**DAY 4 :**

**1)SUM OF NATURAL NUMBERS:**

**INPUT:**

#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;

printf("\n sum=%d",sum);

return 0;

}

**OUTPUT:**

enter a number:5

sum=15

**2)Greatest common factor using for loop:**

**Input**

#include <stdio.h>

#include <stdlib.h>

int main()

{

int num1,num2,i,hcf;

printf("enter 2 integers: ");

scanf("%d %d",&num1,&num2);

for(i=1;i<=num1||i<=num2;++i)

{

if(num1%i==0&&num2%i==0)

hcf=i;

}

printf("HCF of %d,%d is %d",num1,num2,hcf);

return 0;

}

**Output:**

enter 2 integers: 22 4

HCF of 22,4 is 2

**3)write a code for palindrome.**

**Input:**

#include <stdio.h>

#include <stdlib.h>

int main()

{

int n,reverse=0,temp,rem;

printf("Enter a number:");

scanf("%d",&n);

temp=n;

while(temp!=0)

{

rem=temp%10;

reverse=reverse\*10+rem;

temp/=10;

}

if(reverse==n)

printf("%d is a palindrome",reverse);

else

printf("%d is not a palindrome",reverse);

getch();

}

**Output:**

Enter a number:272

272 is a palindrome

**4) Reverse of a number:**

**Input:**

#include <stdio.h>

#include <stdlib.h>

int main()

{

int temp, rem,reverse=0,n;

printf("Enter a number:");

scanf("%d",&n);

temp=n;

while(temp!=0)

{

rem=temp%10;

reverse=reverse\*10+rem;

temp/=10;

}

printf("%d is the reverse number",reverse);

return 0;

}

**Output:**

Enter a number:85

58 is the reverse number

**5)Write a program for Fibonacci sequence.**

#include <stdio.h>

int main()

{

int count, n, t1 = 0, t2 = 1, Temp = 0;

printf("Enter the Number of Terms:");

scanf("%d", &n);

printf("Fibonacci Series: %d, %d, ", t1, t2);

count = 2;

while (count < n)

{

Temp = t1 + t2;

t1 = t2;

t2 = Temp;

++count;

printf("%d, ", Temp);

}

return 0;

}

**Output:**

Enter the Number of Terms:8

Fibonacci Series: 0, 1, 1, 2, 3, 5, 8, 13,