***Assignment :- 6***

***Loop any Loop***

/\*

Qno1:- Write a program to calculate sum of first N natural number.

\*/

#include<stdio.h>

int main()

{

    int i, n, s = 0;

    printf("Enter any number ");

    scanf("%d", &n);

    for( i =1; i <= n; i++)

    {

        s = s + i;

        printf("The sum of %d is %d\n", i, s);

    }

    return 0;

}

/\*

Qno2:- Write a program to calculate sum of first N even natural numbers.

\*/

#include<stdio.h>

int main()

{

    int i, n, e = 0, s = 0;

    printf("Enter the any number ");

    scanf("%d", &n);

    for ( i = 2; i <=n; i=i+2)

    {

        s = s + i;

        printf("The sum of given even number %d is %d\n", i, s);

    }

    return 0;

}

/\*

Qno3:- Write a program to calculate sum of first N odd natural numbers.

\*/

#include<stdio.h>

int main()

{

    int i,n, s = 0;

    printf("Enter the any numbers ");

    scanf("%d", &n);

    for ( i = 1; i <=n; i=i+2)

    {

        s = s + i;

        printf("The sum of given natural number %d is %d\n", i, s);

    }

    return 0;

}

/\*

Qno4:- Write a program to calculate sum of squares of first N natural numbers.

\*/

#include<stdio.h>

int main()

{

    int i, n, squ = 0, sum = 0;

    printf("Enter the any number ");

    scanf("%d", &n);

    for ( i = 1; i <= n; i++)

    {

        squ = i \* i;

        sum = sum + squ;

        printf("The sum of square %d is %d\n", squ, sum);

    }

    return 0;

}

/\*

Qno5:- Write a program to calculate sum of cubes of first N natural numbers.

\*/

#include<stdio.h>

int main()

{

    int i, n, c= 1, s = 0;

    printf("Enter the any number ");

    scanf("%d", &n);

    for ( i = 1; i <= n; i++)

    {

        c = i \* i \* i;

        s = s + c;

        printf("The sum of %d cubes  %d is %d\n", i, c, s);

    }

    return 0;

}

/\*

Qno6:- Write a program to calcuate factorial of a number.

\*/

#include<stdio.h>

int main()

{

    int i, n, f=1;

    printf("Enter the any number ");

    scanf("%d",&n);

    for ( i = 1; i <=n; i++)

    {

        f = f \* i;

        printf("The factorial of %d is %d\n",i, f);

    }

    return 0;

}

/\*

Qno7:- Write a program to count digits in a given number.

\*/

#include<stdio.h>

int main()

{

    int i, n,e = 0, s = 0;

    printf("Enter the any number ");

    scanf("%d", &n);

    while (n != 0)

    {

        n = n/10;

        s++;

    }

    printf("%d", s);

    return 0;

}

/\*

Qno8:- Write a program to check whether a given number is a prime number or not.

\*/

#include<stdio.h>

int main()

{

    int n, i, flag=0;

    printf("Enter any number ");

    scanf("%d", &n);

    for(i = 2; i < n ; i++)

    {

        if(n % i == 0)

        {

            flag = 1;

            break;

        }

    }

    if(flag == 0)

        printf("It is Prime Number ");

    else

        printf("It is not prime number");

    return 0;

}

/\*

Qno9:- Write a program to calculate LCM of two numbers.

\*/

#include<stdio.h>

int main()

{

    int a, b, i;

    printf("Enter any two number ");

    scanf("%d%d", &a, &b);

    for(i=1; i < a \* b; i++)

    {

        if ((i % a == 0) &&(i % b == 0))

        {

            break;

        }

    }

     printf("The LCM is %d", i);

    return 0;

}

/\*

Qno10:- Write a program to reverse a given number.

\*/

#include<stdio.h>

int main()

{

    int n, i, rev=0, temp= 0;

    printf("Enter the any number ");

    scanf("%d", &n);

    while(n!=0)

    {

        rev = n % 10;

        n = n / 10;

        temp = temp \* 10 + rev;

        i++;

    }

    printf("%d", temp);

    return 0;

}