Set-1

Program1: Fibonacci series

```
#include<stdio.h>
int main()
{
int i,n1=0,n2=1,n=10;
int nt=n1+n2;
printf("%d,%d,",n1,n2);
for(i=1;i<=n;i++)
{
   printf("%d,",nt);
n1=n2;
n2=nt;
nt=n1+n2;
}
return 0;
}
```

Output:

0,1,1,2,3,5,8,13,21,34,55,89

Program2: Armstrong number

```
#include<stdio.h>
int main()
{
int num=153,originalnum,rem,result=0;
originalnum=num;
while(originalnum!=0)
{
rem=originalnum%10;
result+=rem*rem*rem;
originalnum/=10;
}
if(result==num)
printf("%d is an armstrong number\n",num);
else
printf("%d is not an armstrong number\n",num);
return 0;
}
```

Output:

153 is an armstrong number

Program3: Sum of digits

```
#include<stdio.h>
int main()
{
int sum=0,rem,n=1234;
while(n>0)
{
rem=n%10;
sum=sum+rem;
n=n/10;
}
printf("sum of digits=%d",sum);
return 0;
}
```

Output:

```
sum of digits=10
```

Program4: Palindrome

```
#include<stdio.h>
int main()
{
int num=121,reversed=0,rem,originalnum;
originalnum=num;
while(num!=0)
{
rem=num%10;
reversed=reversed*10+rem;
num/=10;
}
if(originalnum==reversed)
{
printf("%d is a palindrome",originalnum);
}
else
{
printf("%d  is not a palindrome",originalnum);
}
return 0;
}
```

Output:121 is a palindrome

Program5: Leap year or Not

```
#include <stdio.h>
int main() {
  int year=2024,month=3,date=2;
    if (year % 400 == 0) {
    printf("%d/%d/%d is a leap year.", date,month,year);
  }
    else if (year % 100 == 0) {
    printf("%d/%d/%d is not a leap year.",date,month, year);
  }
  else if (year % 4 == 0) {
    printf("%d/%d/%d is a leap year.", date,month,year);
  }
    else {
    printf("%d/%d/%d is not a leap year.", date,month,year);
  }
  return 0;
}
```

Output:

2/3/2024 is a leap year.

Program6: Vote

```
#include<stdio.h>
int main()
{
int age=9;
if(age>=18)
printf("eligible for vote");
else
printf("not eligible for vote\nu will  be eligible  after %d years",18-age);
return 0;
}
```

Output:

```
not eligible for vote
u will  be eligible  after 9 years
```

Program7: Odd or Even

```
#include <stdio.h>
int main()
{
int a=10;
if(a%2==0)
printf("%d is even",a);
else
printf("%d is odd",a);
return 0;
}
```

Output:

```
10 is even
```