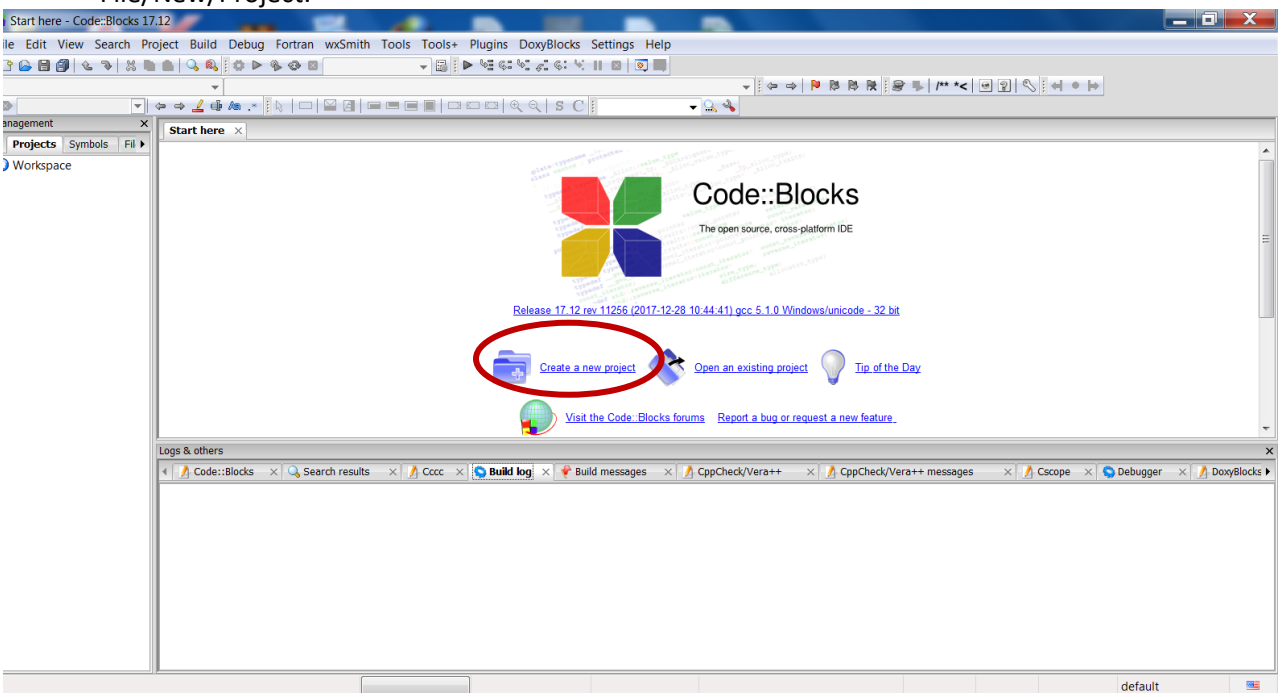
PW sheet No. 1

Part 1 : Launching the programming environment Code::Blocks

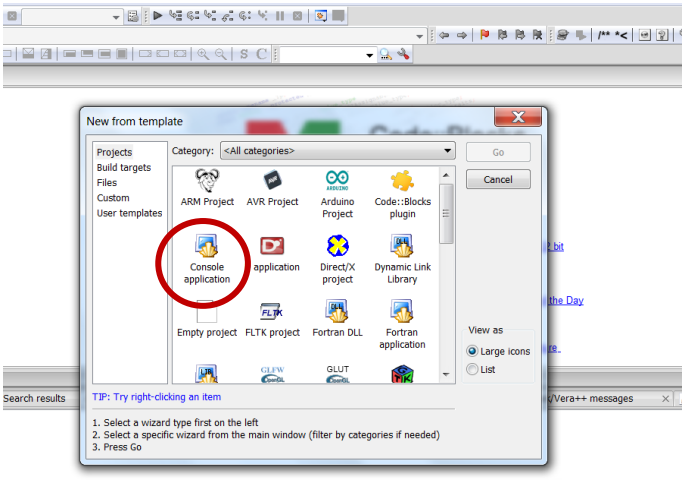
The purpose of this practical work is to familiarize you with the Code::Blocks programming environment.

