Loops Questions

1. Write a program to print numbers from 1 to 10.

```
class PrintNumber1to10
{
	public static void main(String... s)
	{
		int i=1;
		while(i<=10)
		{
			System.out.println(i);
			i++;
		}
	}
}
```

2. write a program to calculate the sum of first 10 natural number.

```
class SumOfFirst10Numbers
{
	public static void main(String... s)
	{
		int sum=0;
		int i=1;
		while(i<=10)
		{
			sum=sum+i;
			i++;
		}
		System.out.println("Sum of first 10 Natural Number is ="+ "+sum);
	}
}
```

3. Write a program that prompts the user to input a positive integer. it should then print the multiplication table of that number.

```
import java.util.Scanner;
class Table
{
	public static void main(String... s)
	{
		Scanner sc=new Scanner(System.in);

		System.out.println("Enter the Number");
		int x=sc.nextInt();
		int y=0;
		System.out.println("Table of "+x+" is");

		for(int i=1;i<=10;i++)
		{
			y=x*i;
			System.out.println(x+"  X  "+i+"  =  "+y);
		}

		sc.close();
	}
}
```

4. Write a program to find the factorial value of any number entered through the keyboard.

```
import java.util.Scanner;
class Factorial
{
	public static void main(String... s)
	{
		Scanner sc=new Scanner(System.in);

		System.out.println("Enter the Number");
		int x=sc.nextInt();
		int fact=1;

		for(int i=1;i<=x;i++)
		{
			fact=fact*i;
		}
		System.out.println("The Factorial of "+x+" is "+fact);


		sc.close();
	}
}
```

5. Two Numbers are entered through the keyboard. Write a program to find the value of one number raised to the power of another.(Do not use java built-in method)

```
class Power
{
	public static void main(String... s)
	{
		System.out.println("Enter 1'st Value");
		int x=new java.util.Scanner(System.in).nextInt();

		System.out.println("Enter 2'st Value");
		int y=new java.util.Scanner(System.in).nextInt();

		int z=1;
		for(int i=1;i<=y;i++)
		{
			z=z*x;
		}
		System.out.println(x+" raised the power "+y+ " is = " +z);
	}
}
```

6. Write a program that prompts the user to input an integer and then outputs the number with the digits reversed. example, if the input is 12345,then output should be 54321.

```
class Reverse
{
	public static void main(String... s)
	{
		int rev=0;
		int z;
		while(true)
		{
			System.out.println("Enter the value1");
			int x1=new java.util.Scanner(System.in).nextInt();
			while(x1>0)
			{
				z=x1%10;
				x1=x1/10;
				rev=rev*10+z;
			}
			System.out.println(rev);
			rev=0;
			System.out.println("Do you want to continue press 1 for yes 0 for no");
			int x2=new java.util.Scanner(System.in).nextInt();
			if(x2==1)
				continue;
			else
				break;

		}
	}
}
```

7. Write a program that reads a set of integers, and then prints the sum of the even and odd integers.

```
import java.util.Scanner;
class SumOfEvenOddIntegers
{
	public static void main(String... s)
	{
		Scanner sc=new Scanner(System.in);

		System.out.println("Enter the numbers of Elements");
		int n=sc.nextInt();

		int evensum=0;
		int oddsum=0;

		System.out.println("Enter "+n+" integers :");
		for(int i=0;i<n;i++)
		{
			int num=sc.nextInt();

			if(num%2==0){
				evensum=evensum+num;
			}
			else{
				oddsum=oddsum+num;
```

```
                }
            }

            System.out.println("Sum of even numbers : "+evensum);
            System.out.println("Sum of odd numbers : "+oddsum);


            sc.close();
        }
}
```

8. Write a program that prompts the user to input a positive integer. It should then output a message indicating whether the number is a prime number.

```
class PrimeNo
{
	public static void main(String... s)
	{
		System.out.println("Enter the value1");
		int x1=new java.util.Scanner(System.in).nextInt();
		//String name=new java.util.Scanner(System.in).nextLine();
		int count=0;
		for(int i=1;i<=x1;i++)
		{
			int z=x1%i;
			if(z==0)
			{
				count++;
			}
		}
		if(count==2)
			System.out.println(x1+" is a prime Number");
		else
			System.out.println(x1+" is not a prime Number");
	}
}
```

First 50 Prime Numbers

```
class First50PrimeNo
{
	public static void main(String... s)
	{
		int count=0;
		int count1=0;
		int start=2;

		while(true)
		{
			for(int i=1;i<=start;i++)
			{
				int z=start%i;
				if(z==0)
				{
					count1++;
				}
			}
			if(count1==2)
			{
				System.out.print(start+"\t ");
				count++;
			}
			if(count==50)
				break;

			start++;
			count1=0;
		}
	}
}
```

9. Write a program to calculate HCF of two given number.

```
import java.util.Scanner;
class HCF
{
	public static void main(String... s)
	{
		Scanner sc=new Scanner(System.in);

		System.out.println("Enter 1'st Number");
		int num1=sc.nextInt();

		System.out.println("Enter 2'nd Number");
		int num2=sc.nextInt();

		sc.close();

		//finding hcf using loop
		int hcf=1;
		int min=Math.min(num1,num2);  //Get the smaller number

		for(int i=1;i<=min;i++)
		{
			if(num1%i==0 && num2%i==0)
			{
				hcf=i;  //updated hcf
			}
		}
```

```
		//DIsplay Result
		System.out.println("HCF of " + num1 + " and " + num2 + " is = "+hcf);
	}
}
```

10. Write a do-while loop that asks the user to enter two numbers should be added and the sum displayed. The loop should ask the user whether he or she wishes to perform the operation again. if so, the loop should repeat; otherwise it should terminate.

```
class SumOftwoNumbers
{
	public static void main(String... s)
	{
		int sum=0;
		while(true)
		{
			System.out.println("Enter 1'st Number");
			int num1=new java.util.Scanner(System.in).nextInt();

			System.out.println("Enter 1'st Number");
			int num2=new java.util.Scanner(System.in).nextInt();

			sum=num1+num2;
			System.out.println("Sum of "+num1+" and "+num2+" is = "+sum);
			sum=0;
			System.out.println("Do you want to continue press 1 for yes 0 for no");
			int x2=new java.util.Scanner(System.in).nextInt();
```

```
                    if(x2==1)
                        continue;
                    else
                        break;
                }


        }
}
```