

Objectives:

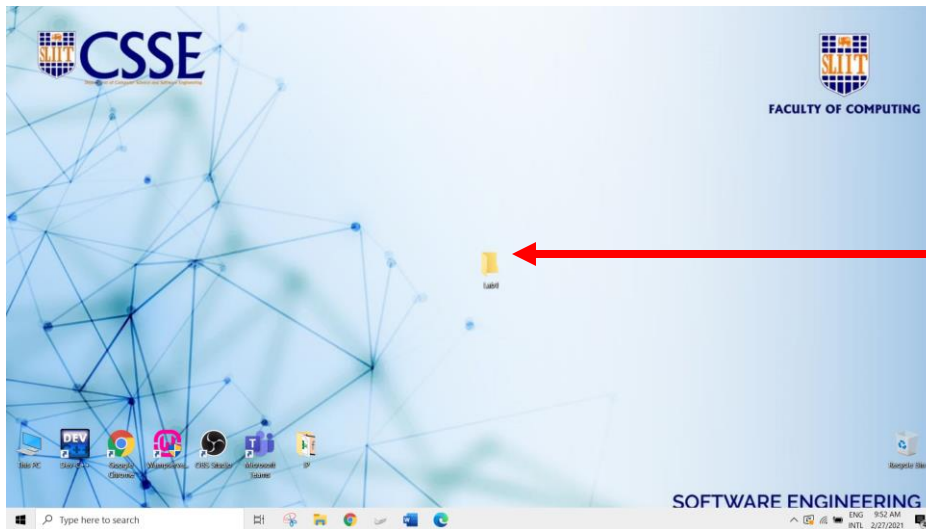
At the end of the class the students should be able to:

- Create a source code file using Dev C++ to write a C program.
- Use printf statement in C programming.

Exercise 1

Follow the following steps to write a simple C program using Dev C++ IDE.

1. First, create a folder in your desktop or C drive and name it as **Lab1**.



Lab1
Folder

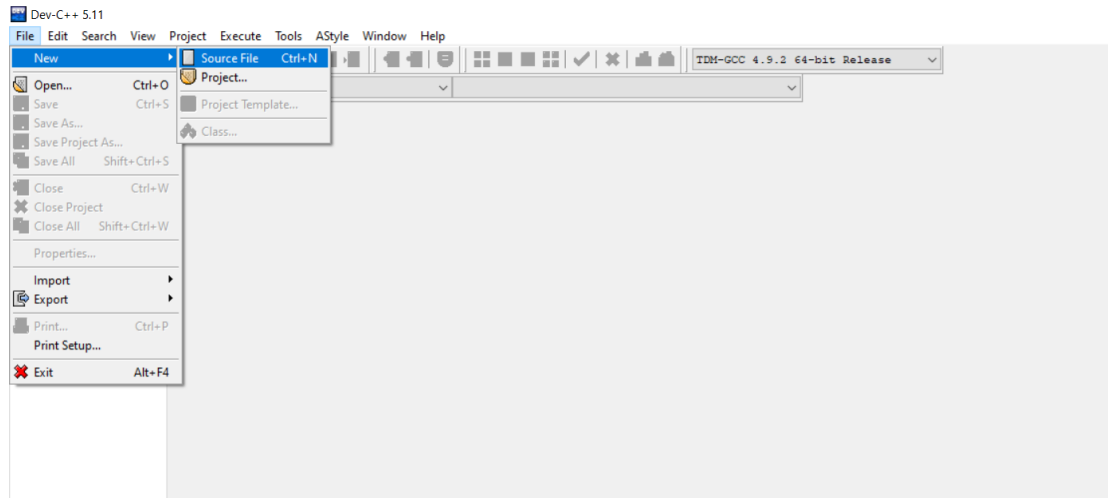
BSc (Hons) in Information Technology Year 1