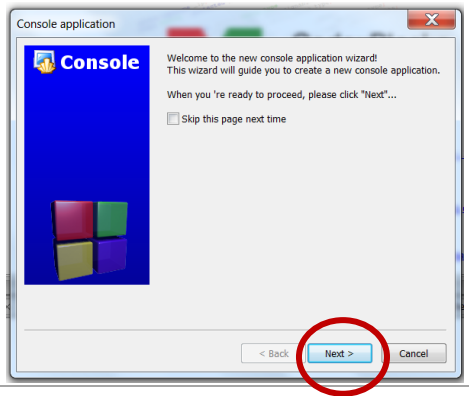
- To launch Code::Blocks, click on the shortcut available on the desktop or in the Start menu/CodeBlocks (otherwise it will be indicated by your PW assistant).

- Once you have launched the Code::Blocks IDE, choose "Create a new project" or go to File/New/Project.

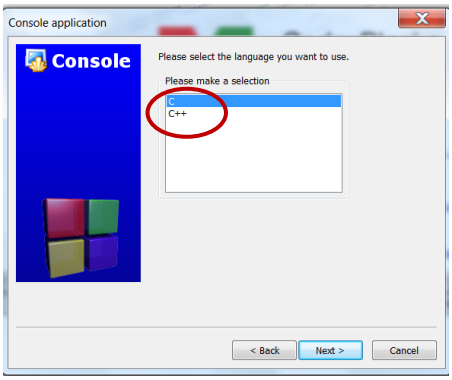


- Then, select the "Console application" project from the list and click "Next" to continu.

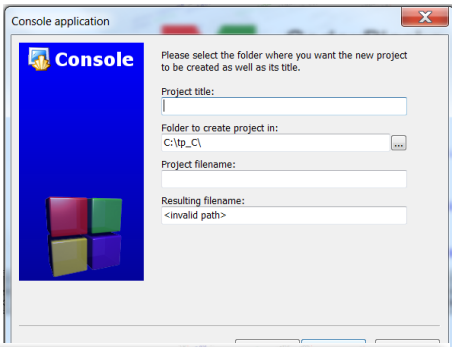




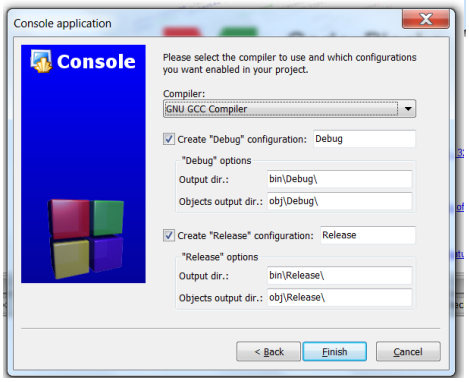
- n the language selection window, select C and click "Next".



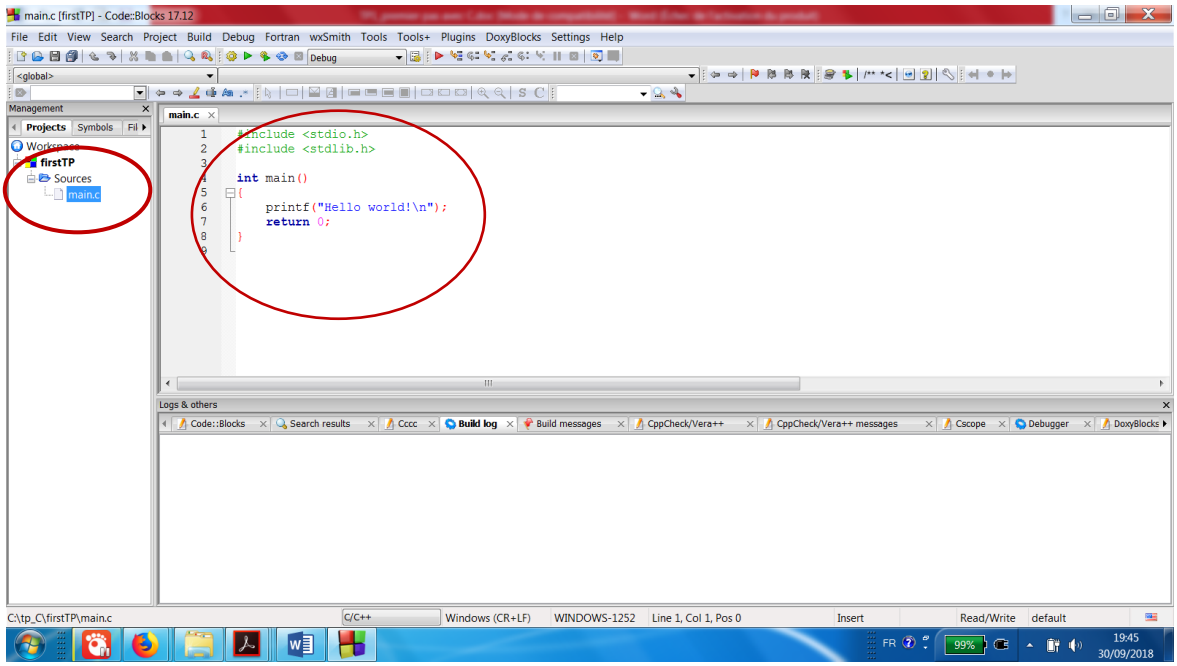
- Give your project a name and choose the directory where it should be saved. Click "Next" to continue.



