Program 1:

1-Correct the following C program after execution:

```c
#include <stdio.h>
int main()
{
    int i=1;
    while (i<=5) {
    printf("\n infinite loop");
    }
    return 0;
}
```

Program 2:

Write a **C program**

> That allows you to control the input of a strictly positive
> integer N less than 50, with an error message being
> displayed if this is not the case, using the while loop.

2-can the **while** loop be replaced by   **do while**

  if so, rewrite the program

3-can the **while** loop be replaced by   **for**

  if so, rewrite the program

Program 3:

Write a **C program**

> That allows you to enter a value of an integer n (n>=0)
>
> Then calculate and display its factorial

1

Program 4:

Write the **C program**

Which allows you to enter 2 integers X (X<>0) and n (n>=0)

Then calculate and display the value of X^n

Program 5:

Write a **C program**

That allows you to enter 2 integers X (X<>0) and n (n>=0)

Then calculate and display the value of the following expression:

$$1 - \frac{x}{1!} + \frac{x^2}{2!} - \frac{x^3}{3!} + \cdots \frac{x^n}{n!}$$