

ASSIGNMENT 2

COP

Q1 Write a program to calculate the sum of first 10 natural number.

```
package assignment2;

import java.util.*;
public class Sumof10Digit {

    public static void main(String[] args)
    {
        Scanner s=new Scanner(System.in);
        System.out.println("Enter the numbers you want to add");
        int num=s.nextInt();
        //int num=10;
        int sum=0;
        for(int i=0; i<=num; i++)
        {
            sum=sum+i;
        }

        System.out.println("Sum of the natural numbers is= "
+sum);
    }
}
```

Q 2 Write a program that prompts the user to input a positive integer. It should then print the multiplication table of that number.

```
package assignment2;

import java.util.Scanner;

public class PositiveintegerMultiple
{
    public static void main(String[] args)
    {
        Scanner s=new Scanner(System.in);
        int num=s.nextInt();
        System.out.println("Multiplication of " +num);

        for(int i=1; i<=10; i++)
        {
            int multi=num*i;
            System.out.println(multi);
        }
    }
}
```

Q 3 Write a program that prompts the user to input an integer and then outputs the number with the digits reversed. For example, if the input is 12345, the output should be 54321.

```
package assignment2;

import java.util.Scanner;

public class ReverseNumber {

    public static void main(String[] args)
    {
        Scanner s=new Scanner(System.in);
        System.out.println("Enter the number");
        int num=s.nextInt();
        int rev=0;
        while(num!=0)
        {
            int reminder=num%10;
            rev=rev*10+reminder;
            num=num/10;
        }
        System.out.println("The reverse of the given number is "
+rev);
    }

}
```

Q 4 Write a do-while loop that asks the user to enter two numbers. The 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.(while loop)

```
package assignment2;

import java.util.*;
public class DoWhile4 {

    public static void main(String[] args)
    {
        Scanner s= new Scanner(System.in);
        int sum=0;
        String option;

        do
        {
            System.out.println("Enter two numbers");
            int num1=s.nextInt();
            int num2=s.nextInt();
            sum=num1+num2;
            System.out.println("Do You Want to Perform The
Operation Again");
            option=s.nextLine();
        }

        while(option=="YES" || option=="Yes" || option=="yes");
        {
            System.out.println("Sum of two number is "
+sum);
        }

    }

}
```

Q 5 Write a program to print out all Armstrong numbers between 1 and 500. If sum of cubes of each digit of the number is equal to the number itself, then the number is called an Armstrong number.

For example, $153 = (1 * 1 * 1) + (5 * 5 * 5) + (3 * 3 * 3)$

```
package assignment2;

import java.util.Scanner;

public class ArmstrongNumber5
{
    public static void main(String[] args)
    {
        Scanner s=new Scanner(System.in);
        System.out.println("enter the number");
        int num=s.nextInt();
        int num2=num;
        double result=0;
        int remainder;
        while(num2>0)
        {
            remainder=num2%10;
            result= result+ Math.pow(remainder,3);
            num2=num2/10;
        }

        if(num==result)
        {
            System.out.println("The Given Number is a
Armstrong Number");
        }

        else
        {
            System.out.println("The Given Number is Not a
Armstrong Number");
        }
    }
}
```

Q 6 Write a program to print Fibonacci series of n terms where n is input by user :
0 1 1 2 3 5 8 13 24

```
package assignment2;

import java.util.Scanner;

public class FibonacciSeries6 {
    public static void main(String[] args)
    {
        System.out.println("Enter the Number");
        Scanner s=new Scanner(System.in);
        int number=s.nextInt();
        int num1=0;
        int num2=1;
        int counter=0;

        while(counter<number)
        {
            System.out.print(num1+" ");

            int num3=num2+num1;
            num1=num2;
            num2=num3;
            counter=counter+1;
        }
    }
}
```

Q 7 Write a program to print following :

PATTERN 1

```
package assignment2;

public class Pattern7i {

    public static void main(String[] args) {

        for(int i=1; i<=4; i++)
        {
            for(int j=1; j<=10; j++)
            {
                System.out.print("*");
            }
            System.out.println();
        }

    }
}
```

PATTERN 2

```
package assignment2;

public class Pattern7ii {
    public static void main(String[] args)
    {
        for (int i=0; i<=5; i++)
        {
            for(int j=1; j<=i; j++)
            {
                System.out.print("*");
            }
            System.out.println();
        }

    }
}
```

PATTERN 3

```
package assignment2;
import java.util.*;
public class Pattern7iii {
    public static void main(String[] args)
    {
        Scanner s=new Scanner(System.in);
        System.out.println("enter hight pf pyramid");
        int k=s.nextInt();

        for (int i=0; i<k; i++)
        {
            for(int j=2*(k-i); j>=0; j--)
            {
                System.out.print(" ");
            }
            for(int j=0; j<=i; j++)
            {
                System.out.print("*");
            }
            System.out.println();
        }
    }
}
```


Q 8 Write a program in java to find the sum of the even and odd digits of the number which is given as input.

```
package assignment2;
import java.util.*;
public class SumEvenOdd8 {

    public static void main(String[] args)
    {
        Scanner s=new Scanner(System.in);
        System.out.println("Enter the Number");
        int number=s.nextInt();
        int evensum=0;
        int oddsum=0;

        while(number!=0)
        {
            int reminder=number%10;

            if(reminder%2==0)
            {
                evensum=evensum+reminder;
            }

            else
            {
                oddsum=oddsum+reminder;
            }

            number=number/10;
        }
        System.out.println("Sum of even digit: " +evensum);
        System.out.println("Sum of odd digit: " +oddsum);
    }
}
```

