PROGRAMMING FUNDAMENTALS (PF)

Introduction to Programming Language, Dev C++ (with installation guide) and Basic Structure of C++ Programming.

LAB #1

SECTION: "B"

SUBMITTED TO :

MR. ANIQ REHMAN

SUBMITTED BY :

AHMED HASSAN   25-SE-053

DEPARTMENT OF COMPUTER SCIENCE
HITEC UNIVERSITY, TAXILA

OBJECTIVES :

‣ In this lab, we learned the basics of programming languages and why they are important. We also studied the basic structure of a C++ program and wrote simple programs to see how coding, compiling, and running work together.

TOOLS:

‣ DEV C++ IDE

LAB TASKS
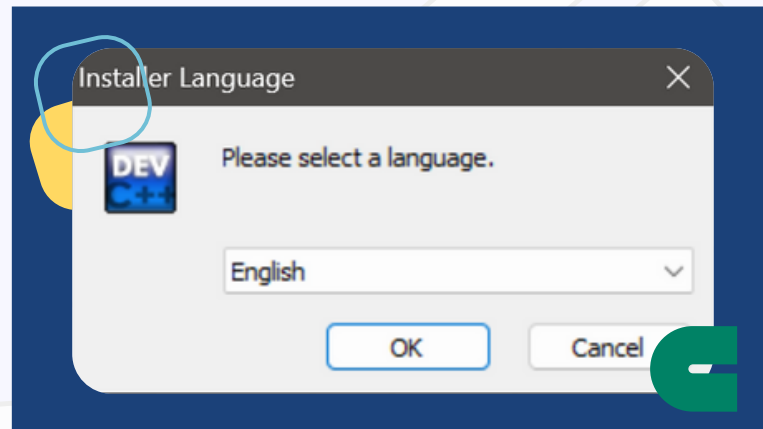
1. Install Dev C++ and show all steps.

STEP 1 :

‣ Head over to https://sourceforge.net/projects/embarcadero-devcpp/ and download the Dev-C++ .exe file
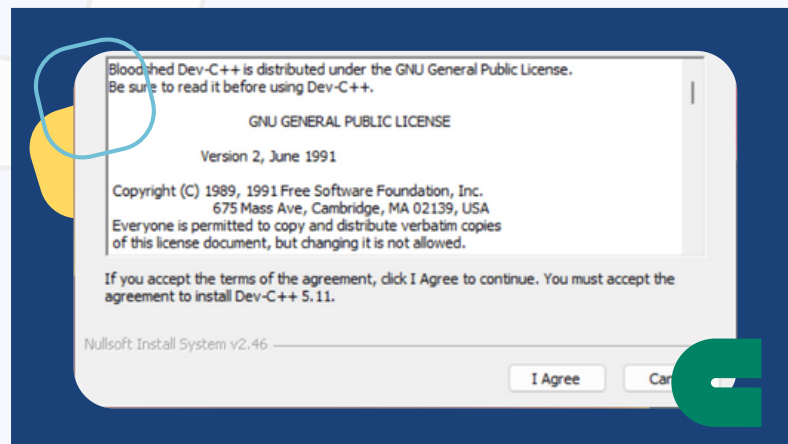
STEP 2:

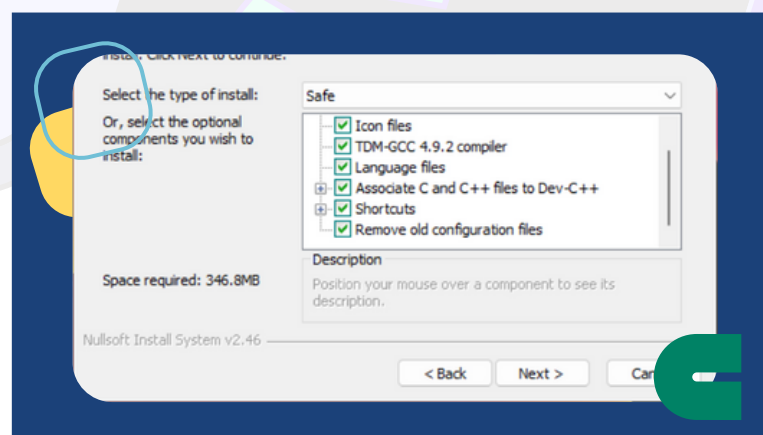‣ Open the installer and select a language.

STEP 3:

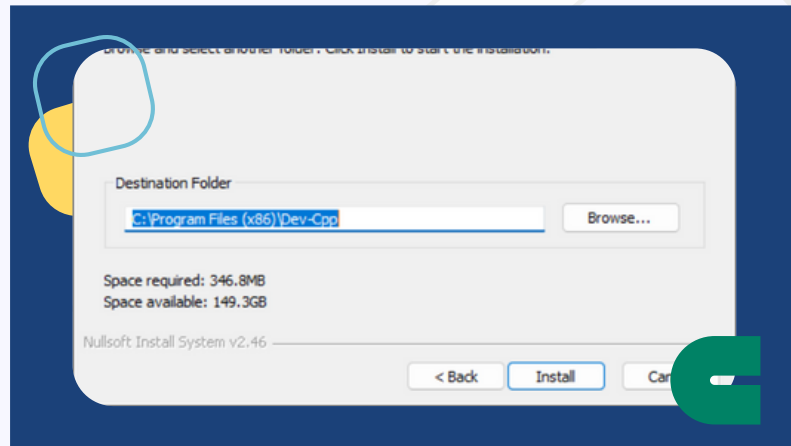‣ Click on **I AGREE** on the license agreement.

