
		{
			for(int i=2;i<num;i++)
			{
				if(num%i==0)  //15%3==0
				{
					count++;  //0 -> 1
					break;
				}
			}
		}
		if(count==1)
			System.out.println("Non Prime");
		else
		System.out.println("Prime");
	}

}
```

Program :

```
package LogicalProg;

public class ArmstrongNum {

	public static void main(String[] args) {

		//371 = (3x3x3) + (7x7x7) + (1x1x1) = 371

		int num = 371,rem,sum=0,num1;
		num1 = num;
		System.out.println("Origional Number = " + num);  //371

		while(num>0)  //0>0  x
		{
			rem = num%10; //3%10 = 3
			sum = sum + rem*rem*rem;  //344 + (3*3*3) = 371
			num = num/10; //3/10 = 0
		}
//		System.out.println("Result = " + sum);

		if(num1 == sum)
			System.out.println(num1 + " is Armstrong Num");
		else
			System.out.println("Not Armstrong Num");
	}
}
```

Program :

```
package LogicalProg;

public class NumberCount {

	public static void main(String[] args) {

		int num = 12121314,count=0;
		while(num>0) //0>0
		{
			num = num / 10;  //num = 0
			count++;	//count = 8
		}
		System.out.println("Number of count of given no = " + count);
	}
}
```

Program :

```
package LogicalProg;

public class CountEvenOddNum {

	public static void main(String[] args) {

		int num = 12121314,countEven=0,countOdd=0;
		int rem;
		while(num>0)
		{
			rem = num % 10; //4
			if(rem%2==0)
				countEven++;  //1
			else
				countOdd++;
			num = num / 10;
		}
		System.out.println("Even count = " + countEven);
		System.out.println("Odd count = " + countOdd);
	}
}
```