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SECTION: B

Question 01: What are the steps in the program execution cycle in Dev C++? Explain each in your own words.

Following are the steps involved in the program execution cycle in Dev C++ :-

WRITING THE CODE:

The very first step when developing a program is to write a code by understanding all the demands which should be fulfilled by that program. Dev C++ is one of the most powerful and useful editor for writing codes. This editor provides an Integrated Development Environment (IDE) which makes writing codes a lot easier. The code written is known as the source code and is saved with .c extension, this code cannot be understood by the computer directly.

COMPILING:

Compiling is the process in which the errors are caught to make sure that the code follows the rules of C language. If no errors are found then it converts the human-readable source code into machine-readable object code, saved with .obj extension. If any error is found then no object code file is generated.

LINKING:

Linking is the process of combining the object code file with library files to form the executable program. This file is saved with .exe extension. If any error is found during the linking process no executable file is formed.

LOADING:

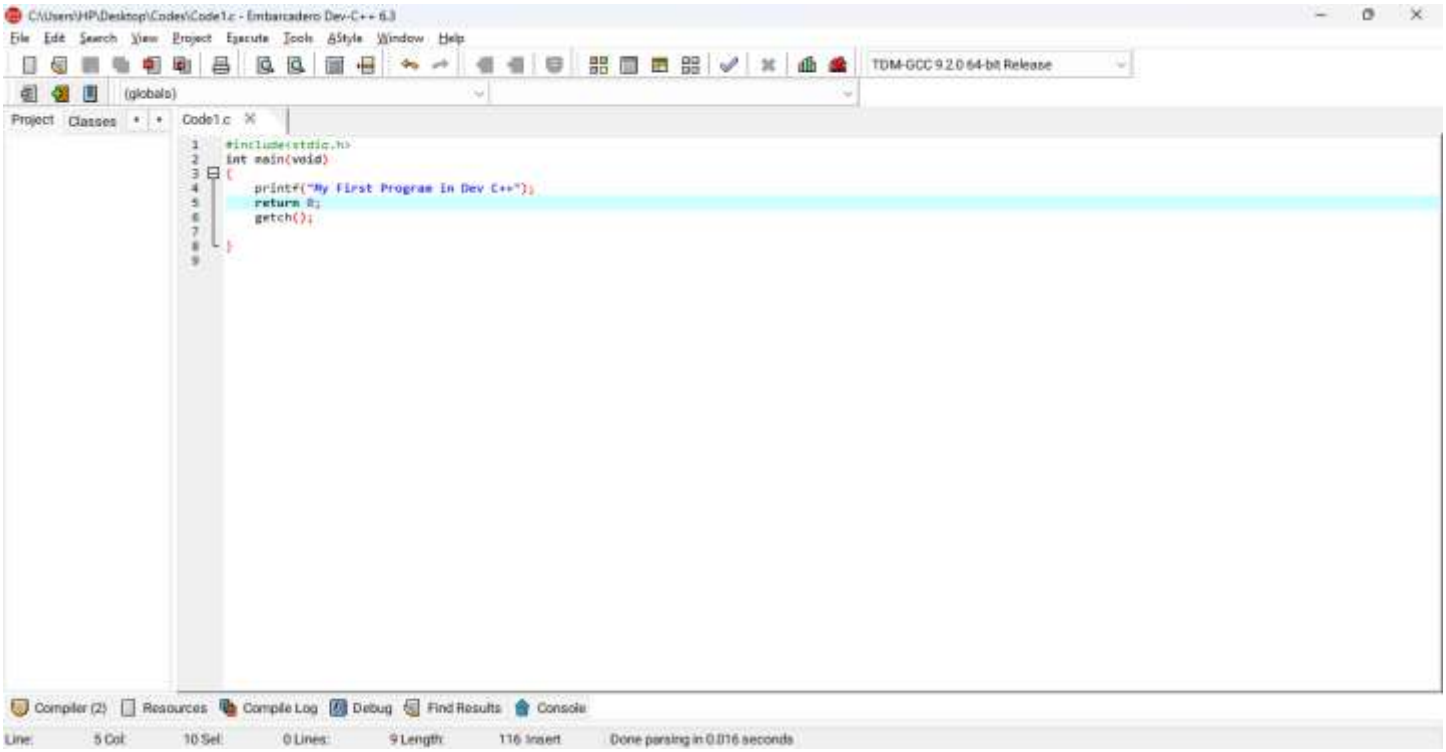
Loading is the process of allocating storage for the executable file in RAM so that it can be ready for execution.

