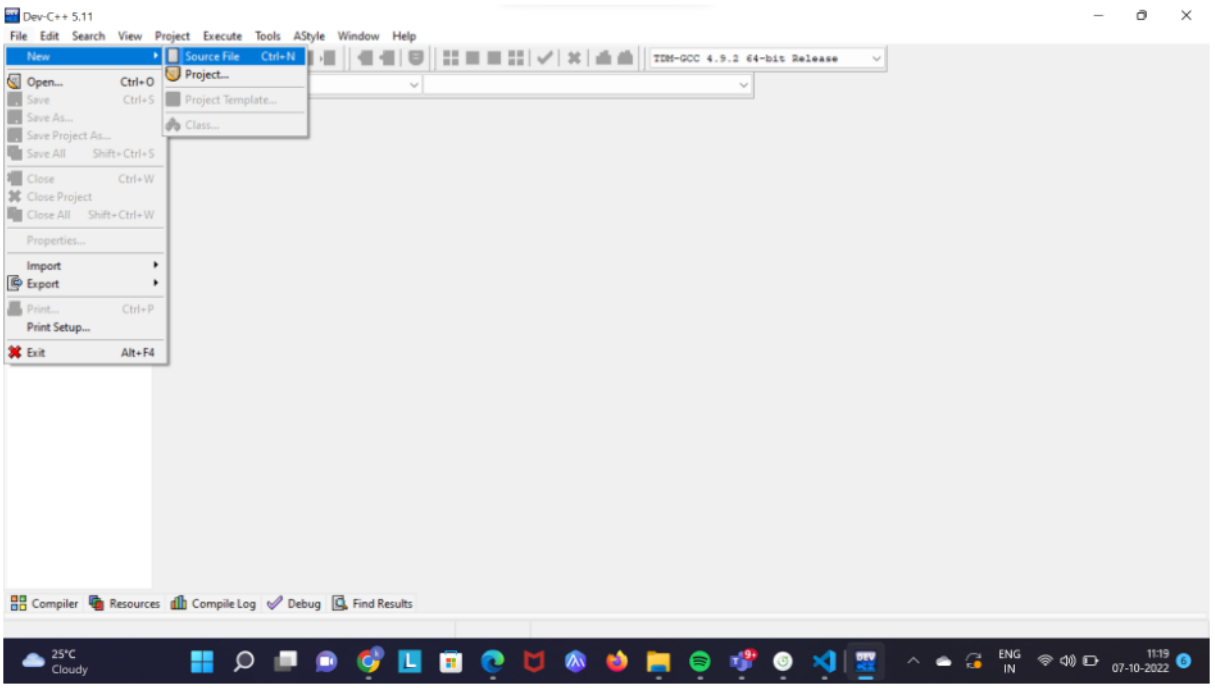
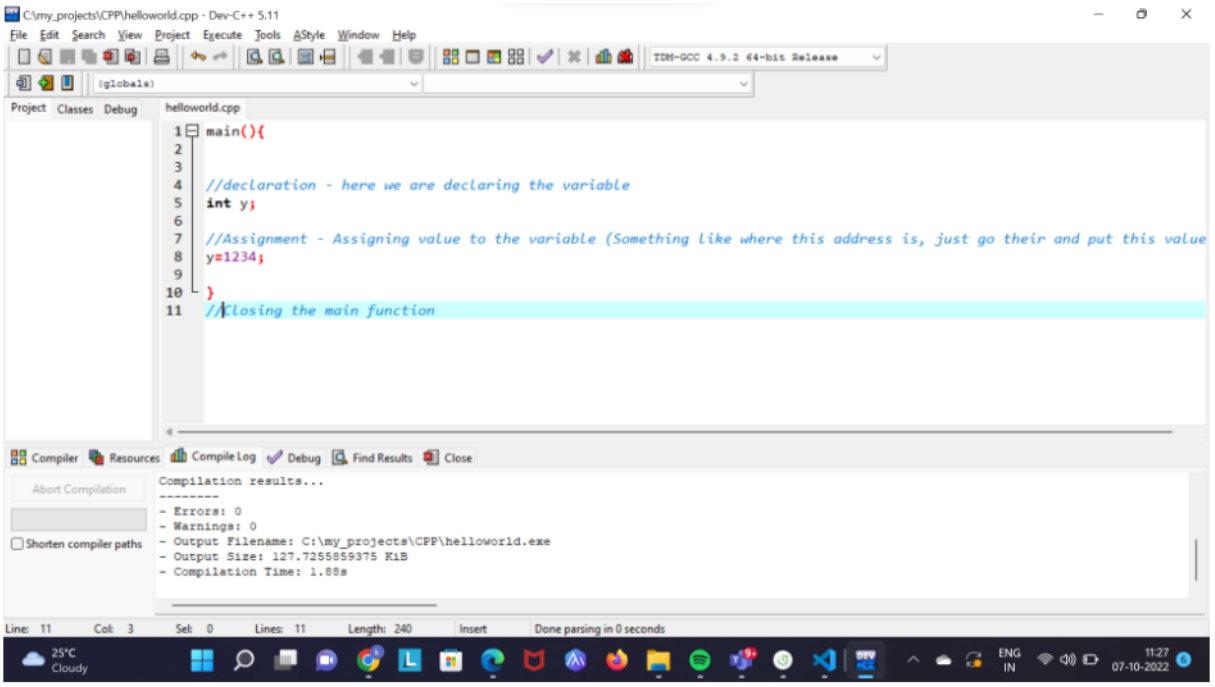
Summary

