ASSIGNMENT – 6

1. Write a program to calculate sum of first N natural numbers

#include<stdio.h>

int main()

{

    int n,i,sum=0;

    printf("Enter a number : ");

    scanf("%d",&n);

    for ( i = 1; i <= n; i++)

        sum+=i;

    printf("Sum of first %d natural numbers is : %d",n,sum);

}

2. Write a program to calculate sum of first N even natural numbers

#include<stdio.h>

int main()

{

    int n,i,sum=0;

    printf("Enter a number : ");

    scanf("%d",&n);

    for ( i = 2; i <= 2\*n; i+=2)

        sum+=i;

    printf("Sum of first %d even natural numbers is : %d",n,sum);

}

3. Write a program to calculate sum of first N odd natural numbers

#include<stdio.h>

int main()

{

    int n,i,sum=0;

    printf("Enter a number : ");

    scanf("%d",&n);

    for ( i = 1; i < 2\*n; i+=2)

        sum+=i;

    printf("Sum of first %d ODD natural numbers is : %d",n,sum);

}

4. Write a program to calculate sum of squares of first N natural numbers

#include<stdio.h>

int main()

{

    int n,i,sum=0;

    printf("Enter a number : ");

    scanf("%d",&n);

    for ( i = 1; i <= n; i++)

        sum=sum+(i\*i);

    printf("Sum of SQUARES of first %d natural numbers is : %d",n,sum);

}

5. Write a program to calculate sum of cubes of first N natural numbers

#include<stdio.h>

int main()

{

    int n,i,sum=0;

    printf("Enter a number : ");

    scanf("%d",&n);

    for ( i = 1; i <= n; i++)

        sum+=(i\*i\*i);

    printf("Sum of CUBES of first %d natural numbers is : %d",n,sum);

}

6. Write a program to calculate factorial of a number

#include<stdio.h>

int main()

{

    int n,i,fact=1;

    printf("Enter a number : ");

    scanf("%d",&n);

    for ( i = 2; i <= n; i++)

        fact\*=i;

    printf("Factorial of %d is : %d",n,fact);

}

7. Write a program to count digits in a given number

#include<stdio.h>

int main()

{

    int n,i,count=0;

    printf("Enter a number : ");

    scanf("%d",&n);

    int m=n;

    for (n; n!=0 ;n=n/10)

        count++;

    printf("No. of digits in %d is : %d",m,count);

}

8. Write a program to check whether a given number is a Prime number or not

#include<stdio.h>

int main()

{

    int n,i,count=0;

    printf("Enter a number : ");

    scanf("%d",&n);

    for ( i = 2; i <= n/2; i++)

        if(n%i==0)

            count++;

    if(count>0)

        printf("It is not a prime number");

    else if(n==1)

        printf("It is not a prime number");

    else

        printf("It is a prime number");

}

9. Write a program to calculate LCM of two numbers

#include<stdio.h>

int main()

{

    int x,y,i,lcm;

    printf("Enter two numbers : ");

    scanf("%d %d",&x,&y);

    int min = (x<y)?x:y;

    for ( i = min ; i <= x\*y; i++)

    {

        if(i%x==0 && i%y==0)

        {

            lcm=i;

            break;

        }

    }

    printf("LCM of %d and %d is : %d",x,y,lcm);

}

10. Write a program to reverse a given number

#include<stdio.h>

int main()

{

    int n,i,rev=0;

    printf("Enter a number : ");

    scanf("%d",&n);

    int m=n;

    while(n>0)

    {

        i=n%10;

        rev=rev\*10+i;

        n=n/10;

    }

    printf("Reverse of %d is : %d",m,rev);

}