RUN:

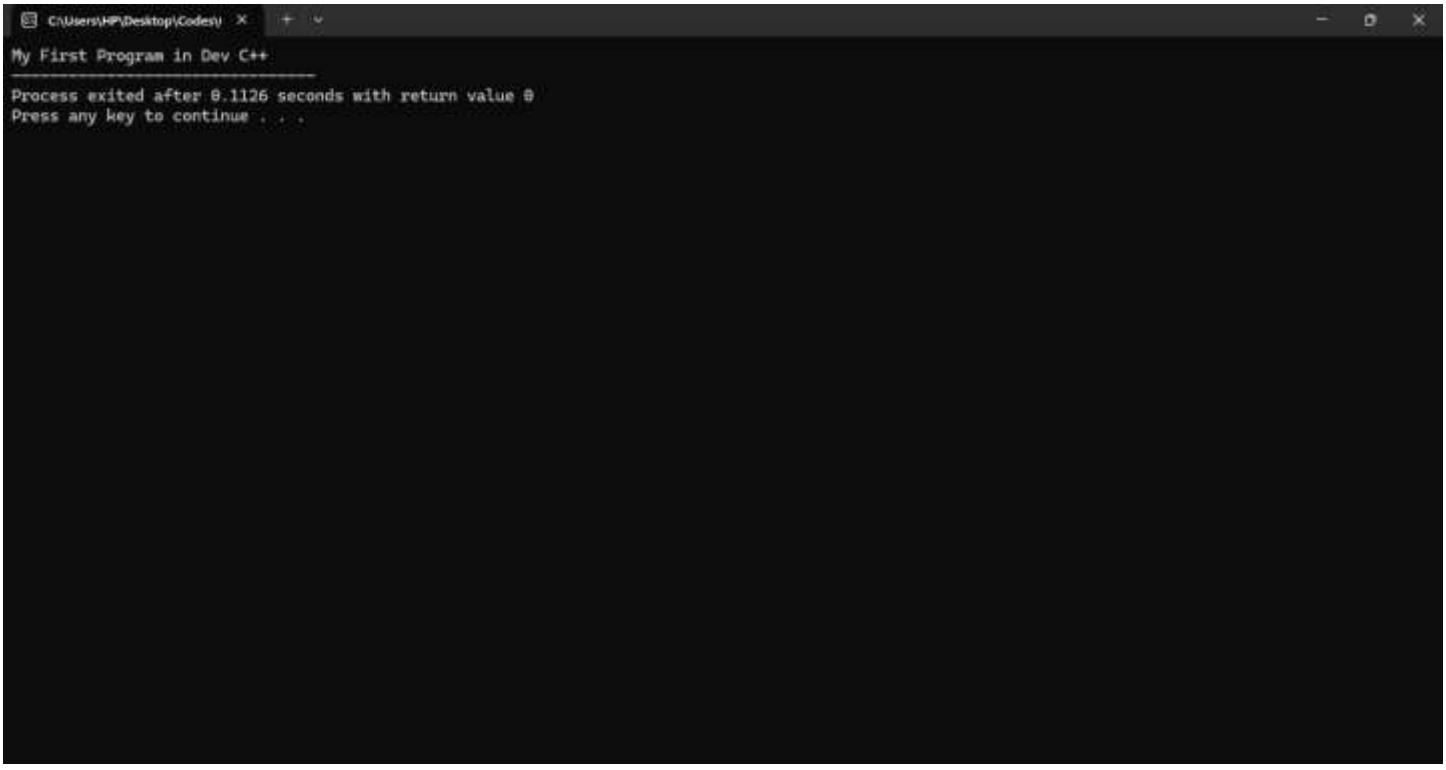
Once the memory is allocated to the executable file. The control is given to the CPU to start running the program by reading the instructions line by line so the necessary output can be seen by the user.

Question 02: Write a simple C program in Dev C++ that prints “My first program in Dev C++”. Compile and run it.

SOURCE CODE:



OUTPUT:



Question 03: What is carriage return. Explain the difference between \n and \t with examples.

CARRIAGE RETURN (\r) :

Carriage return is an escape sequence in C language which is assigned to do specific task. It is represented by '\r'. It brings the cursor to the beginning of the current line unlike \n which moves the cursor to the beginning of the next line. If more characters are written after \r then it will overwrite the existing characters in the same line.

For Example:

CODE:

```
#include<stdio.h>
int main(void)
{
	printf("Welcome to Dev C++\rHello");
	getch ();
	return 0;
}
```

OUTPUT:

Hellome to Dev C++

(It first prints Welcome to Dev C++ then the \r moves the cursor to the beginning of the line and overwrites Hello)

DIFFERENCE BETWEEN \n AND \t :

NEWLINE CHARACTER (\n)	HORIZONTAL TAB CHARACTER (\t)
It is used to move the cursor to the beginning of the next line.	It is used to give space between a word or character, it typically moves the cursor 8 spaces away.

For Example:
CODE:
`#include<stdio.h>`
`int main(void)`
`{`
`printf("Hello\nEveryone!");`
`getch ();`
`return 0;`
`}`
	For Example:
	CODE:
	`#include<stdio.h>`
	`int main(void)`
	`{`
	`printf("Hello\tEveryone!");`
	`getch ();`
	`return 0;`
	`}`

OUTPUT: Hello Everyone	OUTPUT: Hello Everyone

\n is used when you want line breaks.	\t is used when you want extra spacing on the same line.