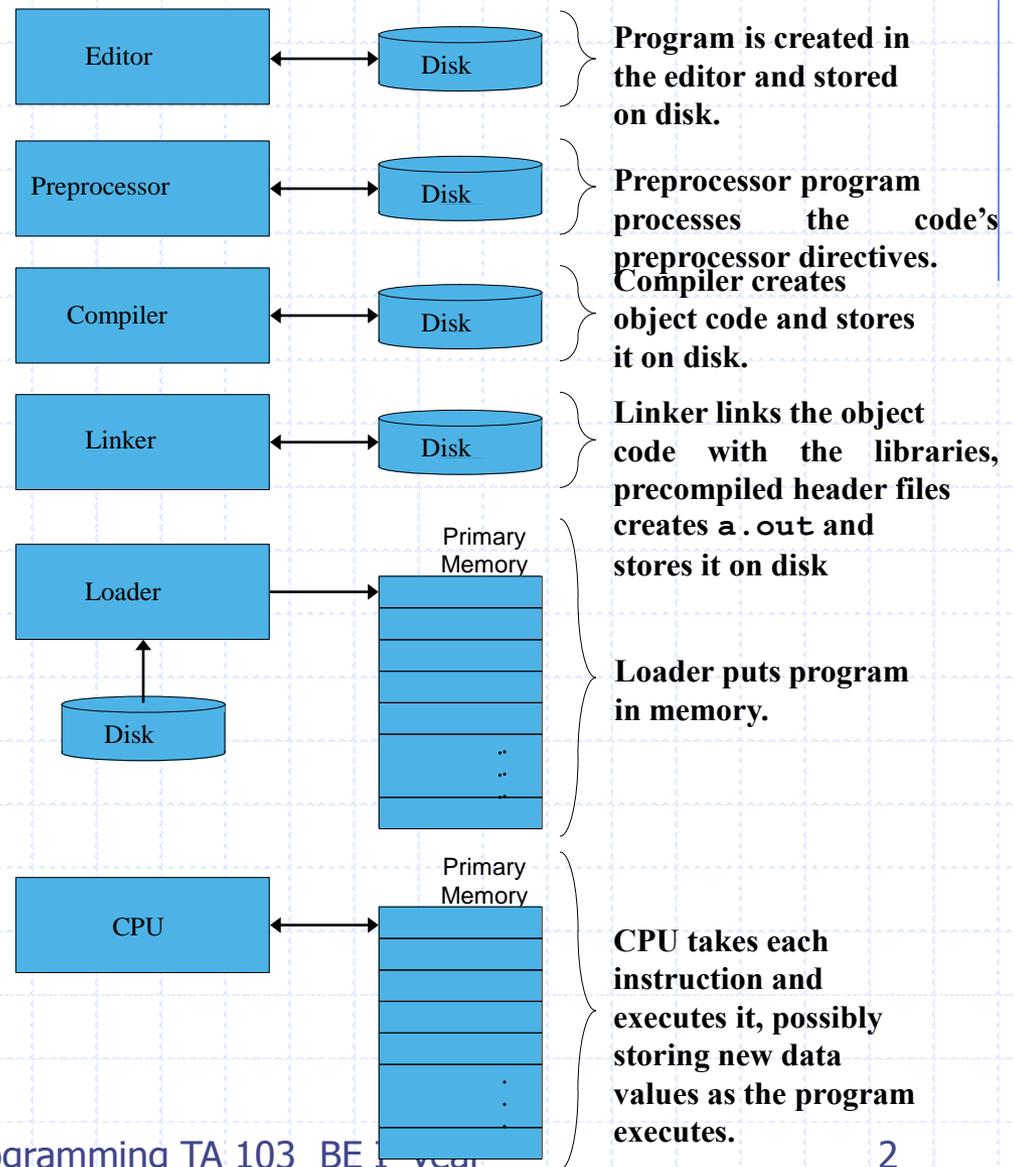


First C Program

a Typical C Environment

Phases of C Programs:

1. Edit
2. Preprocess
3. Compile
4. Link
5. Load
6. Execute



First Program in C

```
// my first program in C  
#include <stdio.h>  
int main ()  
{  
    printf("Hello World!");  
}
```

Output : Hello world

◆ // my first program in C

◆ This is a comment line. All the lines beginning with two slash signs (//) are considered comments and do not have any effect on the behavior of the program. They can be used by the programmer to include short explanations or observations within the source itself. In this case, the line is a brief description of what our program does.

◆ **#include <stdio.h>**

Sentences that begin with a pound sign (#) are directives for the preprocessor. They are not executable code lines but indications for the compiler. In this case the sentence **#include <stdio.h>** tells the compiler's preprocessor to include the **stdio** standard header file. This specific file includes the declarations of the basic standard input-output library in C and it is included because its functionality is used later in the program. Header files are precompiled. <> bracket means that the file is in the directory include.” ” means that the file can be in the current directory or C Software Directories.

◆ **int main ()**

- This line corresponds to the beginning of the **main** function declaration. The **main** function is the point where all C programs begin their execution. It is independent of whether it is at the beginning, at the end or in the middle of the code - its content is always the first to be executed when a program starts. In addition, for that same reason, it is essential that all C programs have a **main** function. **main** is followed by a pair of parenthesis **()** because it is a function. In C all functions are followed by a pair of parenthesis **()** that, optionally, can include arguments within them. The content of the **main** function immediately follows its formal declaration and it is enclosed between curly brackets **{ }**, as in our example.

◆ Printf("Hello World")

- This instruction does the most important thing in this program. Printf is the standard output statement in C (usually the screen), and the full sentence inserts a sequence of characters (in this case "Hello World") into this output stream (the screen). printf is declared in the stdio.h header file, so in order to be able to use it that file must be included. Notice that the sentence ends with a semicolon character (;). This character signifies the end of the instruction and must be included after every instruction in any C program (one of the most common errors of C programmers is indeed to forget to include a semicolon ; at the end of each instruction).