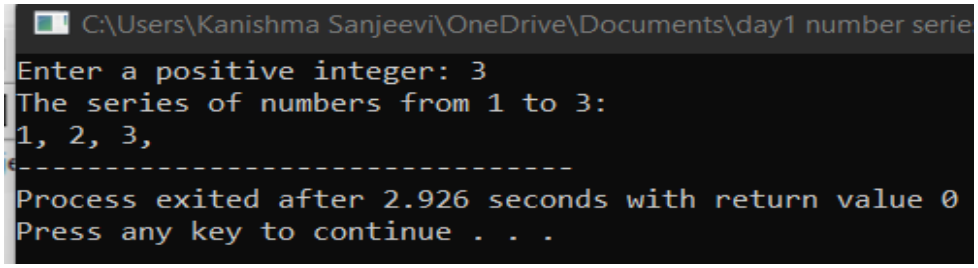
# FUNDAMENTALS OF COMPUTING

## DAY-1

**1**.Generation of number series 1,2,3,……,n.

```c
#include<stdio.h>
#include<conio.h>
int main()
{
    int i, number;
    printf("\n Please Enter the Maximum Limit Value : ");
    scanf("%d", &number);
    printf("\n Even Numbers between 1 and %d are : \n", number)
    for(i = 1; i <= number; i++)
    {
        if ( i % 2 == 0 )
        {
            printf(" %d\n", i);
        }
    }
    return 0;
}
```

**OUTPUT:**




**2**.Generation of even number series.

day1 product series(factorial of given number).cpp

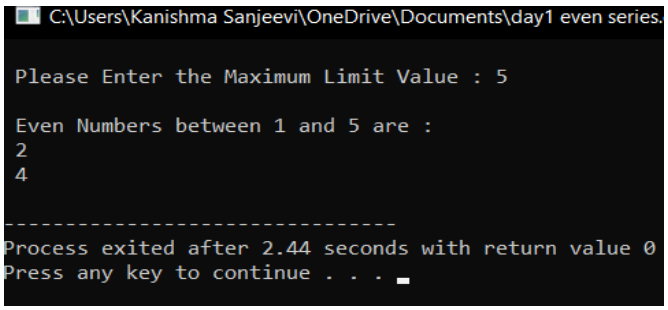
```c
#include <stdio.h>

int main() {
  int n, i;

  printf("Enter a positive integer: ");
  scanf("%d", &n);

  printf("The series of numbers from 1 to %d: \n", n);
  for (i = 1; i <= n; ++i) {
    printf("%d, ", i);
  }
  return 0;
}
```

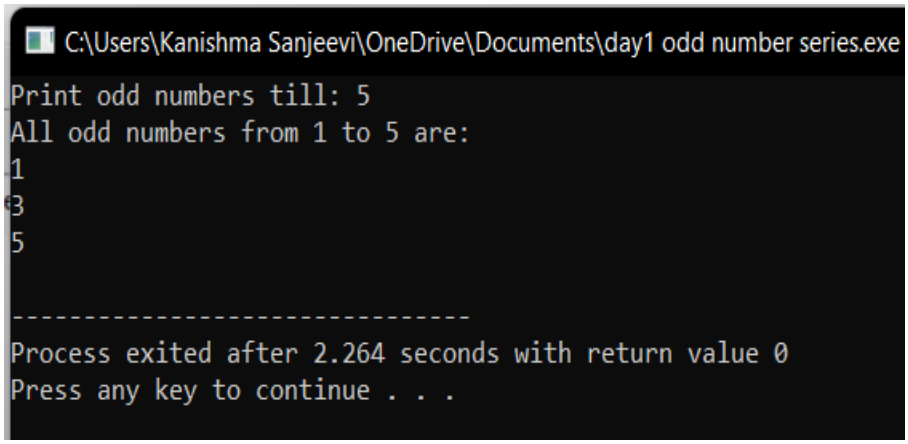
**OUTPUT:**




**3**.Generation of odd series.

```c
#include<stdio.h>
#include<conio.h>
int main()
{
    int i, n;
    printf("Print odd numbers till: ");
    scanf("%d", &n);
    printf("All odd numbers from 1 to %d are: \n", n);
    for(i=1; i<=n; i++)
    {
        if(i%2!=0)
        {
            printf("%d\n", i);
        }
    }
    return 0;
}
```

