**ASSIGNMENT-6**

**Use any loop**

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

#include<stdio.h>

int main()

{

   int i,n,sum=0;

   printf("Enter a no:");

   scanf("%d",&n);

   for(i=n;i>0;i--)

   sum+=i;

   printf("%d is the sum of %d natural no.s",sum,n);

    return 0;

}

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

#include<stdio.h>

int main()

{

   int i=1,n,sum=0;

   printf("enter a no:");

   scanf("%d",&n);

   while(i<=n)

   {

   sum+=2\*i;

   i++;

   }

   printf("%d is sum of first %d even nos ",sum,n);

    return 0;

}

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

#include<stdio.h>

int main()

{

   int i,n,sum=0;

   printf("Enter a no:");

   scanf("%d",&n);

   for(i=1;i<=n;i++)

   sum+=2\*i-1;

   printf("%d is the sum first %d odd natural nos",sum,n);

    return 0;

}

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

#include<stdio.h>

int main()

{

   int i,n,sum=0;

   printf("Enter a no:");

   scanf("%d",&n);

   printf("sum of Square of first %d natural nos:",n);

   for(i=1;i<=n;i++)

   sum+=i\*i;

   printf("%d ",sum);

    return 0;

}

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

#include<stdio.h>

int main()

{

   int i,n,sum=0;

   printf("Enter a no:");

   scanf("%d",&n);

   printf("sum of cubes of first %d natural nos:",n);

   for(i=1;i<=n;i++)

   sum+=i\*i\*i;

   printf("%d ",sum);

    return 0;

}

1. Write a program to calculate factorial of a number

#include<stdio.h>

int main()

{

   int i,n,fact=1;

   printf("Enter a no:");

   scanf("%d",&n);

   for(i=n;i>0;i--)

   fact\*=i;

   printf("%d is the factorial of %d",fact,n);

    return 0;

}

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

#include<stdio.h>

int main()

{

   int count=0,n;

   printf("Enter a no:");

   scanf("%d",&n);

   while(n)

   {

   n=n/10;

   count++;

   }

   if(count==0)

   printf("1 digit in this no");

   else

   printf("%d digit in this no",count);

    return 0;

}

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

#include<stdio.h>

#include<math.h>

int main()

{

   int i,n,count;

   printf("Enter a no:");

   scanf("%d",&n);

   if(n>0)

   {

   for(i=2,count=0;i<=sqrt(n);i++)

   {

    if(n%i==0)

    {

        count++;

        break;

    }

   }

   if(count==0)

   printf("prime no");

   else

   printf("not prime");

   }

   else

   printf("not prime");

    return 0;

}

1. Write a program to calculate LCM of two numbers

#include<stdio.h>

int main()

{

   int i,n1,n2;

   printf("Enter two no:");

   scanf("%d%d",&n1,&n2);

   for(i=2;i<=n1\*n2;i++)

   {

    if(i%n1==0&&i%n2==0)

    {

        printf("lcm is %d",i);

        break;

    }

   }

    return 0;

}

1. Write a program to reverse a given number

#include<stdio.h>

int main()

{

   int n,r,x=0;

   printf("Enter a no:");

   scanf("%d",&n);

   while(n)

   {

    r=n%10;

    x=x\*10+r;

    n=n/10;

    }

    printf("Reverse no is %d",x);

    return 0;

}