Session No 1 And 2

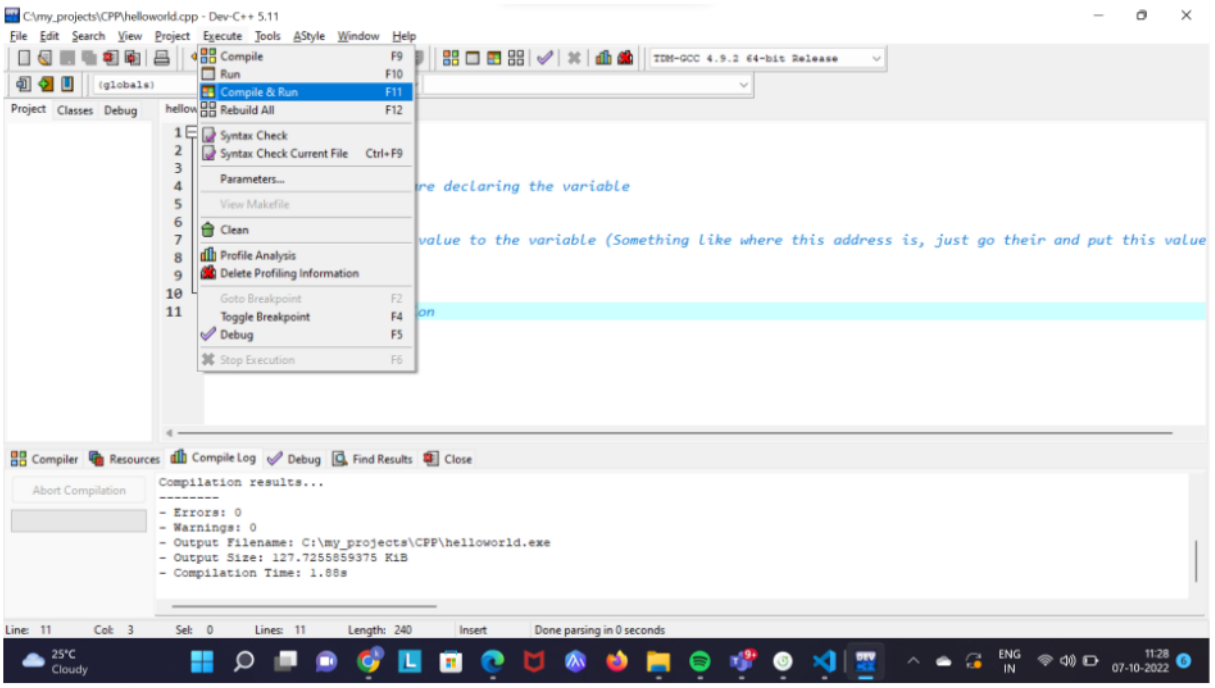
- CPP is One of the Old programing language which is very fast and used in the multiple fields like for OS development, Games, Browsers, IOT Devices and many more
- We are using CPP because it is fast and widely used and provide us functionality to direct interact with hardware(Ram , CPU)
- C/CPP have capability which helps us directly to go into RAM and manage our data in our own way
- We use CPP so that we can run our program in very limited ram such that 3-4KB, Which is normally used in the IOT devices
- To Run CPP program we need an IDE, Here we would be using DEV C++ IDE
- Install DEV C++ with mingw - https://sourceforge.net/projects/orwelldevcpp/files/Compilers/MinGW/
    - Install Dev C++ with all by default options

- Program file - A file which understood the instructions
- Memory manager - A manager which manage our data in RAM(memory)
- Algorithm - A sequence of statements that collectively achieves a goal
- Developer - A person who write the instructions in a programming language
- To create a Source File - Launch DEV C++ and go to **file** -> **New- Source File** 👇
- 

- Semicolon (;) denotes the end of an statement
- To declare and Assign a value to a variable 👇



- To execute your CPP file - Go to **Execute**- Click on **Compile & Run** 👇



- Here we have Included one of the CPP library(**iostream**)and So that we can print the output in the console with the help of **cout**

helloworld.cpp

```cpp
//including liberary
#include "iostream"
main(){


//declaration - here we are declaring the variable
int y;

//Assignment - Assigning value to the variable (Something like where this address is, just go their and put this val
y=1234;

std:: cout<<"Output - " ;
//Printing a string value in console

std::cout <<y;
//printing the value of "y" in the console
}
```

- If we will run this code then output will be -

```
C:\my_projects\CPP\helloworld.exe
Output - 1234
--------------------------------
Process exited after 0.1205 seconds with return value 0
Press any key to continue . . .
```

- CPP is one of the top languages which has the capability to get the exact physical address of the RAM where your data is stored. With the help of **pointers** we can retrieve the exact address where our data is stored. here **&y** has the address of RAM where our data is stored

```cpp
std::cout<<&y;
```

Output-

```
0x6ffe1c
--------------------------------
Process exited after 0.1263 seconds with return value 0
Press any key to continue . . .
```

- We can declare and Initialize a variable in one line also, like shown below

```cpp
int x=5;

std::cout<<x;
```