**OUTPUT:**



**4**.Generation of Fibonacci series.

```c
#include<stdio.h>
int main(){
    int n,n1=0,n2=1,nt,i;
    printf("enter n elements:");
    scanf("%d",&n);
    printf("the fibonacci series is:");
    printf("%d %d",n1,n2);
    for(i=2;i<=n;i++){
        nt=n1+n2;
        n1=n2;
        n2=nt;
        printf("%d",nt);
    }
    return 0;
}
```

**OUTPUT:**

```
C:\Users\Kanishma Sanjeevi\OneDrive\Documents\day1 fibonacci series
enter n elements:4
the fibonacci series is:0 1123
--------------------------------
Process exited after 1.227 seconds with return value 0
Press any key to continue . . .
```

**5**.Summing up series 1+2+3+…..+n.

```c
#include <stdio.h>

int main() {
    int n, i, sum = 0;
    printf("Enter the value of n: ");
    scanf("%d", &n);
    for (i = 1; i <= n; i++) {
        sum += i;
    }
    printf("Sum of the series 1 to %d is %d\n", n, sum);
    return 0;
}
```

**OUTPUT:**

```
C:\Users\Kanishma Sanjeevi\OneDrive\Documents\day1 summing up 1=
Enter the value of n: 3
Sum of the series 1 to 3 is 6

--------------------------------
Process exited after 1.551 seconds with return value 0
Press any key to continue . . .
```

**6.**Summing up of even number series.

day1 integer is even or odd.cpp

```c
#include <stdio.h>

int main() {
  int i, n, sum = 0;

  printf("Enter the number of terms: ");
  scanf("%d", &n);

  for (i = 2; i <= 2 * n; i += 2) {
    sum += i;
  }

  printf("Sum of even numbers: %d\n", sum);
  return 0;
}
```

**OUTPUT:**

```
C:\Users\Kanishma Sanjeevi\OneDrive\Documents\day1 summing up even number series.exe
Enter the number of terms: 7
Sum of even numbers: 56

--------------------------------
Process exited after 2.008 seconds with return value 0
Press any key to continue . . .
```

**7.**Summing up of cube of n numbers.

day1 integer is even or odd.cpp

```c
#include <stdio.h>
#include <math.h>

int main() {
    int n, i;
    double num, sum = 0;

    printf("Enter the value of n: ");
    scanf("%d", &n);

    for (i = 0; i < n; i++) {
        printf("Enter a number: ");
        scanf("%lf", &num);
        sum += pow(num, 3);
    }

    printf("The sum of cubes is: %lf\n", sum);

    return 0;
}
```

**OUPUT:**

```
C:\Users\Kanishma Sanjeevi\OneDrive\Documents\day1 summing up cube
Enter the value of n: 5
Enter a number: 1
Enter a number: 2
Enter a number: 3
Enter a number: 4
Enter a number: 5
The sum of cubes is: 225.000000

--------------------------------
Process exited after 6.774 seconds with return value 0
Press any key to continue . . .
```

**8.**Finding whether the given number is even or odd.

```c
#include <stdio.h>

int main() {
  int num;
  printf("Enter an integer: ");
  scanf("%d", &num);
  if (num % 2 == 0)
    printf("%d is even.", num);
  else
    printf("%d is odd.", num);
  return 0;
}
```

**OUTPUT:**

```
C:\Users\Kanishma Sanjeevi\OneDrive\Documents\day1 integer is even or odd.exe
Enter an integer: 5
5 is odd.
--------------------------------
Process exited after 2.651 seconds with return value 0
Press any key to continue . . .
```

