Practical # 01

Introduction to DEV C++ IDE

Objective: *To understand the DEV C++ IDE(Integrated Development Environment) and implement a simple C Program.*

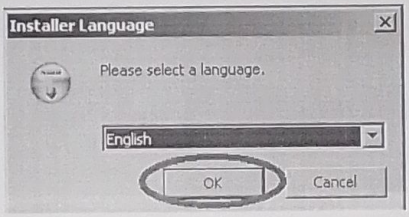
Theory:

The Integrated Development Environment (IDE)

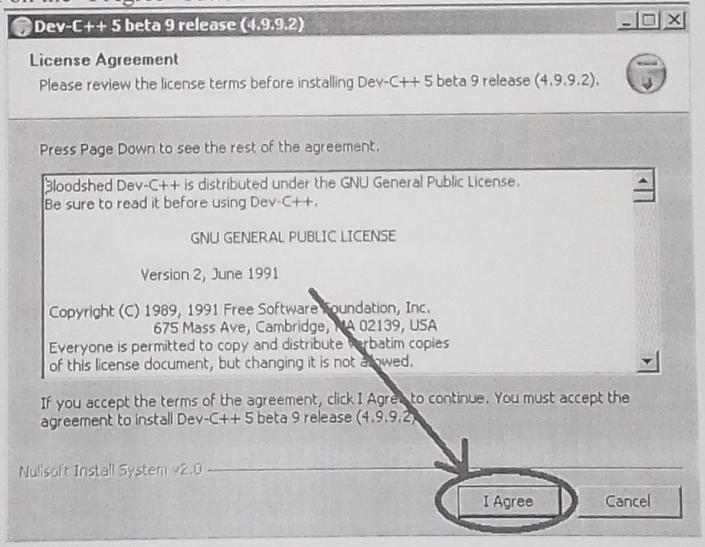
Dev-C++, developed by Bloodshed Software, is a fully featured graphical IDE (Integrated Development Environment), which is able to create Windows or console-based C/C++ programs using the MinGW compiler system. MinGW (Minimalist GNU* for Windows) uses GCC (the GNU g++ compiler collection), which is essentially the same compiler system that is in Cygwin (the unix environment program for Windows) and most versions of Linux.

Installation Steps:

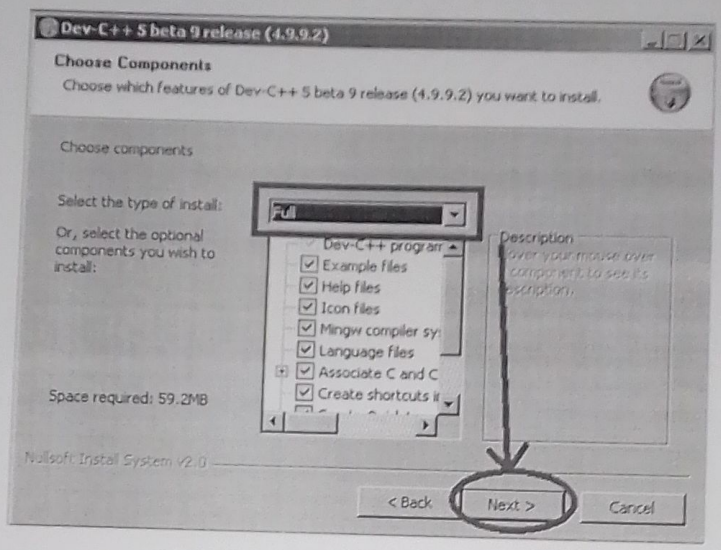
1. Download the installer from the internet. Follow the instructions and install the program. The following screenshots will help you install and run the product:



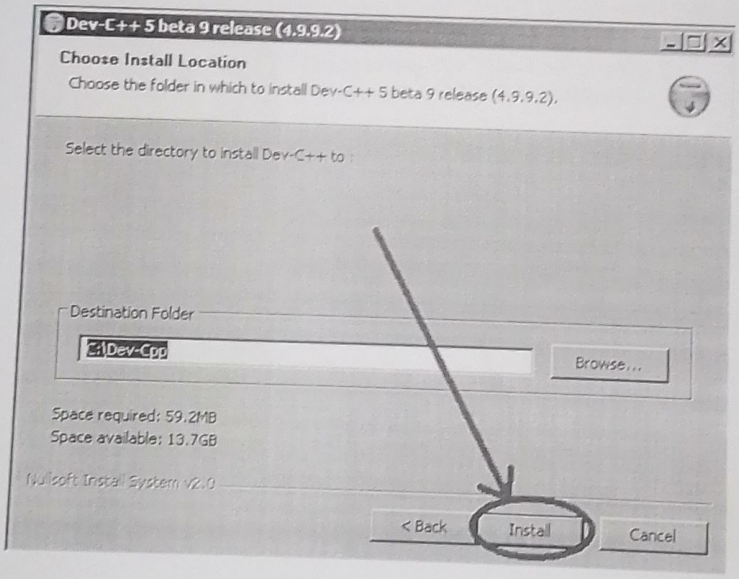
2. License Agreement
   Click on the "I Agree" button to continue



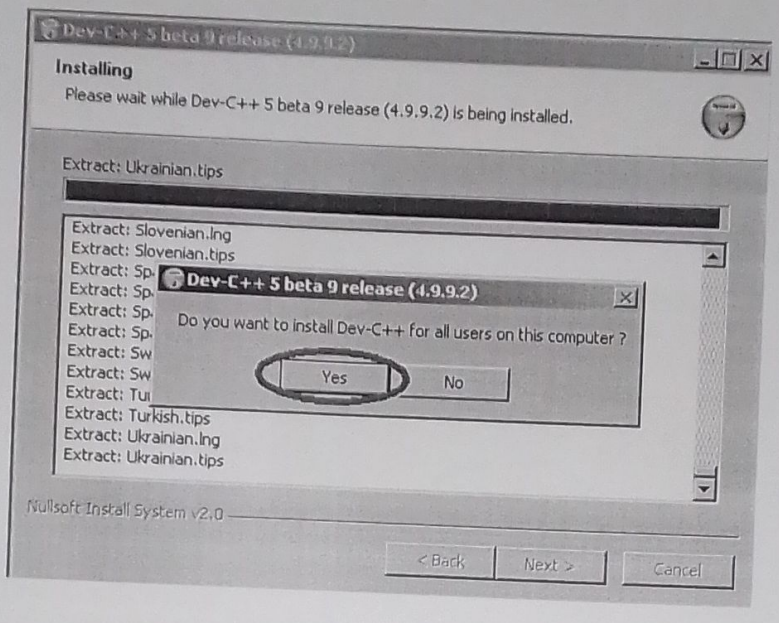
3. Choose Components
   Make sure that the type of install is Full and click the Next button to continue



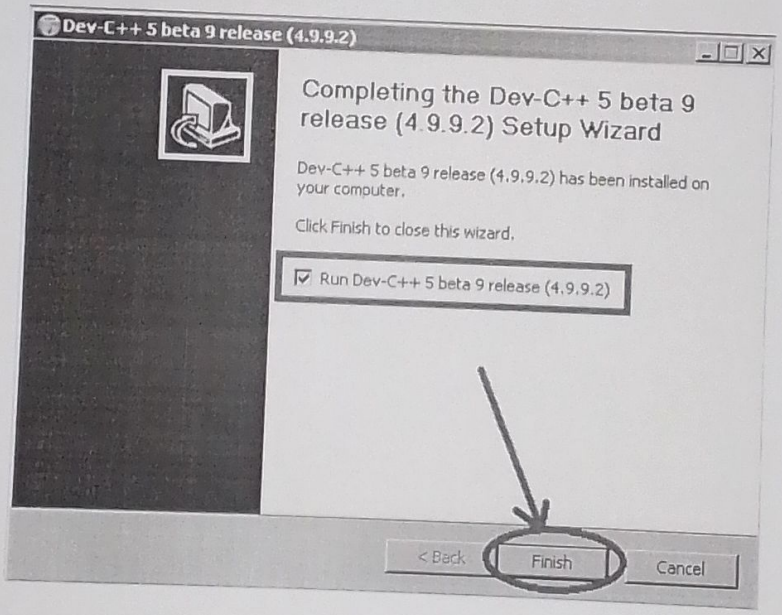
4. Choose Install Location
   Click the Install button to continue



