Turbo C++ installation; how to move around; DOS

Borland Turbo C++ installation

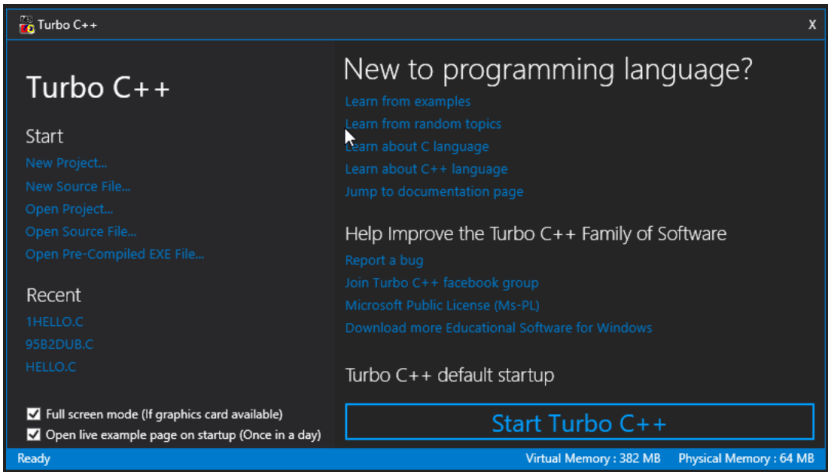
At the beginning, I advise you to familiarize yourself with any website describing the Turbo C++ installation process for the steps of the process.

Search the Internet for "download turbo c++ for windows 10" or "turbo c++"
and install *Turbo C++*

(You will have an icon 

on your desktop. You will always use the icon later to run Turbo C++.)

Finally, you will get the below dialog box:



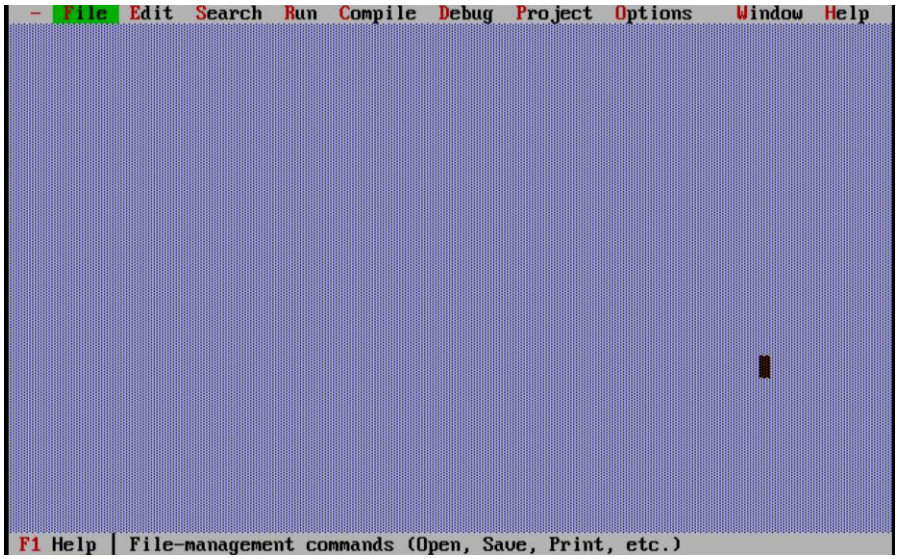
and by clicking on the 

you will enter the "***C***" language editor.

How to navigate in the Borland Turbo C++ environment

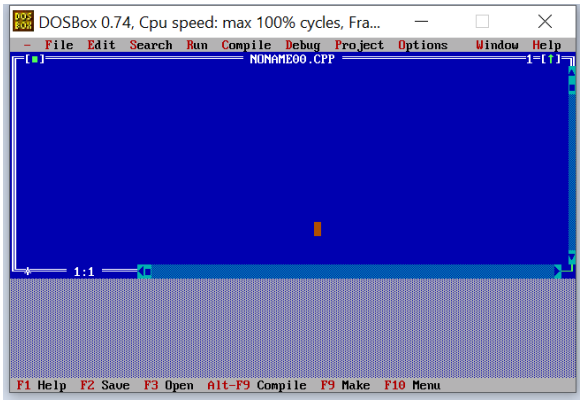
A few short videos on YouTube (about 3 minutes each of them) are a good way to get into the topic.