Lab Sheet 01

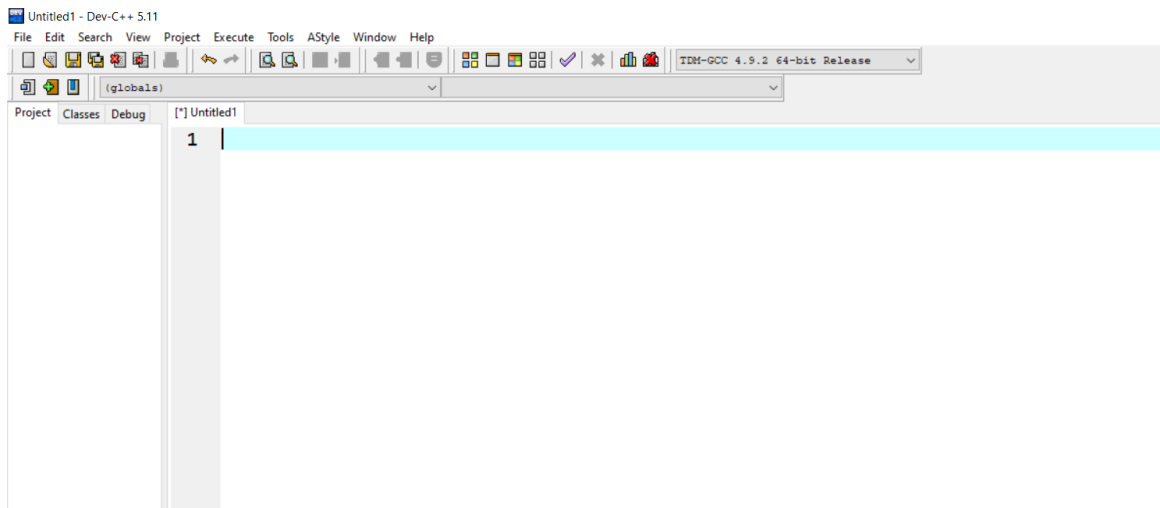
IT1010 – Introduction to Programming

Semester 1, 2021

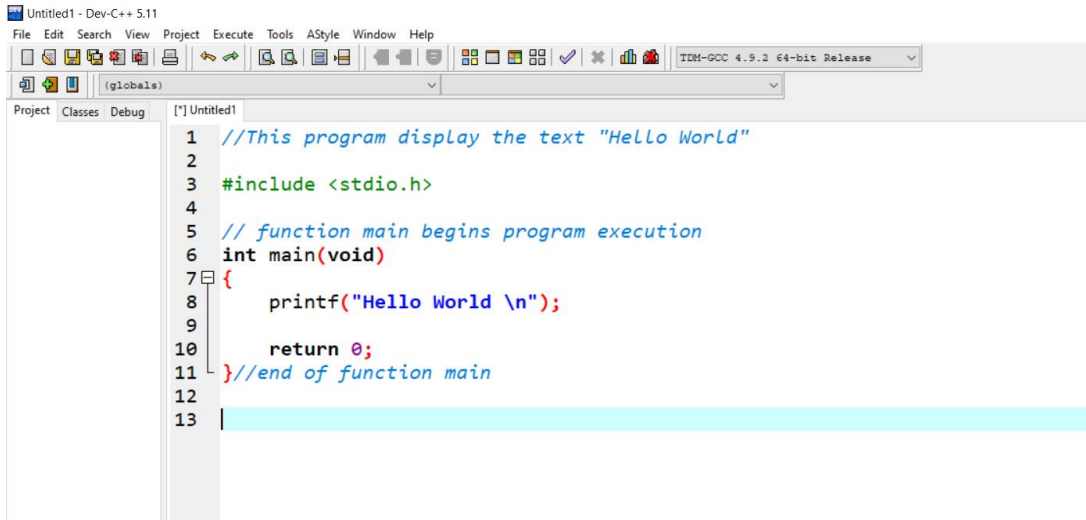
2. Next open Dev C++ IDE and select
File → New → Source File



3. A source file will be created as shown below.



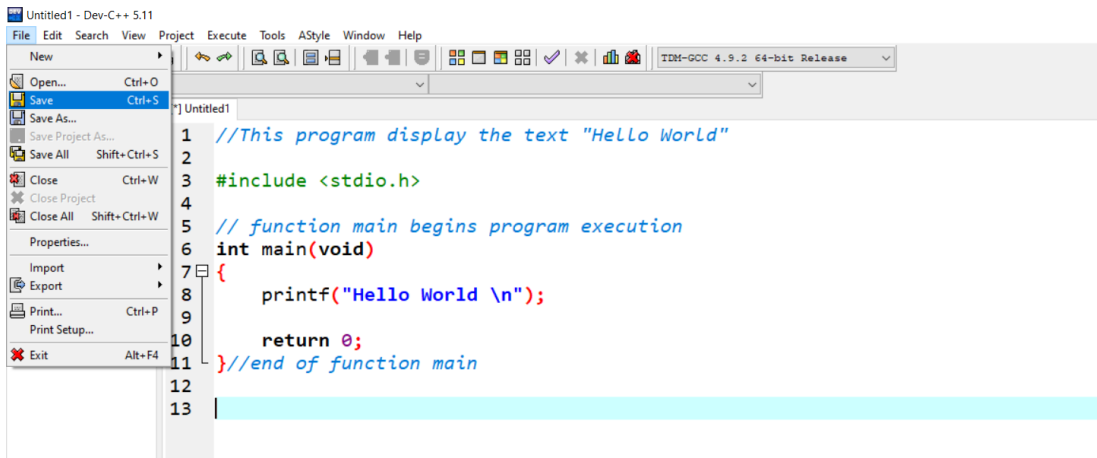
4. Now, type the following program.



```
1 //This program display the text "Hello World"
2
3 #include <stdio.h>
4
5 // function main begins program execution
6 int main(void)
7 {
8     printf("Hello World \n");
9
10    return 0;
11 }//end of function main
12
13
```