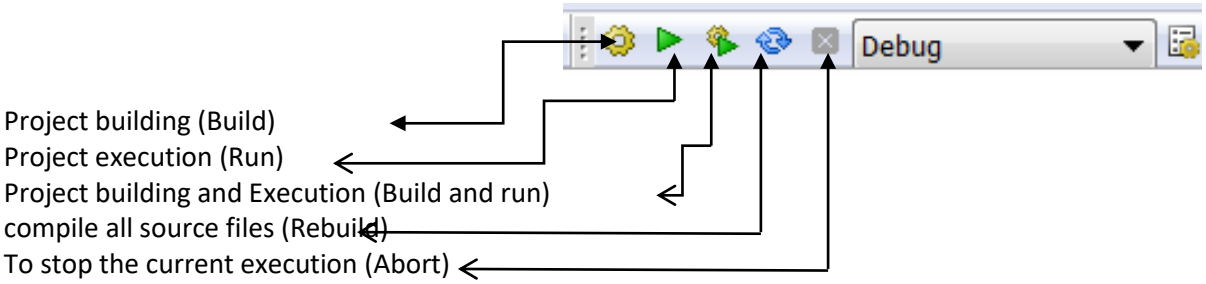
- In the compiler selection window, keep the default settings and click "Finish".



- In the left pane "Projects", expand the tree by clicking on the small "+" to display the list of project files. You should have at least a main.c file with a little bit of source code already in it. You can open the main.c file by double-clicking on it.



- To save a file, go to the File/Save menu or press the keyboard shortcut Ctrl+S.
- To open a file (or project), go to the File/Open... menu or press the keyboard shortcut Ctrl+O.



- To compile a C program (i.e., generate the executable program), you can either go to the Build menu and select Build, or press Ctrl+F9. You can also use the Compile toolbar button.
- To run a program, you can either go to the Build menu and select Run, or press Ctrl+F10.
- Pour quitter Code::Blocks, aller dans le menu File/Quit ou taper la combinaison de touches Ctrl+Q.

Part 2 : My first C programs

The "Hello world" program and the display instruction

When you double-click on the main.c file name, the following code will be displayed:

```
#include <stdio.h>
#include <stdlib.h>

int main()
{
   printf("Hello world!\n");
   return 0;
}
```

1. Compile and run your project.
   a. Modify the program to display the following phrase: "Bonjour je m'appelle Amine", instead of "Hello World", and then re-run it.
   b. Modify the program, add the \n character after the word "Bonjour" and re-run it. What do you observe?
2. Replace the instruction printf("Hello world!\n") with the following instruction:
   printf("La valeur de a=%d",2); then compile and run.
   1. Change the value 2 by 10 and then by 10.5
      a. Deduce the action of the format specifier %d
      b. Change %d by %f, What do you notice?
3. Type the following code
   a. Compile and run
   b. What do you deduce from this ?

```
#include <stdio.h>
#include <stdlib.h>

int main()
{
int a;
a=5;
printf("La valeur de %d*%d=%d",a,10,a*10);
 return 0;
}
```

In conclusion,

1. In the C programming language, printing is done using the printf() instruction, which is written as follows:

   printf("<character string>",<variable or expression>);
2. The instruction contains a single string of characters between double quotes
3. The following are some of the special characters that can be used in a string with the printf() instruction:
   - \n - Newline
   - %d - Replaces an integer value
   - %f - Replaces a floating-point value
   - %c - Replaces a character
   - And there are others…

Exercice supplémentaire

To learn how to choose variable names, test the following program:

a. Create a new project.
b. Type this code, then compile and run.
c. Replace the note variable with each of the following variables:

- note Algo
- note_Algo
- Note
- _note_Algo
- 3noms
- num-tel
- N°inscription
- MoyAlGo1_T

```
#include <stdio.h>
#include <stdlib.h>

int main()
{
int note;
note=15;
printf("La valeur de cette variable est %d », note);
 return 0;
}
```