Make your screen like this:



File --> New allows you to write new code. See: '**Important notes**' below in this document.

and you will get such a screen:

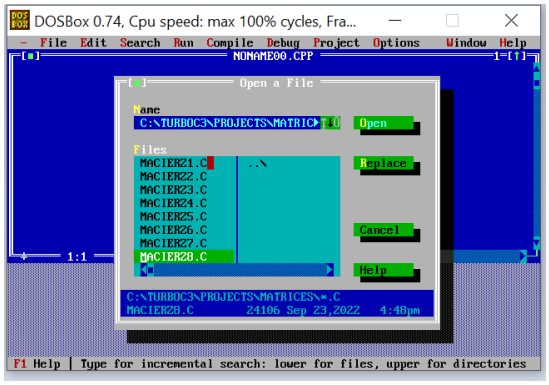


Do not worry about the filename now: When you want to save it, the application will ask you for:

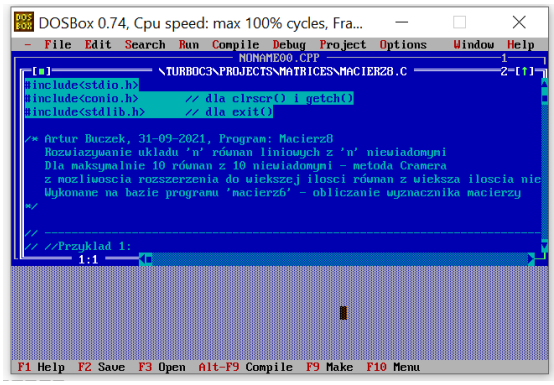
1. file name,
2. name extension (***C*** or ***CPP***),
3. path to the folder where you will keep your files.

Notice the light purple bottom of the screen. After a compilation, its results will be there (***error report*** screen, '**Watch**' screen).

File --> **Open** allows you to enter a file - previously saved - into the editor.



[Enter] gives

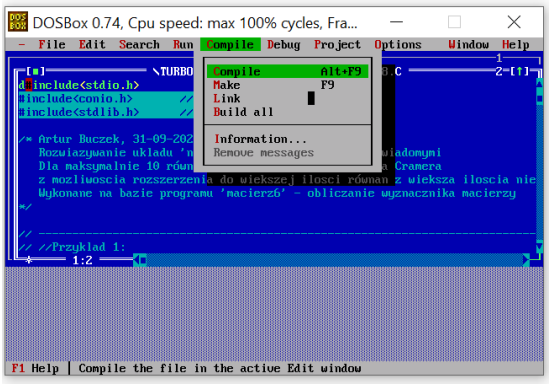


Note further that the editor is cascading - it can hold several programs simultaneously with the ability to jump between them (helpful when you create programs that are interrelated to each other). Above, you can see the active ***MACIERZ8.C*** file on the screen and inactive one with a temporary name ***NONAME00.CPP***.

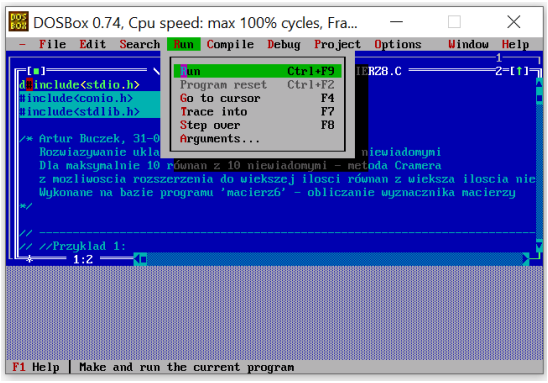
You can give each of your programs the ***.CPP*** extension (for *C++*); if your program does not require the use of ***OOP*** (***O***bject ***O***riented ***P***rogramming, in this case *C++*) features, you can save the program with the extension ***.C***. If a ***.CPP*** extension is required and you are trying to save the program as ***.C***, the compiler will not allow to do that.

You will often use:

Compile --> **Compile** [Alt] + [F9]

