Experiment- 5: Control Flow- II

5.1) Write a C Program to Find Whether the Given Number is Prime number or not

```
# include <stdio .h>
int main ()
 {
int n, i, c = 0;
printf (" Enter any number n:");
scanf ("%d", &n);
for (i = 1; i <= n; i++)
{
if (n % i == 0)
{
c ++;
}
}
if (c == 2)
{
printf ("n is a Prime number ");
}
else
 {
printf ("n is not a Prime number ");
}

return 0;
}
```

Output:

Compilation :[-----]$ cc filename .c

Execution :[----] $ ./a. out

Enter a number: 5

5 is a prime number

5.2) Write a C Program to Find Whether the Given Number is Armstrong Number or not

```
# include<stdio.h>
int main ()
{
int num ,r, sum =0, temp ;
printf (" Enter a number : ");
scanf ("%d" ,&num );
temp =num;
while ( num !=0)
{
r= num %10;
num = num /10;
sum = sum +(r*r*r);
}
if(sum == temp )
        printf ("%d is an Armstrong number ",temp);
else
        printf ("%d is not an Armstrong number ",temp);
return 0;
}
```

Output:

```
Compilation :[-----]$ cc filename .c
Execution :[----] $ ./a. out
Enter a number: 153
153 is an Armstrong number
```

5.3) write a C program to print Floyd Triangle

```
# include <stdio .h>
main ()
{
int n, i, c, a = 1;
printf (" Enter number of rows of Floyd 's triangle \n");
scanf ("%d", &n);
for (i = 1; i <= n; i++)
{
for (c = 1; c <= i; c++)
{
printf ("%d",a);
a ++;
}
printf ("\n");
}
}
```

Output:

Compilation :[-----]$ cc filename .c
Execution :[----] $ ./a. out
Enter the number of rows of Floyd traingle to print 4
1
2 3
4 5 6
7 8 9 10

Experiment- 6: Control Flow- III

6.1) write a C program to find the sum of individual digits of a positive integer.

```
# include<stdio.h>
int main ()
{
int n, temp , sum = 0;
printf (" Enter an integer \n");
scanf ("%d", &n);
while (n != 0)
{
temp = n % 10;
sum = sum + temp ;
n = n / 10;
}
printf ("\n Sum of digits = %d ",sum );
return 0;
}
```

Output:

Compilation :[-----]$ cc filename .c
Execution :[----] $ ./a. out
Enter an integer 123
Sum of digits = 6

6.2) Write a C program to check whether given number is palindrome or not.

```
# include <stdio .h>
int main ()
{
int n, t, sum = 0, remainder ;
printf (" Enter an integer \n");
scanf ("%d", &n);
t = n;
while (n != 0)
{
remainder = n % 10;
sum = sum *10 + remainder ;
n = n/ 10;
}
if(t== sum )
printf ("%d is palindrome number ",t);
else
printf ("%d is not palindrome number ",t);
return 0;
}
```

Output:

```
Compilation :[-----]$ cc filename .c
Execution :[----] $ ./a. out
Enter an integer 141
141 is palindrome number
```

6.3) Write a C program to read two numbers, x and n, and then compute the sum of the geometric progression $1+x+x^2+x^3+\ldots\ldots\ldots\ldots+x^n$.

```
# include <stdio .h>
# include <math .h>
int main ()
{
int n, x, i, sum = 0;
printf ("\ nGEOMETRIC PROGRESSION ");
printf ("\n Enter the limit \n");
scanf ("%d", &n);
printf (" Enter the value of x\n");
scanf ("%d", &x);
if(x < 0 || n < 0)
{
printf (" illegal value ");
}
else
{
for (i = 0; i <= n; i ++)
sum = sum + pow(x, i);
}
printf ("sum =%d", sum );
return 0;
}
```

Output:

```
Compilation :[-----]$ cc filename .c
Execution :[----] $ ./a. out
GEOMETRIC PROGRESSION
Enter the limit
4
Enter the value of x
3
sum =121
```