INC 141
Computer Programming

Lab 5

Learning Outcomes (Lab 5)

- Understand the flow of nested loop

Nested Loop

Nested loop = loop inside loop

Program flow

The inner loops must be finished before the outer loop resumes iteration.

Example1

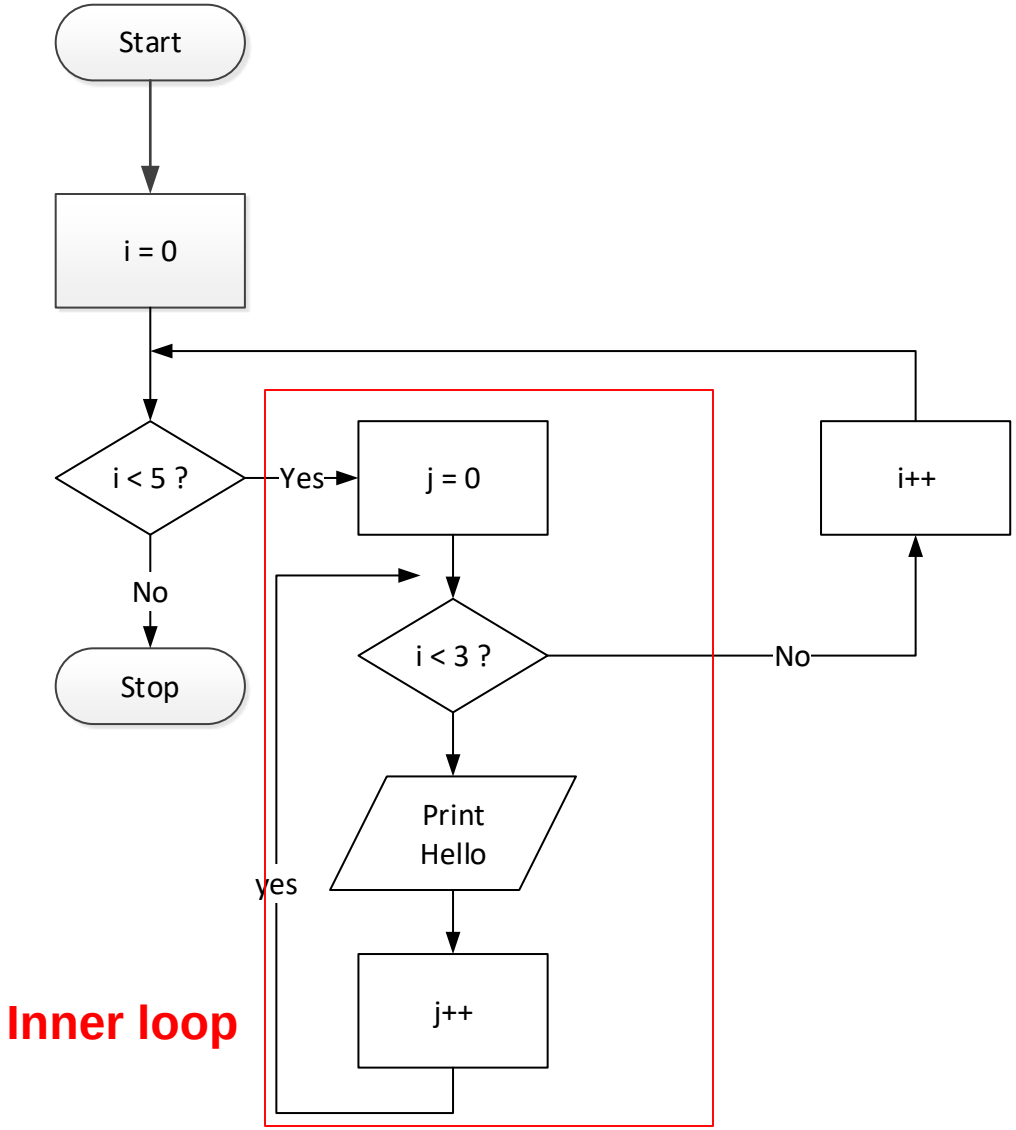
```
#include <stdio.h>

main ()

{
    int i,j;
    for(i=0;i<5;i++) {


        printf("Hello\n");


    }
}
```

How many rounds?

Example1

```
#include <stdio.h>

main ()

{
    int i,j;
    for(i=0;i<5;i++) {

        for(j=0;j<3;j++) {
            printf("Hello\n");
        }

    }
}
```

How many rounds?


Start
i = 0
i < 5 ?
Yes
No
Stop
j = 0
i < 3 ?
No
Print
Hello
yes
j++
i++
Inner loop

Example1

```
#include <stdio.h>

main ()

{
    int i,j;
    for(i=0;i<5;i++) {

        for(j=0;j<3;j++) {
            printf("Hello %d %d\n",i,j);
        }

    }
}
```

How many rounds?

Task 1 (upload to LEB2)

Write a program to print the following patterns

*****	*	1
*****	**	22
*****	***	333
*****	****	4444
*****	*****	55555
*****	******	666666

You must use nested loops.
Your code must print the characters one-by-one.

Task 2 (group +upload to LEB2)

**Write a flowchart / program
to calculate the area of a rectangle.**

- **Receive 2 integers from the keyboard, width and height.**
- **If either width or height is a negative number, the program has to keep asking for a new number until a positive number is entered.**
- **Calculate area = width x height**
- **Print the area on the screen.**