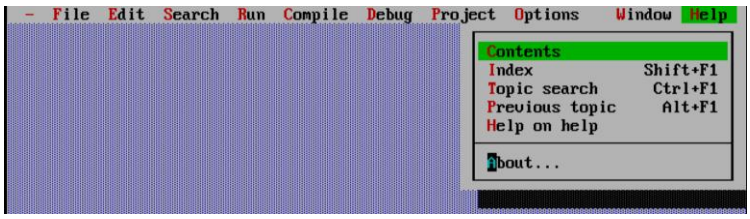


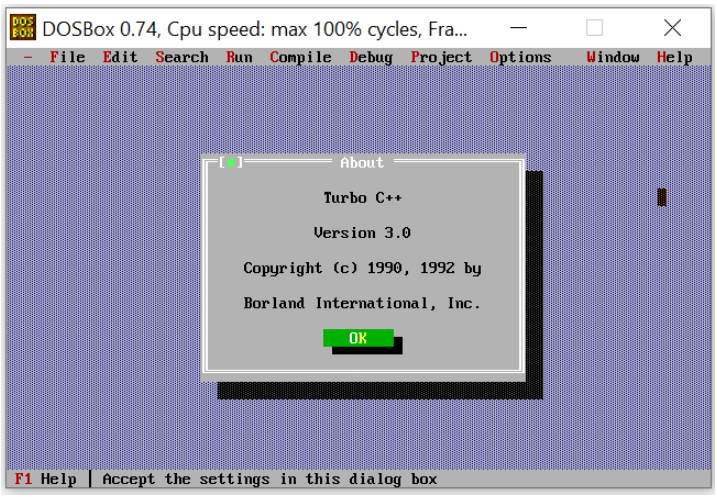
Run --> **Run** [Ctrl] + [F9]



You will need to know something about **Window** option. This allows, for example, to jump between screens: The two screens shown above (***editor*** and ***error report*** - here light purple, not yet used here) and ***User screen*** (with black background) where a result of the program will appear. When you enter the code into the editor, you can remove this inactive light purple screen (***error report***) until compilation and have a whole screen for coding a program (with the **[F5]** function key). At the time of compilation, the ***error report*** screen with the build results will appear automatically (but only if any error occurs).

I use **Help** very often - as for the year of creation of the application (in the late '80s), it is very well done.





Is a matter of practice moving freely in this application. At the beginning, it can be annoying, but that problem quickly disappears with mastering 'keyboard shortcuts' and mastering the capabilities of 'menu' and 'Help' navigating.

From the most interesting websites I recommend:

1. Turbo C++, Version 3.0 User's Guide 1992
https://archive.org/details/bitsavers_borlandturide1992_32222686/page/13/mode/2up

2. It looks like a documentation of graphic functions (modules):

https://home.cs.colorado.edu/~main/bgi/doc/ <-- Borland Graphics Interface (BGI) for Windows
Compare this with the description in the <GRAPHICS.H> of the HELP menu (the last option to the right of the main menu).

3. C code-reference
https://code-reference.com/c <-- Programming Reference/Libraries

2. Borland turbo c for windows graphics
https://slidetodoc.com/borland-c-graphics-turbo-c-v-3-0/ <-- Mr Dave Clausen presentation (40 slides)
Borland C++ Graphics (Turbo C++ v. 3. 0 for DOS or Borland v. 5.

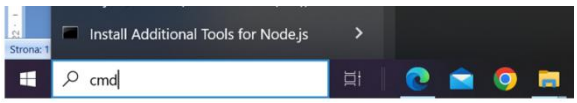
DOS (Disk Operation System)

Contrary to appearances, knowledge of DOS is quite practical. In DOS you can perform operations that Windows itself does not seem to offer*.

Turbo C++ will be loaded in the root directory (C:/):
C:\TURBOC3
(It If you have it somewhere else, you must include this in my descriptions and correct them)

To be sure of it:

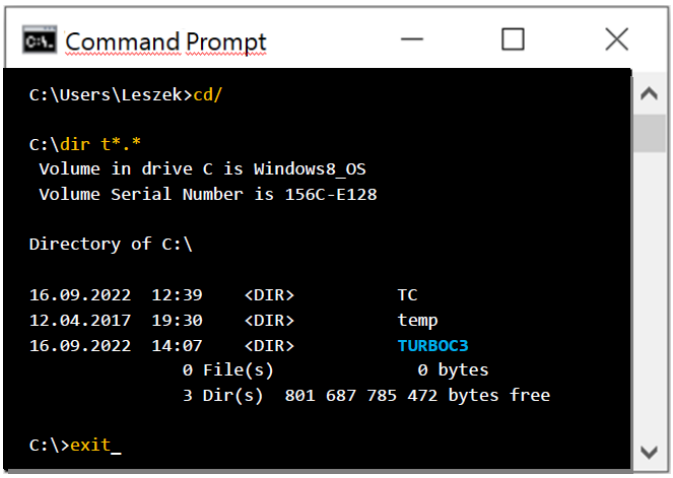
1. go to "Command Prompt" by typing in your computer's search engine "**CMD**"



2. go to the root directory by typing the command **CD/**

3. here, enter the command **dir/p** (option ***p*** allows you to scroll down page by page by pressing [Enter]) or use 'wildcards' ('*****' can denote any character or series of arbitrary characters) ***dir T*.**** - all the files with all extensions, even directories (here '*****' may mean the absence of any sign), beginning with the letter **T** - DOS is not case-sensitive),

4. finally, exit the 'command prompt' window by typing the command **EXIT** :



I recommend the following procedure to copy files from this website to the directory C:/TURBOC3/PROJECTS

Step 1

If the PROJECTS directory (any of your names can be here, e.g. PROGRAMS or SOURCE) does not exist, you can always create it in the following way:

1. Run CMD (Command Prompt)

2. Go to the directory TURBOC3 and create (**M**ake) **D**irectory PROJECTS there (DOS is not case-sensitive):

a) **CD/** <-- go down to the root directory

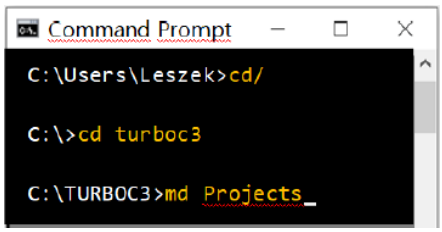
[Enter]

b) **CD TURBOC3** <-- go up to the TURBOC3 directory

[Enter]

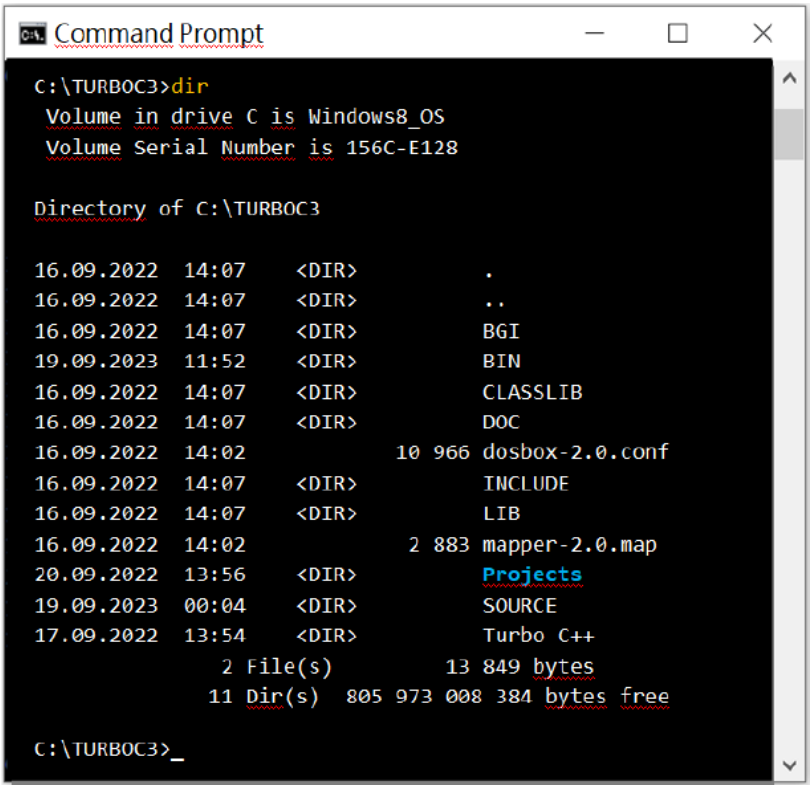
c) **MD PROJECTS** <-- **M**ake **D**irectory PROJECTS in the current directory (here: in TURBOC3)

[Enter]



And you will see this directory by typing:

d) DIR



Step 2 - copying the program codes of this web page to a folder on your desktop

1. Create a folder named ***C*** on the desktop.
2. In the folder ***C***, create two folders: **Matrices** and **Plot**

C <-- desktop folder

Matrices <-- folder in the folder ***C***

Plot <-- folder in the folder ***C***

3. Copy the files from this website to the appropriate folders.

Example on a file PLOT.CPP

a) I click on the appropriate link

Plot (Wykres funkcji)

Turbo C++ installation (English): Borland Turbo C++ Installation and programs description
Instalacja Turbo C++ (Polish): Instalacja Borland Turbo C++ i opis programów

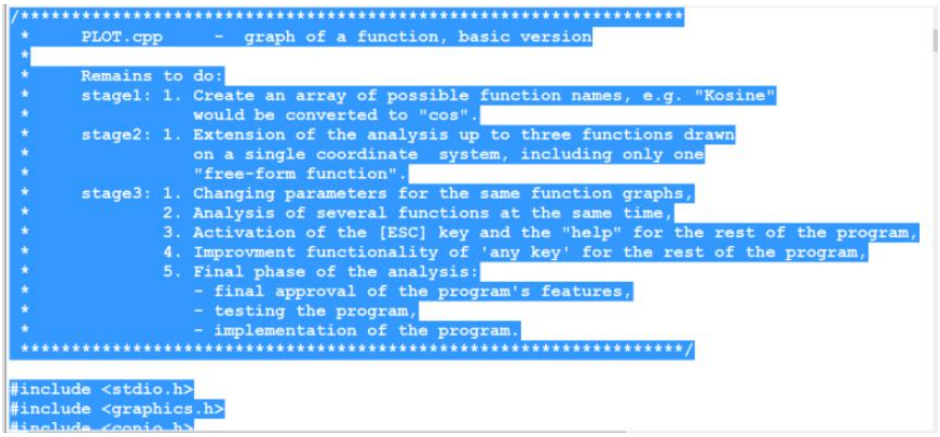
Before you start (English): Plot of a function - program description

