Day -4;

13. Find the Nth Term of the fibonacci series

```
#Include<stdio.h>
int fibonacci iterative (int n)
{
 if (n<=1)
  {
 return n;
}
int a=0, b=1, next term;
for (int i=2; i<=n; i++)
 {
 nextterm =a+b;
  a=b;
  b= nextterm;
}
 return b;
}
 int main() {
  int n;
printf ("Enter a positive integer (n): ");
scanf ("%d", &n);
int result = fibonacciIterative(n);
printf ("the %dth Fibonacci number is: %d\n", n, result);
return 0;
}.
```

14) Factorial of a number

```
#include <stdio.h>
int main() {
 int n, Factorial = 1, i;
printf ("Enter a non-negative integer: ");
scanf ("%d", &n);
if (n<0) {
printf ( "Factorial is not defined for negative numbers.\n");
} else {
 for (i=1; i<=n; i++) {
    Factorial *= i;
}
 printf ("Factorial of %d is %d\n", n, Factorial);
}
 return 0;
}
```

15) power of a number

```
#include <stdio.h>
#include < math.h>
int main () {
double base, exponent, result;
Printf ("Enter the base number: ");
Scanf ("%lf", &base);
Plintf ("Enter the exponent :");
Scanf ("%lf", &exponent);
result = pow(base, exponent);
```

```
Printf ("%.2lf raised to the power of %.2lf = %.2lf\n",
                base, exponent, result);
 return 0;
}
```

16) Factor of a number

```
#include <stdio.h>
int main() {
  int num, i;
Printf ("Enter a positive integer: ");
Scanf ("%d", &num);
Printf ("Factors of %d are: ", num);
for (i=1; i<=num; ++i) {
 if (num%.i==0) {
 Printf ("%d ", i);
  }
}
 Printf ("\n");
 return 0;
}.
```