compilation & execution process

compiler
Assembler

Stdio.h
p f( )
sf( )
puts( )
gets( )

Preprocessing

compiler

Assembly language

abx 01 36x
Add ptr
01 5cs

Assem code

Assembler

Machine level code (.Obj) file

Linker

① ②

(.exe) file (executable)

c lib

Runner → result output

OS
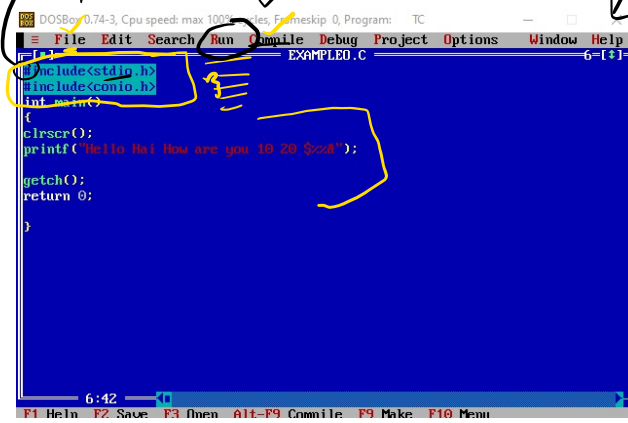
```
/*
                    Online C Compiler.
            Code, Compile, Run and Debug C program online.
Write your code in this editor and press "Run" button to compile and execute it.
*********************************************************/

#include <stdio.h>

int main()
{
    printf("Hello World");

    return 0;
}
```

DOSBox 0.74-3, Cpu speed: max 100% cycles, Frameskip 0, Program: TC

≡ File Edit Search Run Compile Debug Project Options Window Help
EXAMPLE0.C

```
#include<stdio.h>
#include<conio.h>
int main()
{
clrscr();
printf("Hello Hai How are you 10 20 $co8");

getch();
return 0;

}
```

6:42

F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu

```
Source Code (.c file)
        |
        v
Preprocessor (#include, macros, comments removal)
        |
        v
Compiler (Converts to Assembly code)
        |
        v
Assembler (Converts Assembly → Object code [.obj/.o])
        |
        v
Linker (Links Object code + C Libraries → Executable [.exe])
        |
        v
Loader (Loads program into memory)
        |
        v
Execution (Program runs on CPU)
```