- Making a two-dimensional plot of a function - **English**

Zanim zaczniesz (Polish): Wykres funkcji - opis programu

- Sporządzanie dwuwymiarowego wykresu funkcji - **Polish**

b) I select the entire text of the file PLOT.CPP (Edit --> Select all)



```
/*************************************************************
 *     PLOT.cpp      -  graph of a function, basic version
 *
 *     Remains to do:
 *     stage1: 1. Create an array of possible function names, e.g. "Kosine"
 *                would be converted to "cos".
 *     stage2: 1. Extension of the analysis up to three functions drawn
 *                on a single coordinate  system, including only one
 *                "free-form function".
 *     stage3: 1. Changing parameters for the same function graphs,
 *             2. Analysis of several functions at the same time,
 *             3. Activation of the [ESC] key and the "help" for the rest of the program,
 *             4. Improvment functionality of 'any key' for the rest of the program,
 *             5. Final phase of the analysis:
 *                - final approval of the program's features,
 *                - testing the program,
 *                - implementation of the program.
 *************************************************************/

#include <stdio.h>
#include <graphics.h>
#include <conio.h>
```

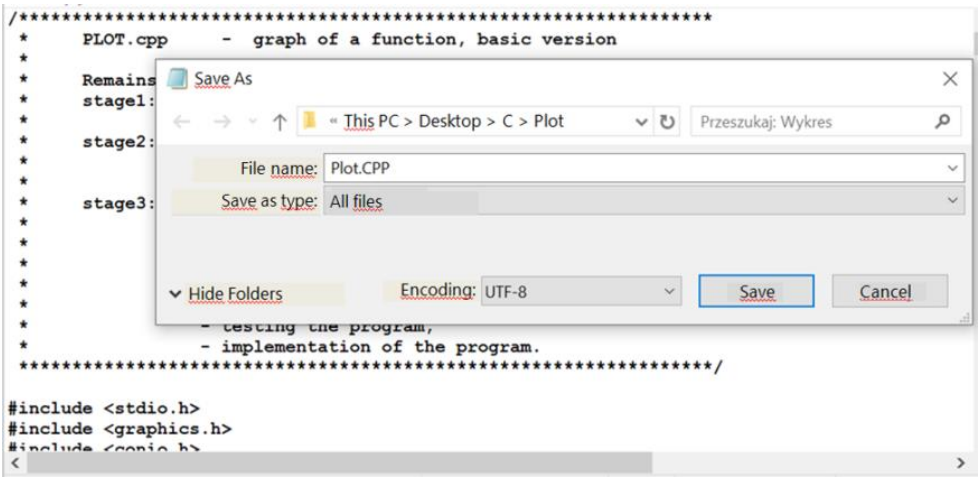
c) [Ctrl] + C <-- 'copy' - I enter the selected text into the buffer

d) I open a new, blank Notepad

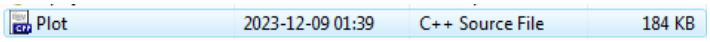
e) I copy the text to this Notepad - [Ctrl] + V

f) I save (**Save As**) the file in the appropriate folder, remembering to give it the following parameters:

- File name --> Plot.CPP <-- We give the extension **.CPP**
- Save as type --> All files
- Encoding --> UTF-8



g) I check its existence there



h) I continue copying to get the following folder **C**

C <-- folder
Matrices <-- folder in the folder C
M_1.C <-- files with the .C extension - copied from this website

M_2.C

Plot <-- folder in the folder C

Plot.CPP <-- file with the .CPP extension - copied from this website

ASCII.C <-- files with the .C extension - copied from this website

If you know what these programs do, change these names to what you think are better.