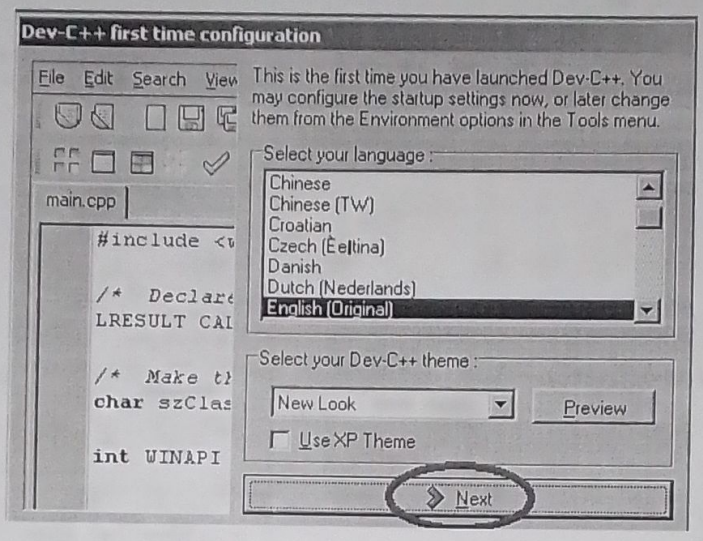
5. Installing
   Click the Yes button



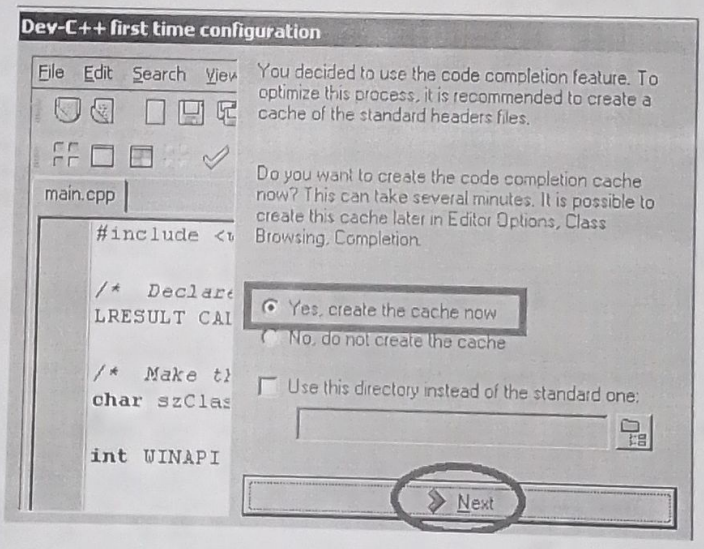
6. Finished
   Click the Finish button to finalize the installation and run the program.