5. Save the source file as **exercise1** inside the folder **Lab1** in your desktop.

File → Save



```
1 //This program display the text "Hello World"
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3 #include <stdio.h>
4
5 // function main begins program execution
6 int main(void)
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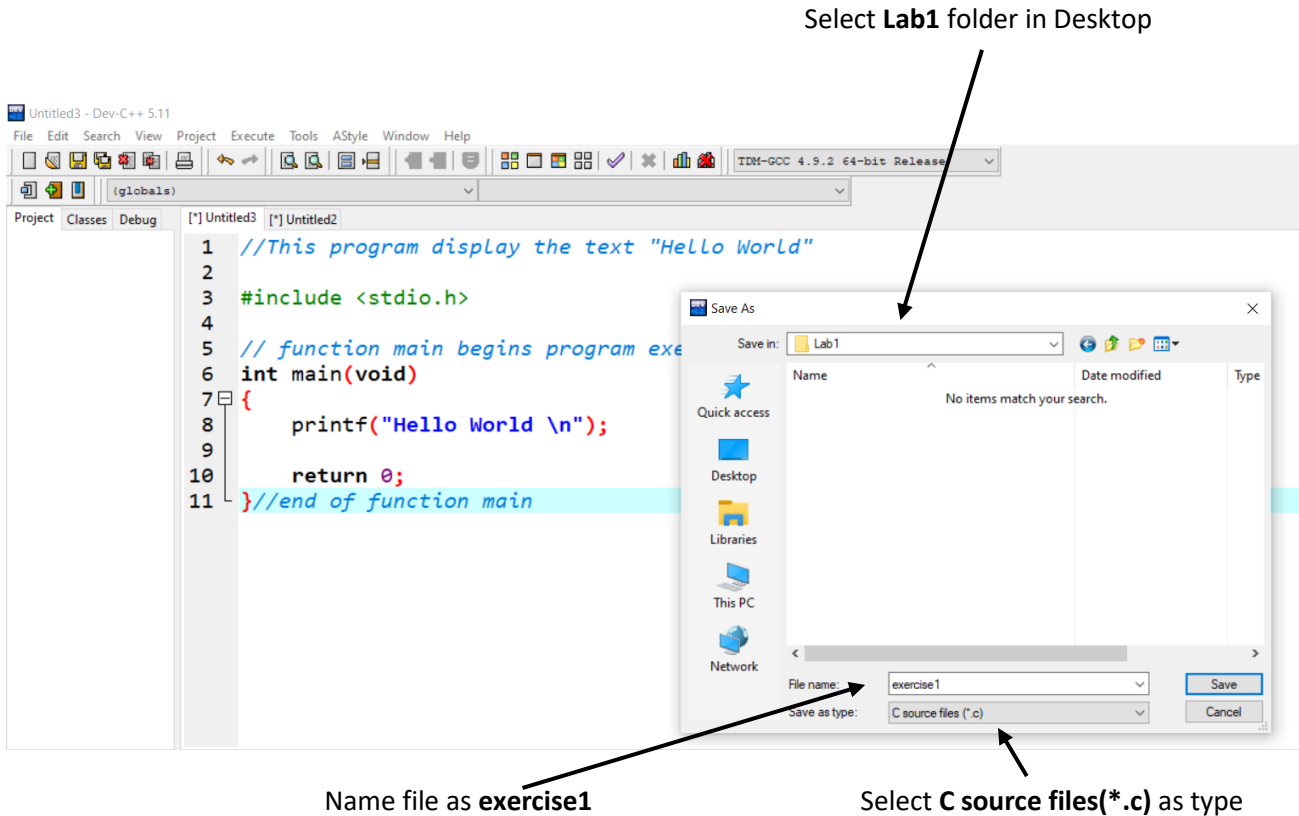
BSc (Hons) in Information Technology Year 1

Lab Sheet 01

IT1010 – Introduction to Programming

Semester 1, 2021

Select **Lab1** folder in Desktop



Save As

Save in: Lab1

Name: exercise1

Save as type: C source files (*.c)

Name file as **exercise1**

Select **C source files(*.c)** as type

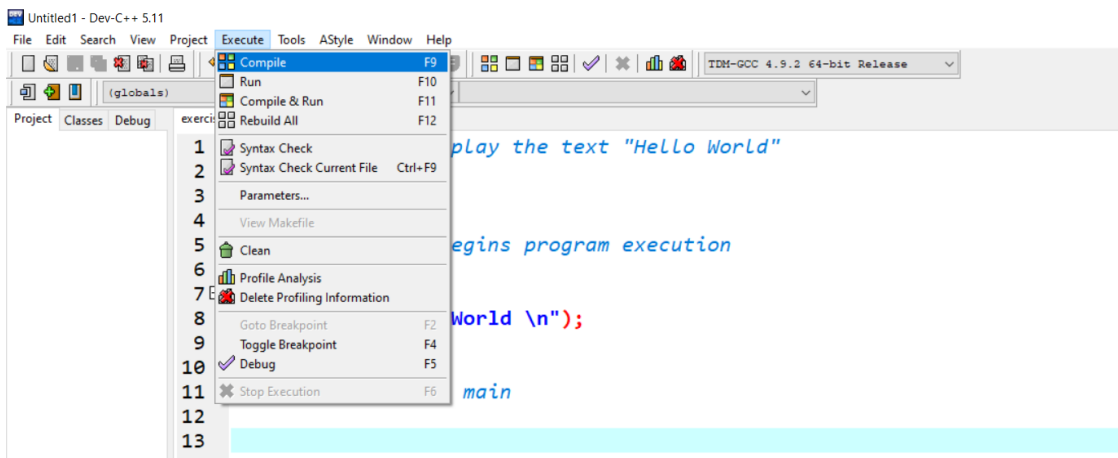
```

1 //This program display the text "Hello World"
2
3 #include <stdio.h>
4
5 // function main begins program execution
6 int main(void)
7 {
8     printf("Hello World \n");
9
10    return 0;
11 }//end of function main
  
```

Here, you have saved your source file as a C file called **exercise1.c**

6. Compile C file.

Execute → Compile



Execute

Compile

Run

Compile & Run

Rebuild All

Syntax Check

Syntax Check Current File

Parameters...

View MakeFile

Clean

Profile Analysis

Delete Profiling Information

Goto Breakpoint

Toggle Breakpoint

Debug

Stop Execution

