Lebanese University **Introduction To Programming** **Partial Exam**
Data Sciences **Duration: 75 mn** **2023**

Exercise 1:

Consider the following program:

```
void main ( )
{
int  i , j , x , y ;
x = 4
y ==15;
j = 0, i = 0;
do{
     i = i + 1;
     j = j +y;
   } while ( i != x )
cout<<"i="<<i<<end<<j="<<j;
}
```

1. Correct the syntax errors in the program
2. Indicate the tracing (memory state ..) during the execution of the program and the displayed result
3. Deduce the calculation in terms of x and y.

Exercise 2:

Write a C program that reads an integer **n** from user and displays **n** lines as follows:

```
  *              (n-1 spaces then one *)
  *              (n-2 spaces and then one *)
 *                    ......
 *
 *
 *
 *
 *
 *
 *
*
```

Exercise 3:

1. Write a C program that reads an integer **n** and displays the number of divisors of **n**.
2. Write a C program that displays the number between **720** and **1000** having more than 30 divisors.