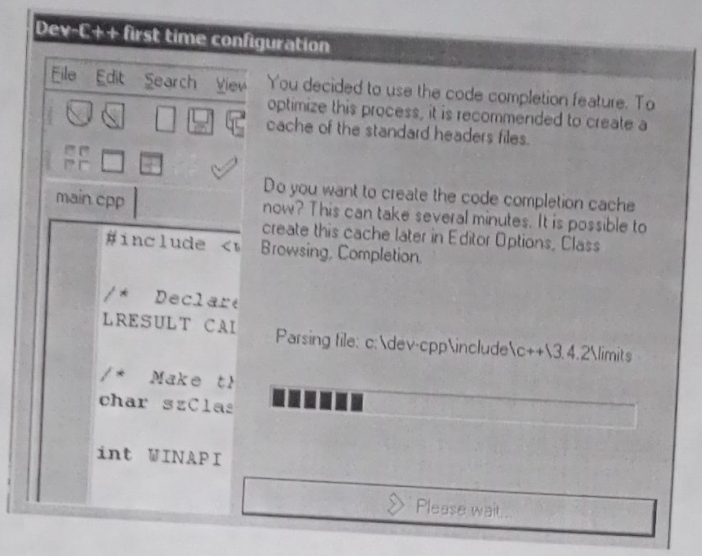
7. First Time Configuration
   Click the Next button to continue



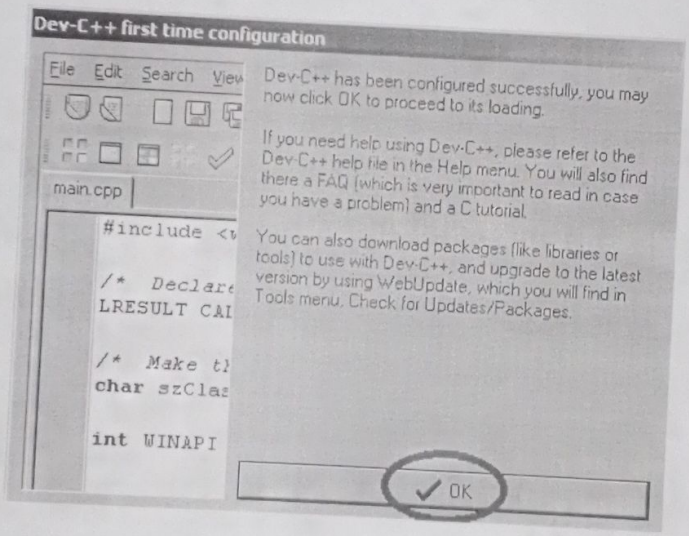
8. First Time Configuration
   Click the Next button to continue