```

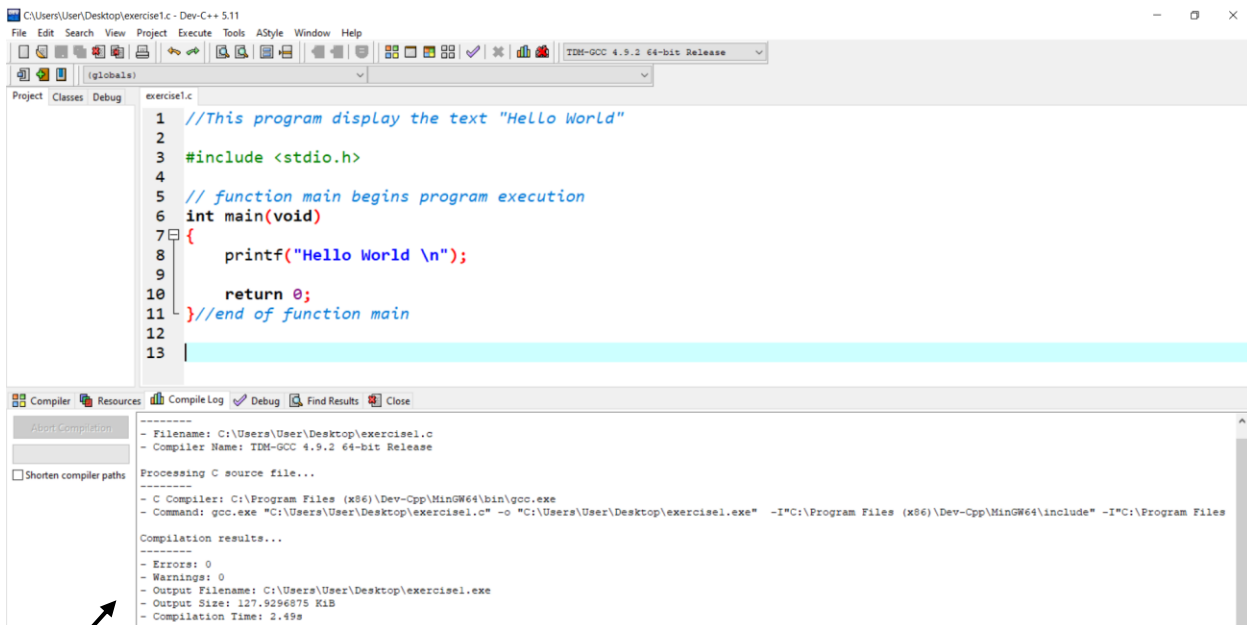
1 //This program display the text "Hello World"
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```

BSc (Hons) in Information Technology Year 1

Lab Sheet 01

IT1010 – Introduction to Programming

Semester 1, 2021



The screenshot shows the Dev-C++ IDE with a C program named 'exercise1.c' open. The program is a simple 'Hello World' program. Below the code editor, the 'Compiler' window shows the compilation results, indicating that the program compiled successfully with no errors or warnings.

```

1 //This program display the text "Hello World"
2
3 #include <stdio.h>
4
5 // function main begins program execution
6 int main(void)
7 {
8     printf("Hello World \n");
9
10    return 0;
11 }//end of function main
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13

```

Compiler Output:

```

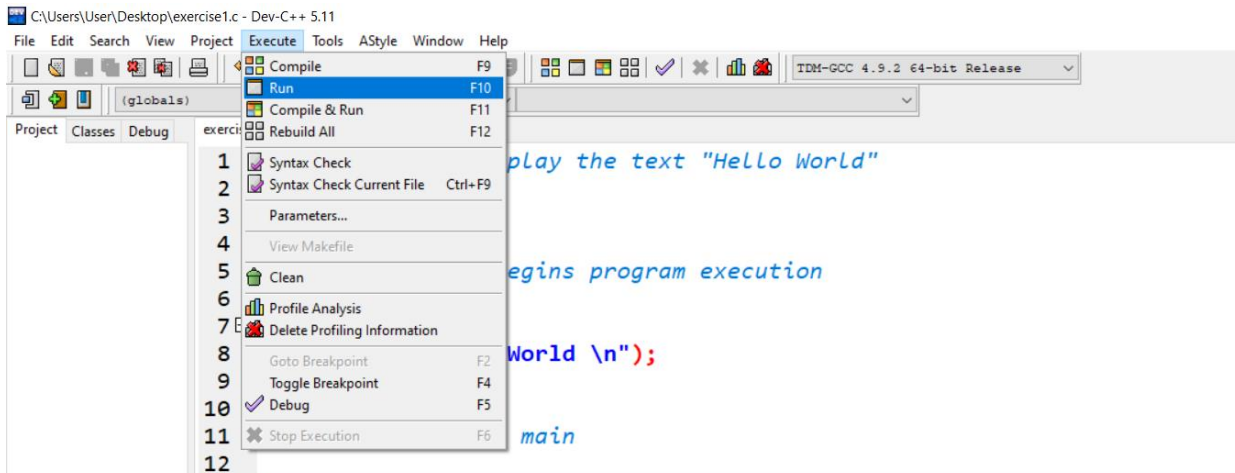
-----
- Filename: C:\Users\User\Desktop\exercise1.c
- Compiler Name: TDM-GCC 4.9.2 64-bit Release
-----
Processing C source file...
- C Compiler: C:\Program Files (x86)\Dev-Cpp\MinGW64\bin\gcc.exe
- Command: gcc.exe "C:\Users\User\Desktop\exercise1.c" -o "C:\Users\User\Desktop\exercise1.exe" -I"C:\Program Files (x86)\Dev-Cpp\MinGW64\include" -I"C:\Program Files
-----
Compilation results...
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\User\Desktop\exercise1.exe
- Output Size: 127,929,675 KiB
- Compilation Time: 2.49s

```

Compilation errors and warnings

- If you have zero errors and warnings, execute the C program.

