

window on the screen and save the resulting text as a separate file. This is often referred to as the *source file*. The custom is that the text of a C program is stored in a file with the extension .c for C language

4. Compiling

This is the translation of the source file must be translated into machine understandable form - binary numbers. An intermediate file called the **object** code - with the extension .obj is produced.

5. Linking

This is the integration of library file information with the intermediate code of your program to produce the final program file that you execute or run. The final file is called the **executable** file - .exe file. Library files are used by a programmer to enable his/her program perform some special task for which a function has been written by a manufacturer.

You can then run .exe files as you run applications, simply by typing their names at the **DOS** prompt or run using Windows menu.

6. Test the program

This involves checking whether the system does what it is supposed to do. Programs may have bugs (errors). Debugging involves the finding and fixing of program errors.

7. Maintain the program

This involves modifying a program as need may arise. This is easily made possible if you document the program clearly and follow good program design practices.

What is C?

- C is a **compiled language**. This means that once you write your C program, you must run it through a **C compiler** to turn your program into an **executable** that the computer can run (execute).
- C is a general-purpose language which has been closely associated with the Unix operating system for which it was developed - since the system and most of the programs that run it are written in C.
- C supports structured programming
- C is a middle level language. This refers to the fact that C can be used to write low level programs as well as high level programs.

Factors that make C popular

Declaration Statements

In C, all variables must be declared before they are used (discussed later).
Line 4 is a declaration for an integer variable called num.

Assignment and expression statements

The statement num =1; (Line 5) is an assignment statement.

Escape Sequences

Escape sequences (also called back slash codes) are character combinations that begin with a backslash symbol (\) used to format output and represent difficult-to-type characters. One of the most important escape sequences is \n, which is often referred to as the new line character. The program below displays the following output on the screen.

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