9. First Time Configuration
   Wait for the Progress Bar to Complete

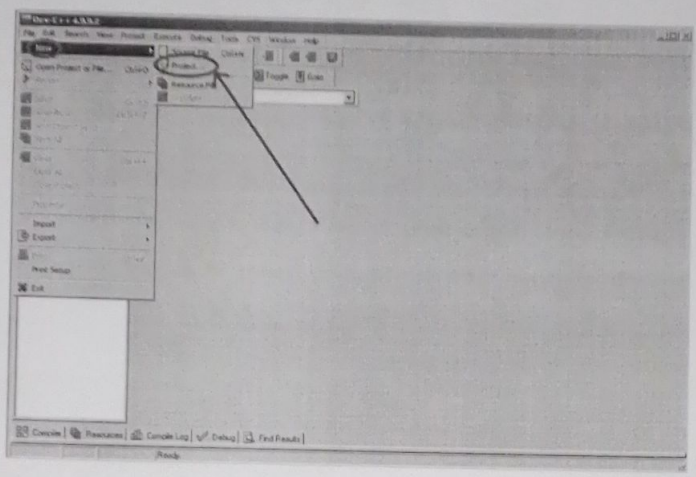


10. First Time Configuration
    Click the OK button to Finalize

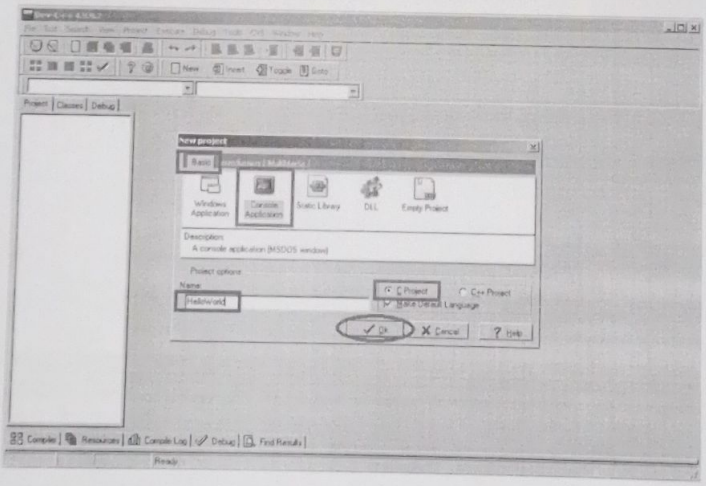


New Project Menu

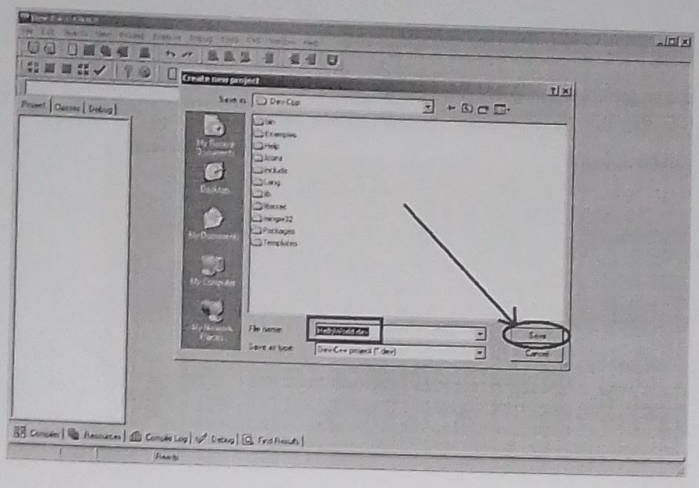
Click the File menu, then select the New menu item and click the Project menu item.



New Project
On the top, make sure that Basic tab is selected and under the Basic tab, select "Console Application"
Give a name to your project using the Name text box, For instance, "Hello World".
Important: Choose "C Project" under "Project Options", on the left
Click the OK button to create your project

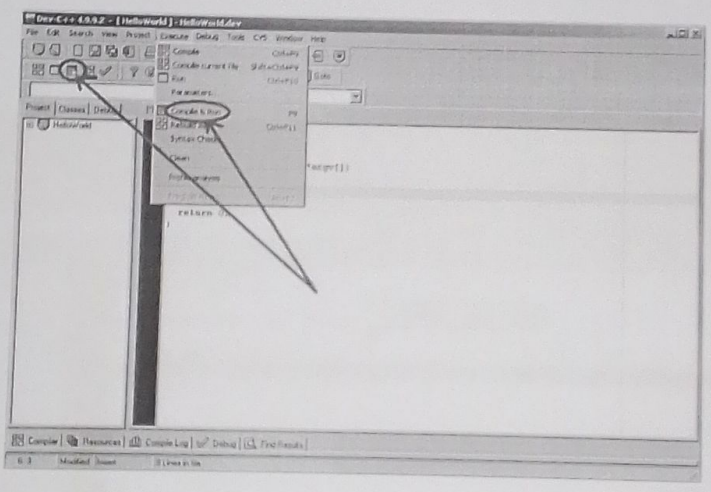


Create New Project
Give a name to your project file and click the Save button to continue



