



Programming Fundamental

Week 02 - Lab Manual



Introduction

Welcome to your favorite programming Lab. In this lab manual, we shall work together to learn and implement new programming concepts

Skills to be learned:

- Writing, compiling, and executing a program to print the output on the screen.
- Using special directives to control output on the screen

Let's do some coding.

Skill: Writing, compiling, and executing a program to print the output on the screen.

Introduction

In this lab, we will learn how to write a basic structure of a c++ program. In addition, we will learn to print the desired text on the console screen.

Task 01(WP): Write, Compile and Execute a C++ Program to Print Hello World on Screen.

- 01: Create a new Text Document.
- 02: Rename the file as **test**.
- 03: Write down the **Basic structure** of the C++ program.

```
*test.txt - Notepad
File Edit Format View Help
#include<iostream>
using namespace std;

int main() {

    return 0;
}
```

Skill: Writing, compiling, and executing a program to print the output on the screen.

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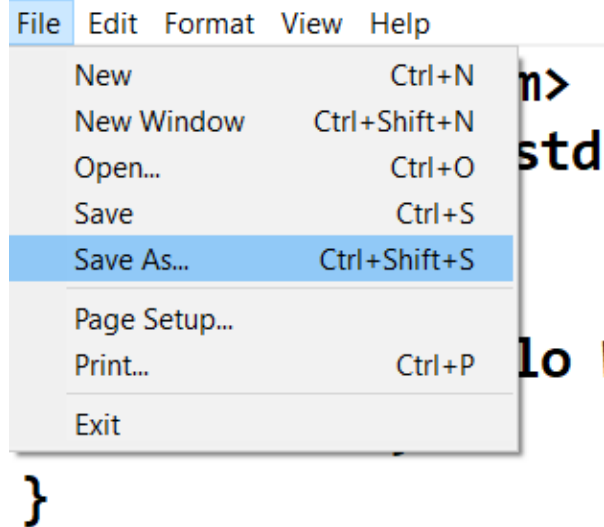


Use the **cout**<< command to print the desired output on the screen.

```
test.txt - Notepad
File Edit Format View Help
#include<iostream>
using namespace std;

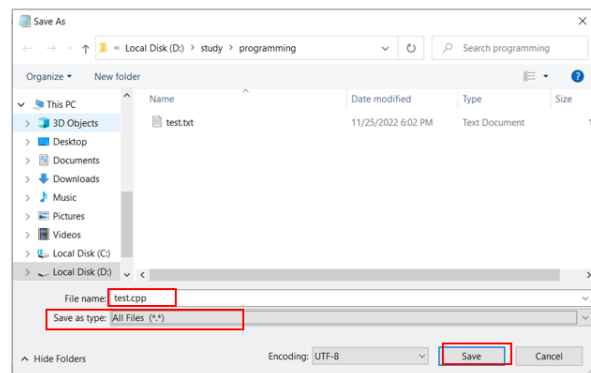
int main() {
    cout << "Hello World!";
    return 0;
}
```

Click on **File > Save As**.



Change the file extension to **.cpp**
Change the save as type **All Files(“.”)**

Choose the **Save** from the bottom buttons.



Now, use the previous knowledge to open the **Command Prompt** and **navigate** to the **working directory**.

```
D:\study\programming>
```

Skill: Writing, compiling, and executing a program to print the output on the screen.

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Now, **Compile the file** using the following command.

Syntax:

c++ file.cpp -o compiledfile.exe

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.2130]
(c) Microsoft Corporation. All rights reserved.

D:\study\programming>c++ test.cpp -o test.exe
D:\study\programming>
```

Write the name of the created **object file** to **execute** it.

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.2130]
(c) Microsoft Corporation. All rights reserved.

D:\study\programming>c++ test.cpp -o test.exe
D:\study\programming>test.exe
Hello World!
D:\study\programming>
```

Congratulations !! You have conquered the Task by Compiling and Executing your First C++ Program.

Conclusion

| Command | Description |
|---|---|
| <code>cout << "statement";</code> | Used to print the "statement" on the console |
| <code>cout << endl;</code> | It is used to take the cursor to the next line. |

Skill: Writing, compiling, and executing a program to print the output on the screen.

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Skill: Using special directives to control output on the screen.

Introduction

In the last lab, you learned how to print the desired output on the screen. Let's put that skill into action now. Consider the tasks mentioned below:

Task 01(WP): Write and Execute a Program to Print a Line of Asterisks.

Sample Output:

```
D:\PF codes>c++ line.cpp -o line.exe
D:\PF codes>line.exe
*****
D:\PF codes>_
```

Solution

```
#include <iostream>
using namespace std;
int main(){

    cout<<"*****"<<endl;

    return 0;
}
```

Task 02(CL): Write and Execute a Program to Print Geometric Shapes

- Square
- Triangle
- Circle
- Parallelogram
- Hexagon

Sample Output

Skill: Using special directives to control output on the screen.

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