Execute → Run



The screenshot shows the Dev-C++ IDE with the 'Execute' menu open. The 'Run' option is highlighted, which is the action to execute the compiled program.

```

1 //This program display the text "Hello World"
2
3 #include <stdio.h>
4
5 // function main begins program execution
6 int main(void)
7 {
8     printf("Hello World \n");
9
10    return 0;
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```

Execute Menu:

- Compile (F9)
- Run (F10)
- Compile & Run (F11)
- Rebuild All (F12)
- Syntax Check
- Syntax Check Current File (Ctrl+F9)
- Parameters...
- View Makefile
- Clean
- Profile Analysis
- Delete Profiling Information
- Goto Breakpoint (F2)
- Toggle Breakpoint (F4)
- Debug (F5)
- Stop Execution (F6)

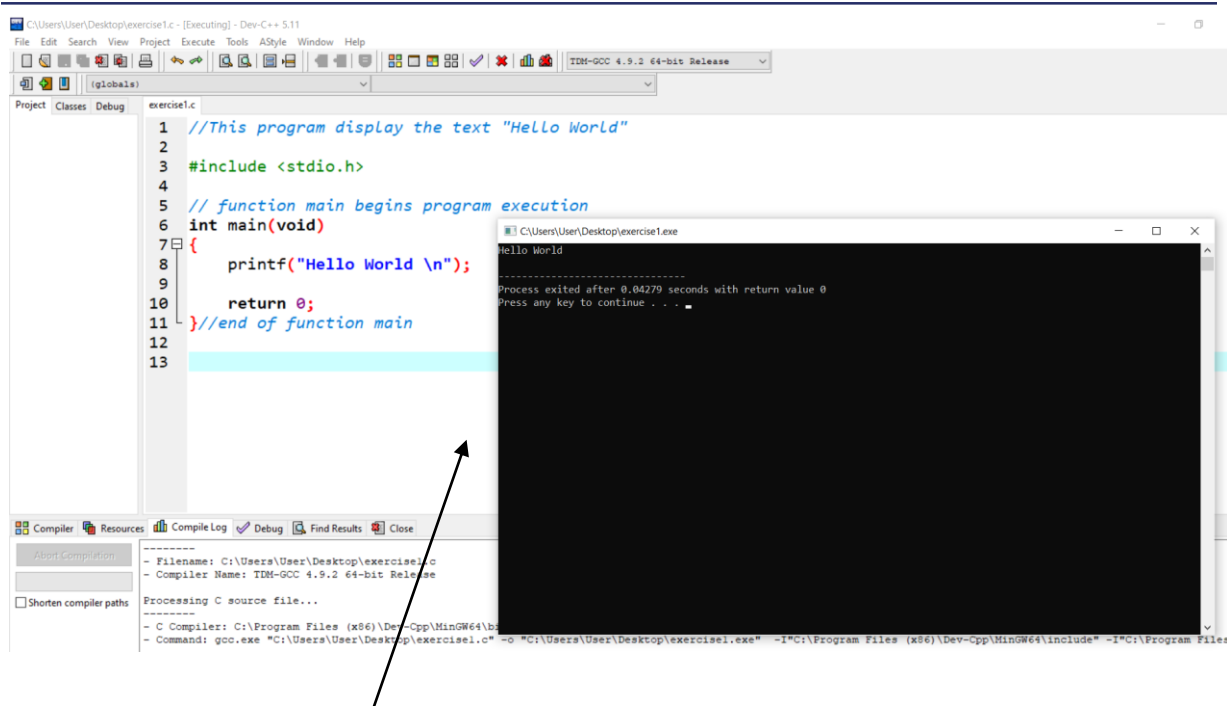
BSc (Hons) in Information Technology

Year 1

Lab Sheet 01

IT1010 – Introduction to Programming

Semester 1, 2021



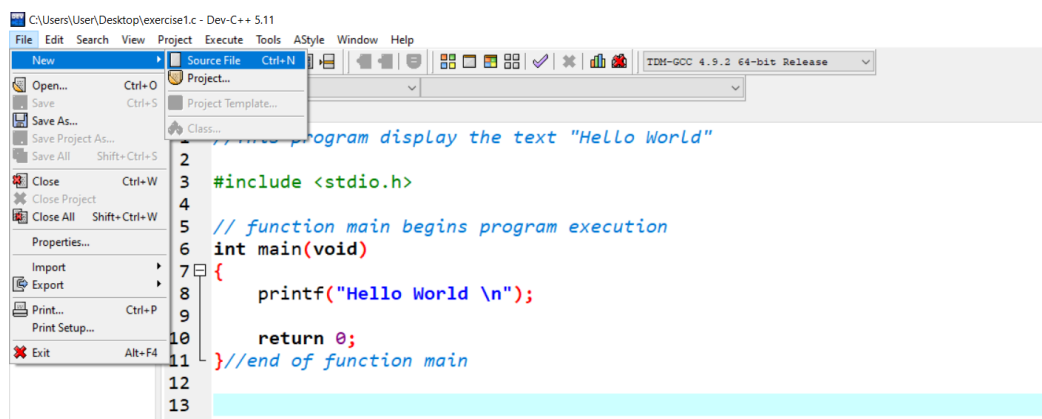
Output of the C program

Exercise 2

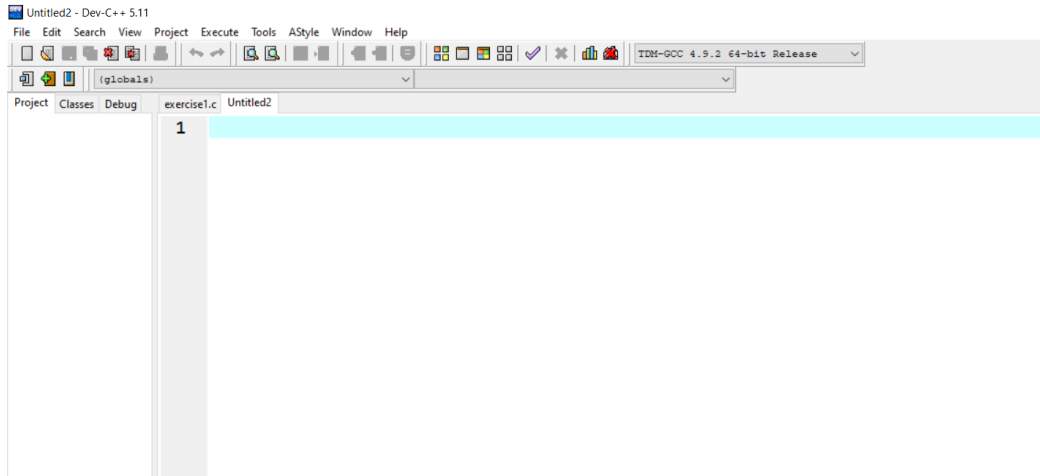
Write a C program to display the message “My First C program” with the words separated by tabs.
(Hint : You need to use `\t` to keep tab spaces between these words)

1. Create another source file

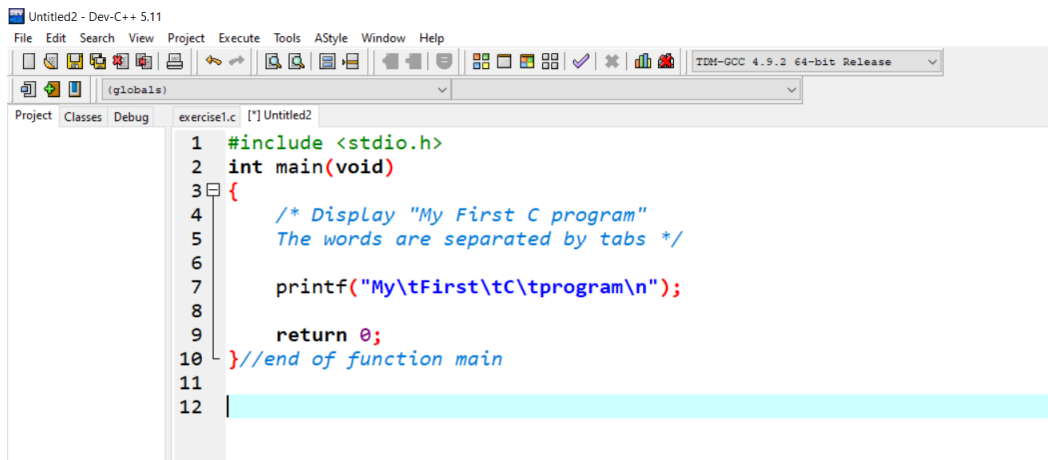
File → New → Source File



2. As following, a new source file will be created.

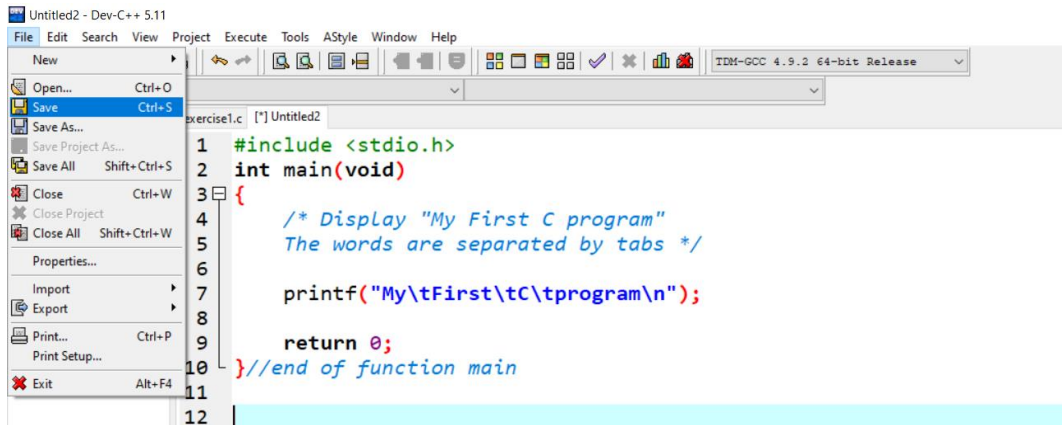


3. Now, type the relevant program.

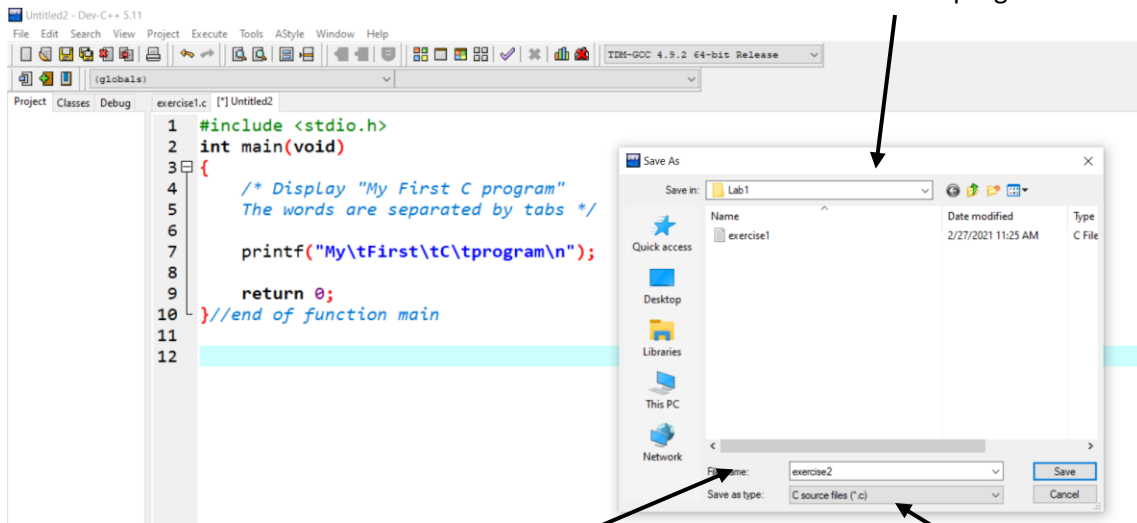