Q9 Write a program to check if given number is prime or not

```
package assignment2;
import java.util.*;
public class PrimeorNot9 {

    public static void main(String[] args)
    {
        Scanner s=new Scanner(System.in);
        System.out.println("Enter the Number");
        int num=s.nextInt();
        int comp=0;

        for(int i=1; i<=num; i++)
        {
            if(num%i==0)
            {
                comp++;
            }
        }

        if(comp==2)
        {
            System.out.println(num+ " is a prime
number");
        }

        else
        {
            System.out.println(num+ " is not a prime
number");
        }

    }
}
```

Q 10 write a program to print prime numbers between 2 to 20.

```
package assignment2;
```

```
public class PrimeNoBetween {  
    public static void main(String[] args)  
    {  
        int num=20, count;  
  
        for (int i=1; i<=num; i++)  
        {  
            count=0;  
  
            for(int j=2; j<=i/2; j++)  
            {  
                if(i%j==0)  
                {  
                    count++;  
                    break;  
                }  
            }  
            if(count==0)  
            {  
                System.out.println(i);  
            }  
        }  
    }  
}
```

Q 11 Write program to find largest among three numbers

```
package assignment2;

import java.util.*;
public class largestNumber11 {

    public static void main(String[] args)
    {
        Scanner s=new Scanner(System.in);
        System.out.println("Enter the First Number");
        int num1=s.nextInt();
        System.out.println("Enter the Second Number");
        int num2=s.nextInt();
        System.out.println("Enter the Third Number");
        int num3=s.nextInt();
        if(num1>num2 && num1>num3)
        {
            System.out.println("The greatest number is "
+num1);
        }
        else if(num2>num1 && num2>num3)
        {
            System.out.println("The greatest number is "
+num2);
        }
        else
        {
            System.out.println("The greatest number is "
+num3);
        }
    }
}
```

Q 21 8. Write a Java program to print numbers between 1 to 100 which are divisible by 3, 5 and by both.

Hint

```
System.out.println("\nDivided by 3: ");
for (int i=1; i<100; i++) {
    if (i%3==0)
        System.out.print(i +", ");
}
```

```
package assignment2;
```

```
public class DivisibleBy3and5 {

    public static void main(String[] args)
    {
        for (int i=1; i<100; i++)
        {
            if (i%3==0)
            {
                System.out.print(i+ ",");
            }

            else if(i%5==0)
            {
                System.out.println(i+ ",");
            }

            else if(i%3==0 && i%5==0)
            {
                System.out.println(i+ ",");
            }
        }
    }
}
```

Q 22 create a menu driven application in java that show

"Add" Add two number
"subtract" Subtract two number
"Multiple" Multiple two numbers
"Exit " Exit

```
package assignment2;

import java.util.Scanner;

public class MenuDriven22 {
    public static void main(String[] args)
    {
        Scanner s=new Scanner(System.in);
        System.out.println("Enter a choice ");
        System.out.println("For Addition Enter 1 ");
        System.out.println("For Substraction Enter 2 ");
        System.out.println("For Multiplication Enter 3");
        System.out.println("For Exit Enter 4");
        int n=s.nextInt();

        switch(n)
        {
            case 1:

                System.out.println("enter the first number");
                int num1=s.nextInt();
                System.out.println("enter the second number");
                int num2=s.nextInt();

                int sum=num1+num2;
                System.out.println("The sum of the numbers are "
+sum);

                break;

            case 2:

                System.out.println("enter the first number");
                int num3=s.nextInt();
                System.out.println("enter the second number");
                int num4=s.nextInt();

                int minu=num3-num4;
                System.out.println("The subtraction of the numbers
is " +minu);

                break;

            case 3:

                System.out.println("enter the first number");
                int num5=s.nextInt();
                System.out.println("enter the second number");
```

```
        int num6=s.nextInt();

        int multi=num5*num6;
        System.out.println("The multiplication of the
numbers are " +multi);
        break;

    case 4:

        return;

    }

}
```

**Q 23 Write a program to display first 1 to 20 even number on screen .
Terminate the program when number 16 is found using break
command .**

```
package assignment2;

public class FirstEven23 {

    public static void main(String[] args)
    {
        for(int i=1; i<=20; i++)
        {
            if (i%2==0)
            {
                System.out.println(i);
            }

            if (i==16)
            {
                break;
            }
        }
    }
}
```


Q 24 Write a Java program that accepts two double variables and test if both strictly between 0 and 1 and false otherwise.

Hint $n1 > 0 \ \&\& \ n1 < 1 \ \&\& \ n2 > 0 \ \&\& \ n2 < 1$

```
package assignment2;

import java.util.Scanner;

public class TrueAndFalse24 {

    public static void main(String[] args)
    {
        Scanner s=new Scanner(System.in);
        System.out.println("Enter first number");
        double num1=s.nextDouble();
        System.out.println("Enter Second number");
        double num2=s.nextDouble();
        System.out.println(num1>0 && num1<1 && num2>0 && num2<1);

    }

}
```