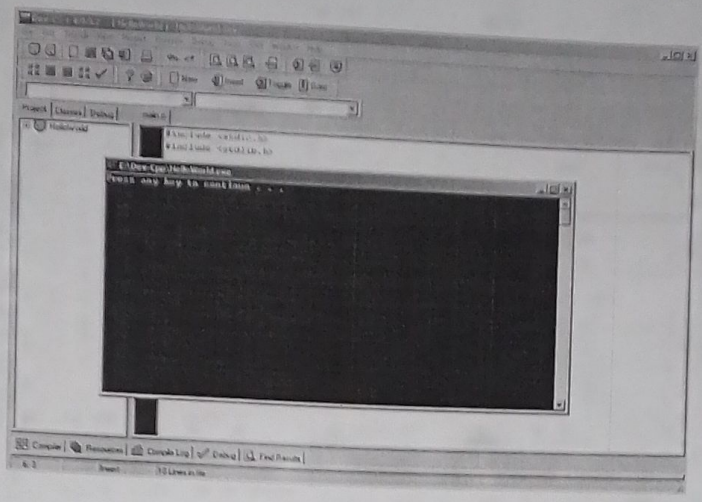
Compile & Run:

Click "Compile & Run" menu item or the icon displayed in the below screenshot or just Press F9 to compile and run your program.



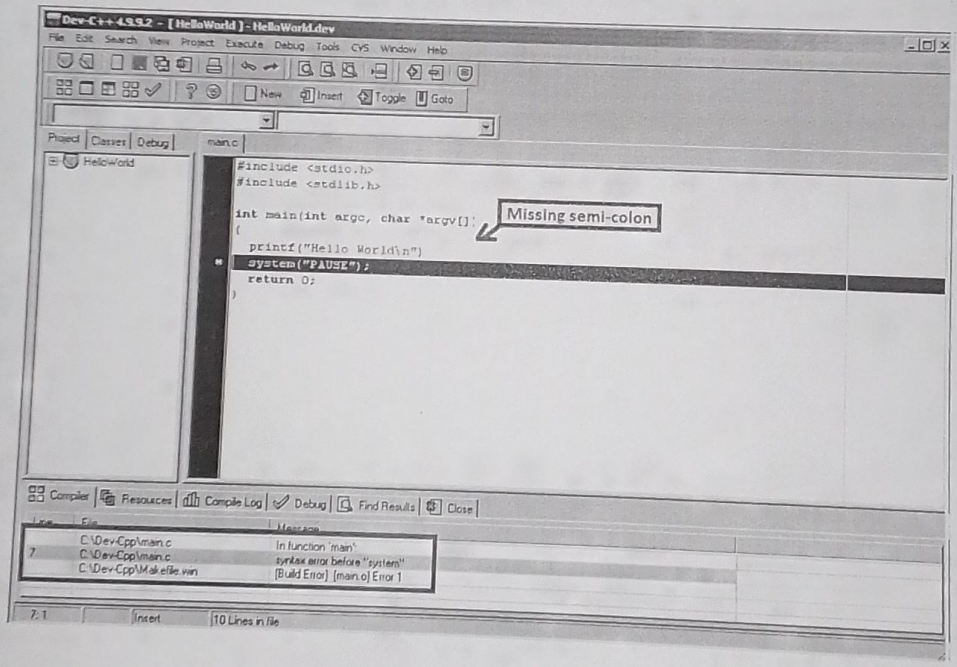
Running:

Assuming you did not make any syntax errors on your code, you should see a similar output window running your program.



Compile Failed

If you try to compile a code which has syntax errors, Compiler window lists the errors with their line numbers. You can double click the error and see the error highlighted in the code.



Review Questions/ Exercise:

1. Discuss the steps necessary to produce executable file?

An executable file is created through the Compilation process where a program's source code is translated into object code and then assembled with libraries to produce a file that can be run on an Operating system.

2. Discuss the purpose of Compiler & the file needed by compiler?

Programmers use Compilers to translate high-Leavel programming Languages into Machine Code that Computers can Undestand and execute. "Main purpose" Translation, Optimization, Error Detection, Abstraction.

3. Discuss the linker & the file needed by the linker?

Combines input files into a single output file. The Linker is a crucial component in the Software development process, responsible for combining various pieces of code and data into a single executable file.