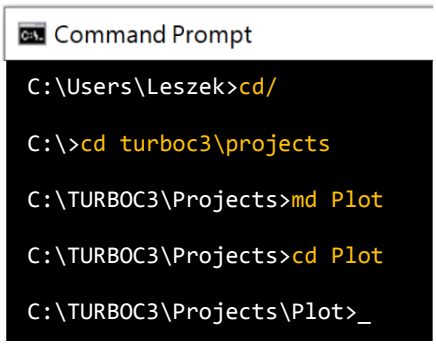
Step 3 - copying files from desktop to C:/TURBOC3/PROJECTS

If you decide to keep the files in the directory:

C:/TURBOC3/PROJECTS

then you can copy the given codes to this location, for example, as follows:

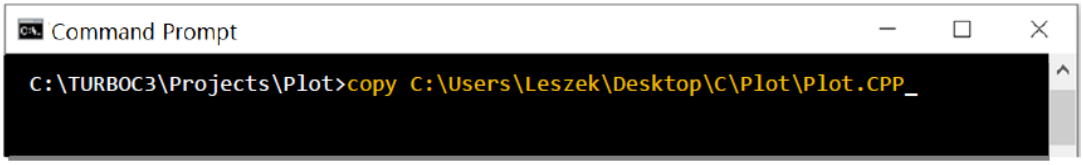
1. Run **CMD**
2. Go to the root directory by using the **CD/** instruction
3. Go to the 'Projects' directory by **CD TURBOC3\Projects**
4. Create a directory 'Plot' with the **MD Plot** instruction
5. Go to the 'Plot' directory by **CD Plot** instruction



6. Copy 'Plot.CPP' from folder 'C\Plot' of the desktop to ***C:\TURBOC3\Projects\Plot*** using the **copy** DOS instruction:

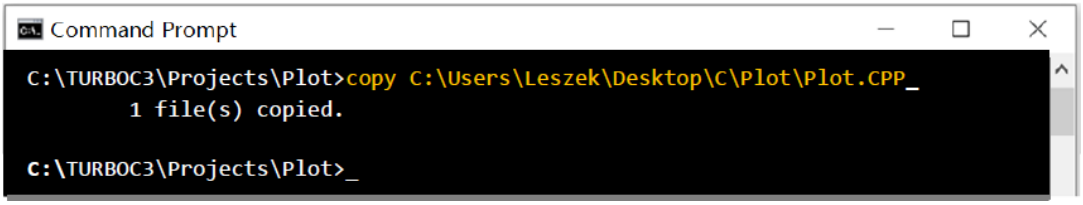
C:\TURBOC3\Projects\Plot> **copy C:\Users** ***(your identifier)*** **\Desktop\C\Plot\Plot.CPP**

Example:

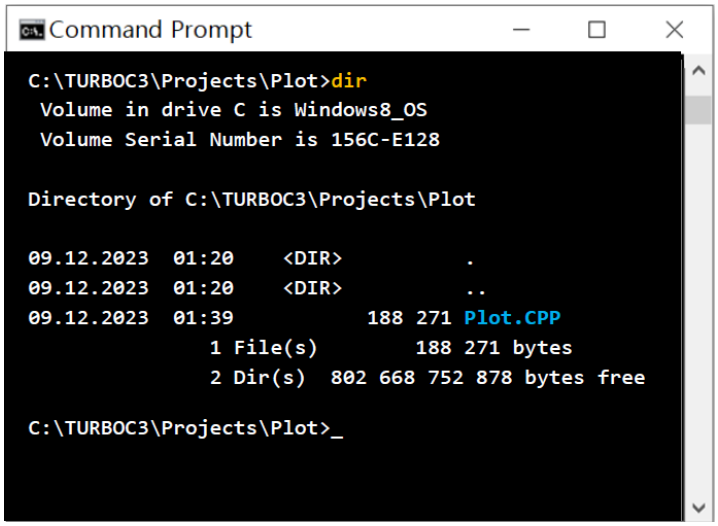


[Enter]

Confirmation that the file was copied correctly:



dir

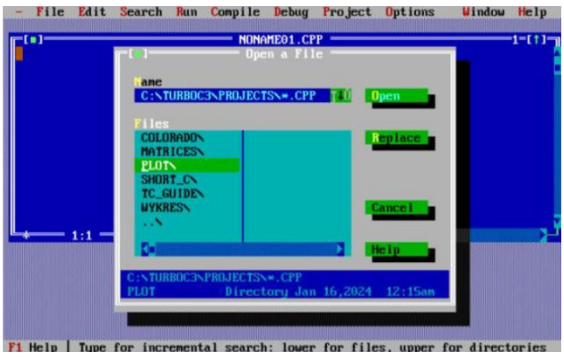


5. This way copy all the files:

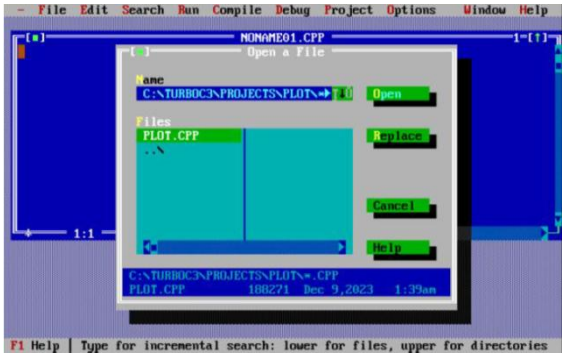
C:\TURBOC3\Projects\Plot> **copy C:\Users** ***(your identifier)*** **\Desktop\C\Plot\Plot.CPP**
C:\TURBOC3\Projects\Matrices> **copy C:\Users** ***(your identifier)*** **\Desktop\C\Matrices\M_1.C**
C:\TURBOC3\Projects\Matrices> **copy C:\Users** ***(your identifier)*** **\Desktop\C\Matrices\M_2.C**

While opening one of these files in *Turbo C++*, we see what is below with the possibility of selecting a program to edit.