**9.**Product series ( Factorial of given number).

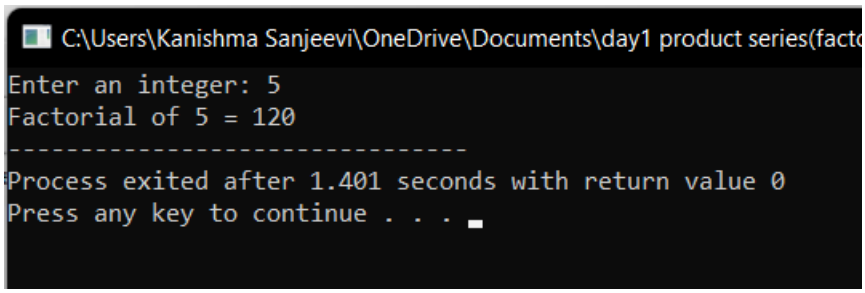
```c
#include <stdio.h>

int main() {
    int num, i, factorial = 1;

    printf("Enter an integer: ");
    scanf("%d", &num);

    // Check if the entered number is negative
    if (num < 0)
        printf("Error! Factorial of a negative number doesn't exist.");
    else {
        for (i = 1; i <= num; ++i) {
            factorial *= i;
        }
        printf("Factorial of %d = %d", num, factorial);
    }
    return 0;
}
```

**OUTPUT:**




**10.**Find the given number is Armstrong or not.

```c
#include<stdio.h>
 int main()
{
int n,r,sum=0,temp;
printf("Enter the value:");
scanf("%d",&n);
temp=n;
while(n>0)
{
r=n%10;
sum=sum+(r*r*r);
n=n/10;
}
if(temp==sum)
printf("armstrong number");
else
printf("not armstrong number");
return 0;
}
```

**OUTPUT:**

```
C:\Users\Kanishma Sanjeevi\OneDrive\Documents\10.armstrong.exe
Enter the value:153
armstrong number
--------------------------------
Process exited after 2.166 seconds with return value 0
Press any key to continue . . .
```

**14.**Reversing the digits of an integer.

```c
#include<stdio.h>
int main()
{
    int n,reverse=0,remainder;
    printf("enter the value:");
    scanf("%d",&n);
    while(n!=0)
    {
        remainder=n%10;
        reverse=reverse*10+remainder;
        n=n/10;
    }
    printf("reversed number:%d",reverse);
    return 0;
}
```

**OUTPUT:**

```
C:\Users\Kanishma Sanjeevi\OneDrive\Documents\day1 armstrong.exe
enter the value:2913
reversed number:3192
--------------------------------
Process exited after 4.196 seconds with return value 0
Press any key to continue . . .
```

**15.**Finding the given integer is positive or negative.

15.pos and neg.cpp

```c
#include<stdio.h>
#include<conio.h>
int main()
{
    int n;
    printf("enter the value:");
    scanf("%d",&n);
    if(n==0)
    {
        printf("neither positive nor negative integer");
    }
    else if(n>0)
    {
        printf("positive integer");
    }
    else
    {
        printf("negative integer");
    }
    return 0;
}
```

**OUTPUT:**

```
enter the value:-45
negative integer
--------------------------------
Process exited after 5.794 seconds with return value 0
Press any key to continue . . .
```

**16.**Swamping two numbers with two temporary variables.ss

16.swapping.cpp

```c
#include<stdio.h>
#include<conio.h>
int main()
{
    int x, y, temp;
    printf("Enter the value of x and y: ");
    scanf("%d %d", &x, &y);
    printf("Before swapping x=%d, y=%d ", x, y);
    temp = x;
    x = y;
    y = temp;
    printf("\nAfter swapping x=%d, b=%d", x, y);
    return 0;
}
```

**s**

**OUPUT:**

```
Enter the value of x and y: 5 and 9
Before swapping x=5, y=0
After swapping x=0, b=5
--------------------------------
Process exited after 9.575 seconds with return value 0
Press any key to continue . . .
```