**Assignment - 6 A Job Ready Bootcamp in C++, DSA and IOT MySirG**

**Use any loop**

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

Sol – 1.

#include<stdio.h>

#include<conio.h>

int main()

{

int i,n,sum=0;

printf("Enter a number : ");

scanf("%d",&n);

for(i=1;i<=n;i++)

{

sum=sum+i;

}

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

getch();

return 0;

}

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

Sol – 2.

#include<stdio.h>

#include<conio.h>

int main()

{

int i,n,sum=0;

printf("Enter a number : ");

scanf("%d",&n);

for(i=2;i<=n\*2;i+=2)

{

sum=sum+i;

}

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

getch();

return 0;

}

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

Sol – 3.

#include<stdio.h>

#include<conio.h>

int main()

{

int i,n,sum=0;

printf("Enter a number : ");

scanf("%d",&n);

for(i=1;i<=n\*2-1;i+=2)

{

sum=sum+i;

}

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

getch();

return 0;

}

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

Sol – 4.

#include<stdio.h>

#include<conio.h>

int main()

{

int i,n,sum=0,j;

printf("Enter a number : ");

scanf("%d",&n);

for(i=1;i<=n;i++)

{

j=i\*i;

sum=sum+j;

}

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

getch();

return 0;

}

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

Sol – 5.

#include<stdio.h>

#include<conio.h>

int main()

{

int i,n,sum=0,j;

printf("Enter a number : ");

scanf("%d",&n);

for(i=1;i<=n;i++)

{

j=i\*i\*i;

sum=sum+j;

}

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

getch();

return 0;

}

1. Write a program to calculate factorial of a number

Sol – 6.

#include<stdio.h>

#include<conio.h>

int main()

{

int i,n,j=1;

printf("Enter a number : ");

scanf("%d",&n);

for(i=1;i<=n;i++)

{

j=j\*i;

}

printf("Factorial of %d is %d\n",n,j);

getch();

return 0;

}

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

Sol – 7.

#include<stdio.h>

#include<conio.h>

int main()

{

int i,n,j=1,count=0;

printf("Enter a number : ");

scanf("%d",&n);

for(i=10;j;i\*=10)

{

j=n/i;

count++;

}

printf("Number of digits in %d is %d\n",n,count);

getch();

return 0;

}

8. Write a program to check whether a given number is a Prime number or

Not

Sol – 8.

#include<stdio.h>

#include<conio.h>

int main()

{

int i,n;

printf("Enter a number : ");

scanf("%d",&n);

for(i=2;i<=n/2;i++)

{

if(n%i==0)

{

printf("%d is not prime number",n);

break;

}

}

if(n%i!=0)

printf("%d is prime number",n);

getch();

return 0;

}

1. Write a program to calculate LCM of two numbers

Sol – 9.

#include<stdio.h>

#include<conio.h>

int main()

{

int x,y,z;

printf("Enter two numbers : ");

scanf("%d%d",&x,&y);

for(z=x>y?x:y;z<=x\*y;z+=x>y?x:y)

{

if(z%x==0&&z%y==0)

break;

}

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

getch();

return 0;

}

OR

#include<stdio.h>

#include<conio.h>

int main()

{

int x,y,n,i,z;

printf("Enter two numbers : ");

scanf("%d%d",&x,&y);

for(i=1;i<=x&&i<=y;i++)

{

if(x%i==0&&y%i==0)

n=i;

}

z=x\*y/n;

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

getch();

return 0;

}

1. Write a program to reverse a given number

Sol – 10.

#include<stdio.h>

#include<conio.h>

int main()

{

int a,p;

printf("Enter a numbers : ");

scanf("%d",&a);

if(a==0)

printf("Rev of number is : 0");

else

{

printf("Rev of number is : ");

for(a;a!=0;a/=10)

{

p=a%10;

printf("%d",p);

}

}

getch();

return 0;

}

OR

#include<stdio.h>

#include<conio.h>

int main()

{

int a,p,q=0;

printf("Enter a numbers : ");

scanf("%d",&a);

for(a;a!=0;a/=10)

{

p=a%10;

q=q\*10+p;

}

printf("Rev of number is : %d",q);

getch();

return 0;

}