File --> **Open** or **[F3]**



and



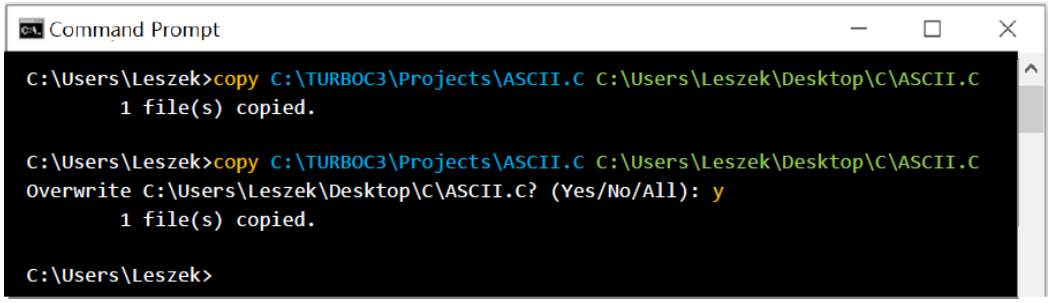
You can always copy any file (here: C program) **from the *Turbo C++* environment to the desktop** or to a folder on it.
Attention: This kind of DOS operation can be performed from anywhere in your *prompt* ('>').

Example: Copying the ASCII.C program code from ***Turbo C++*** to the ***C*** folder on the desktop.

copy C:\TURBOC3\Projects\ASCII.C C:\Users ***(your identifier)*** **\Desktop\C\ASCII.C**

e.g.: **copy C:\TURBOC3\Projects\ASCII.C C:\Users\Leszek\Desktop\C\ASCII.C**

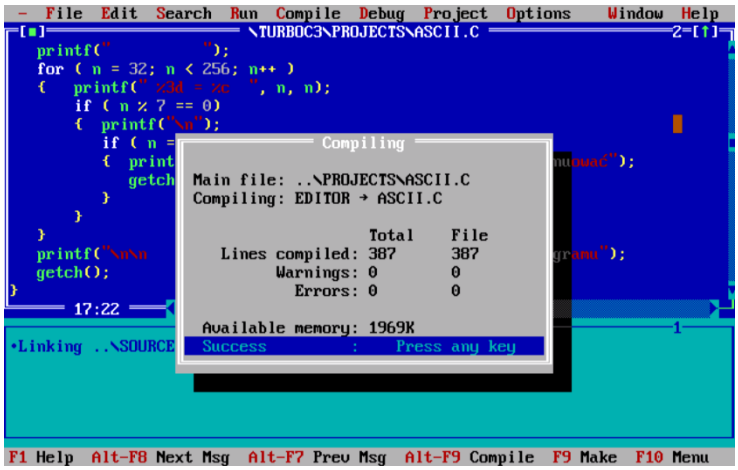
The first case is when it is not yet in the folder 'C'.
The second case is when it already exists in the folder 'C'.



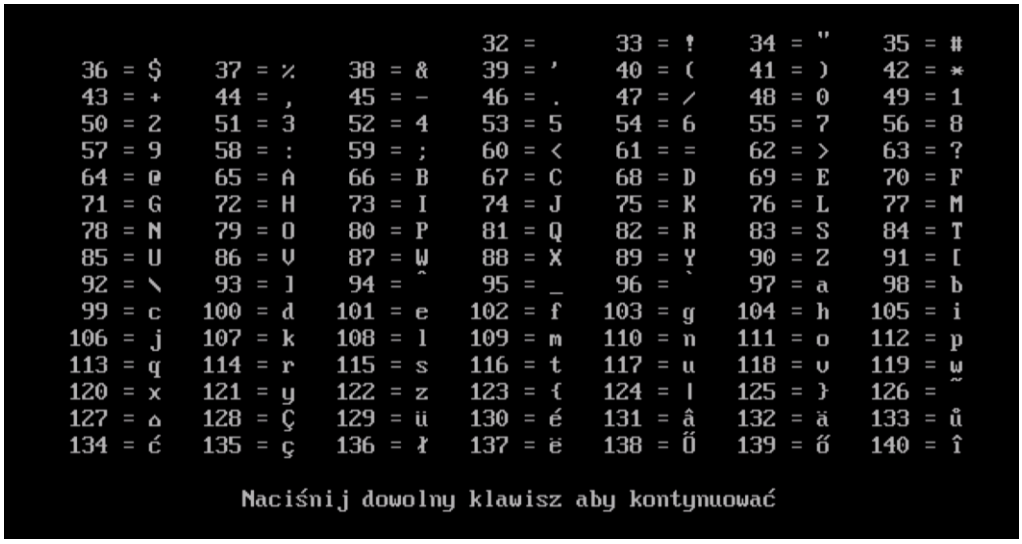
Nota bene, ASCII.C file looks like:

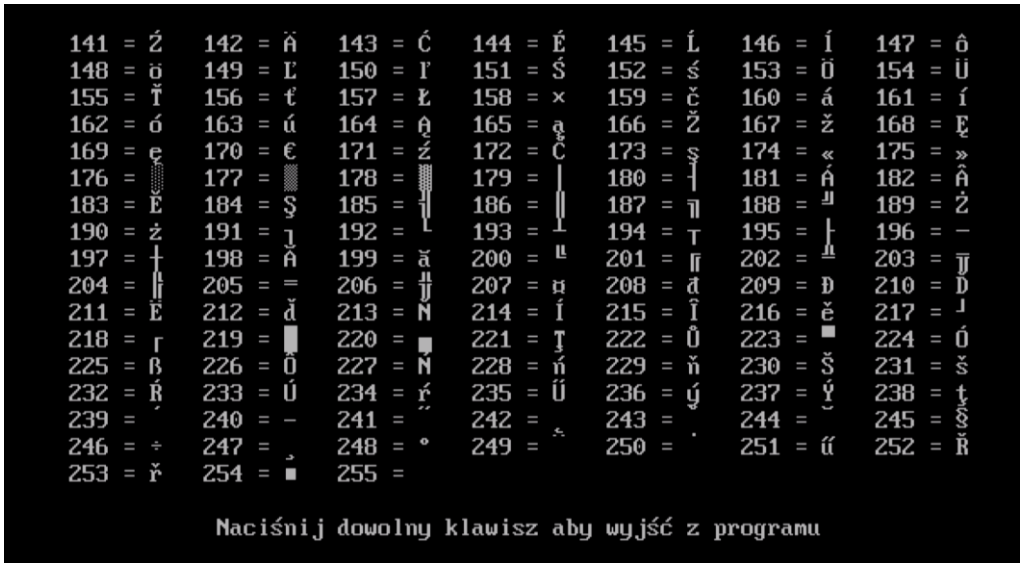
```c
/*************************************************************************
* File: ASCII.c
*************************************************************************/

#include <stdio.h>

int n;

void main(void)
{
   clrscr();              // clean 'User Screen'
   printf("\n\n ");
   for ( n = 32; n < 256; n++ )
   {   printf(" %3d = %c ", n, n);
       if ( n % 7 == 0)
       {  printf("\n");
          if ( n == 140)
          {  printf("\n                Press any key to continue\n\n");
             getch();
          }
       }
   }
   printf("\n\n                  Press any key to exit\n\n");
   getch();
}
```

Example of compiling a program. Here ASCII.C



and after launch a version with a non-English code page (Turbo C++ automatically accepts me the Polish code page):





Turbo C++ gives the correct result.

Dev C++ does it badly and it is hard to trust the Microsoft's program – it is good for students, but I would be worry to use it for really serious challenges.

Important notes:

1. If the *Turbo C++* screen becomes small, such as when you close the *Turbo C++* screen by pressing **[Window]** + **D** (D after 'Desktop') to get the desktop screen, and then return to Turbo C++

Press **[Alt]** + **[Enter]** and you will get the full *Turbo C++* screen again.

2. If you cannot place the mouse cursor on the menu, e.g. if you want to compile a program, and the mouse cursor cannot reach the menu, use
- key **[Alt]** and selected letter. E.g. to get the **File** press **[Alt]** + **F** ; to get the **Edit** press **[Alt]** + **E** , or
- function key **[F10]** just as the line at the bottom of the editor screen suggests.
It is recommended to use 'keyboard shortcuts' and arrow keys instead of the mouse.

3. Pressing the function key **[F5]** gets rid of the 'Watch' screen to make the editor screen larger. 'Watch' will appear automatically at the time of compilation. Press **[F5]** again to reveal 'Watch'.

- - - - - - - - - - - -

* E.g.: I had a trouble transferring a large file with a special program designed for this. I entered DOS (CMD) and there I did it (using FTP - File Transfer Protocol) without a problem.