4. Save the source file as **exercise2** inside the folder **Lab1** in your desktop.

File → Save



We can use same folder **Lab1** to save second C program

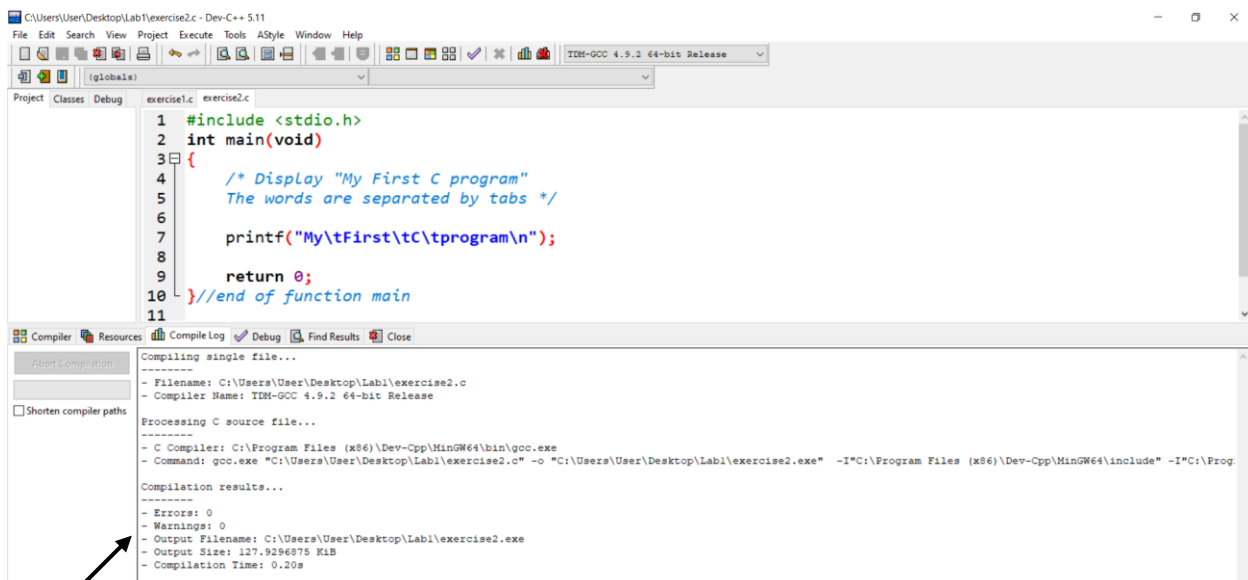
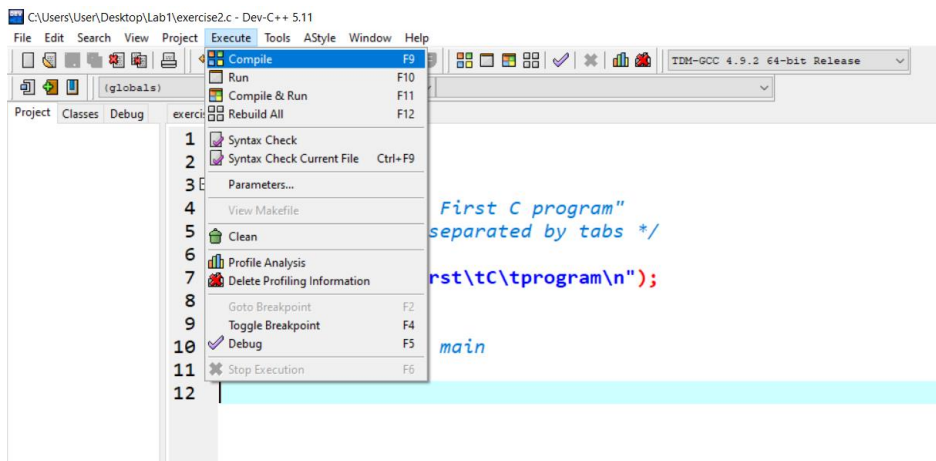


Name C file as **exercise2**

Select **C source files(*.c)** as type

5. Compile the program.

Execute → Compile



Compilation errors and warnings

BSc (Hons) in Information Technology Year 1

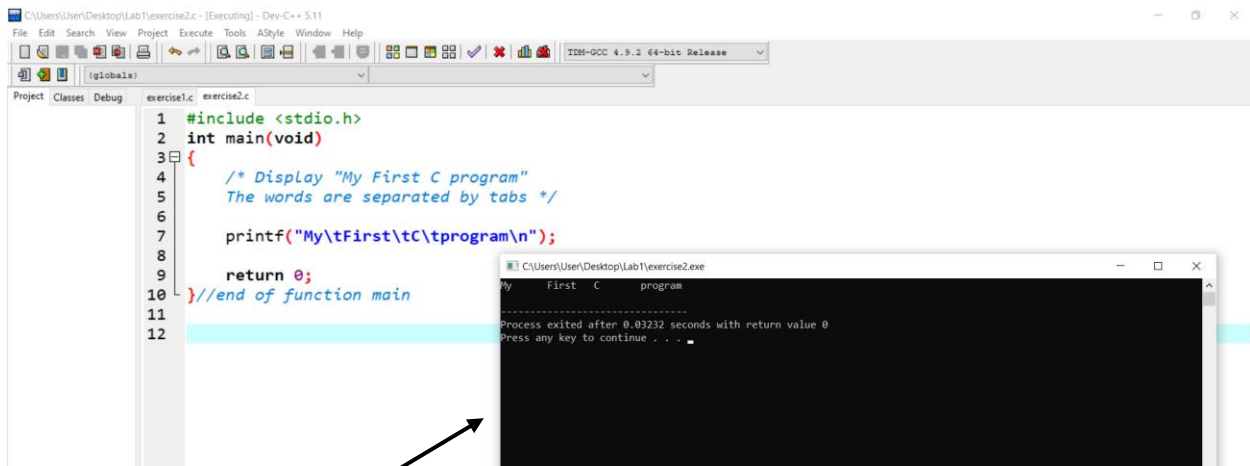
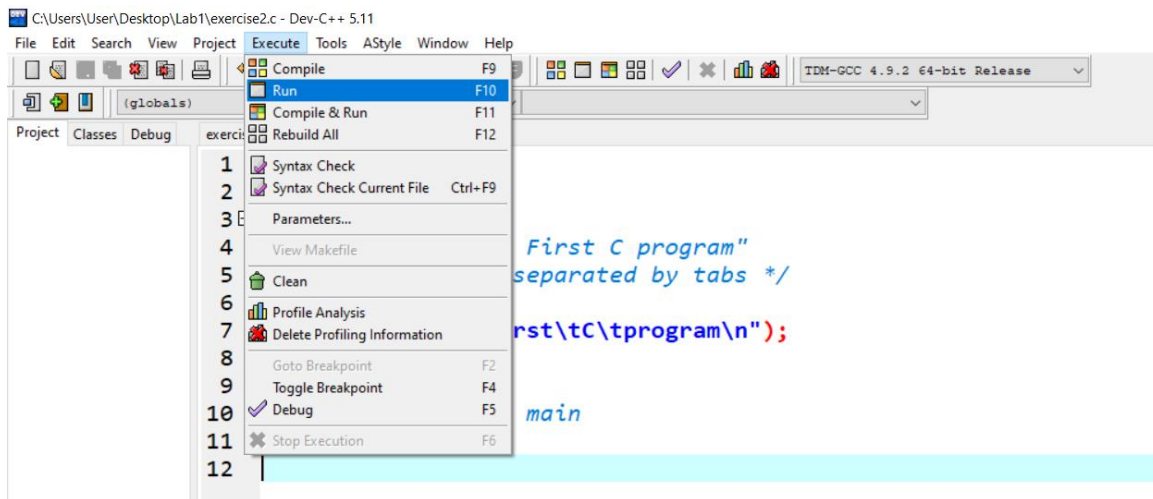
Lab Sheet 01

IT1010 – Introduction to Programming

Semester 1, 2021

6. Run the program.

Execute → Run



Output of the second C program

BSc (Hons) in Information Technology Year 1

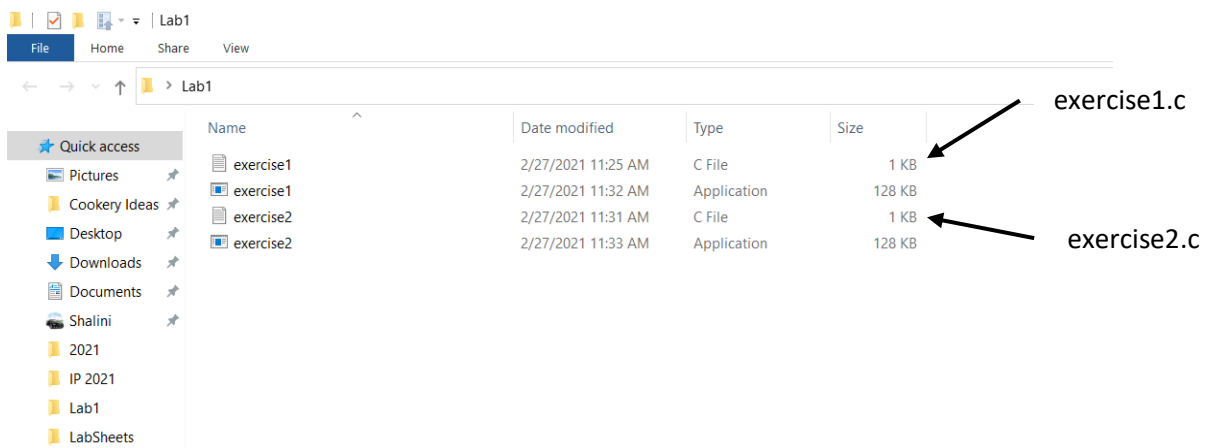
Lab Sheet 01

IT1010 – Introduction to Programming

Semester 1, 2021

Here, you can store all the C files that are created in Lab sheet 01 within same folder.

Inside the **Lab1** folder in your Desktop, now there are two C files that we have saved earlier.



Exercise 3

Write a C program to print your name, date of birth and student ID number in following format.

(Hint : Use one printf statement)

Name : Thedas Perera

DOB : July 14, 1999

ID : IT21234567

Exercise 4

Write a C program to print following table format that includes Student name and preferred subject.

(Hint : use `\n` and `\t` to to format your output)

```
=====
Name      Subject
=====
Amal      English
Mali      Sinhala
Nipun     History
```