STEP 4:

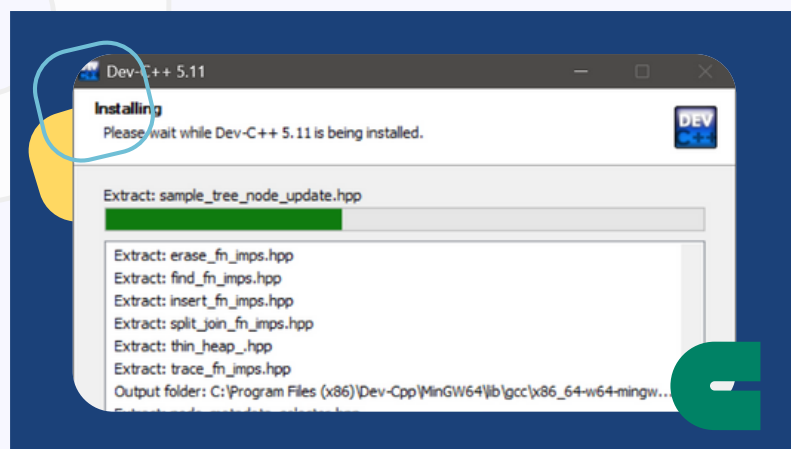‣ Click on all required components for installation.

STEP 5:

‣ Select Destination folder for installation.
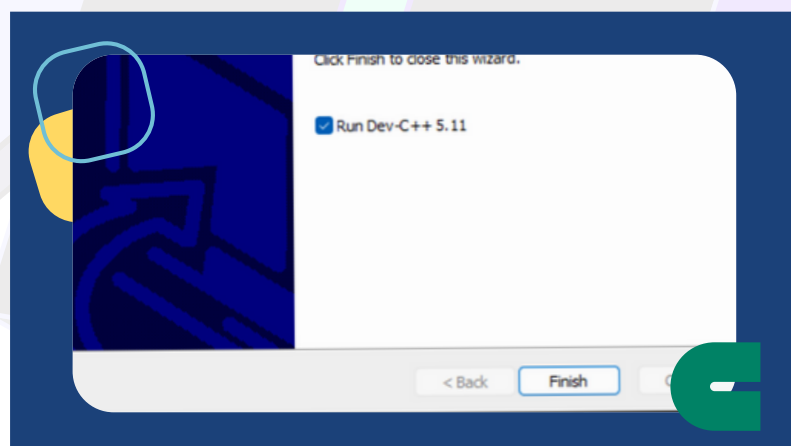

STEP 6:
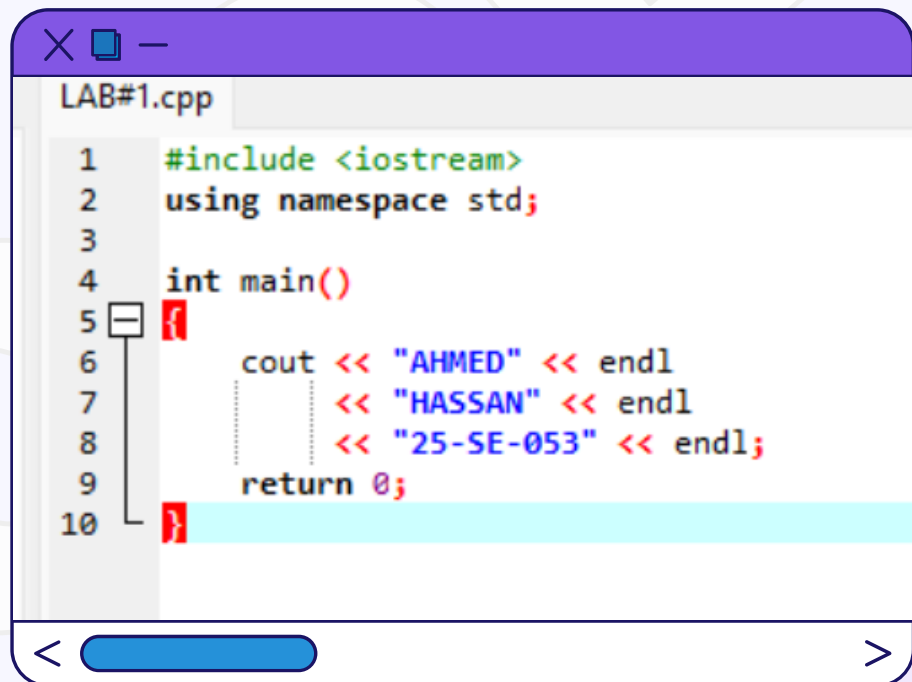
‣ Wait for installation to get completed.

STEP 7:
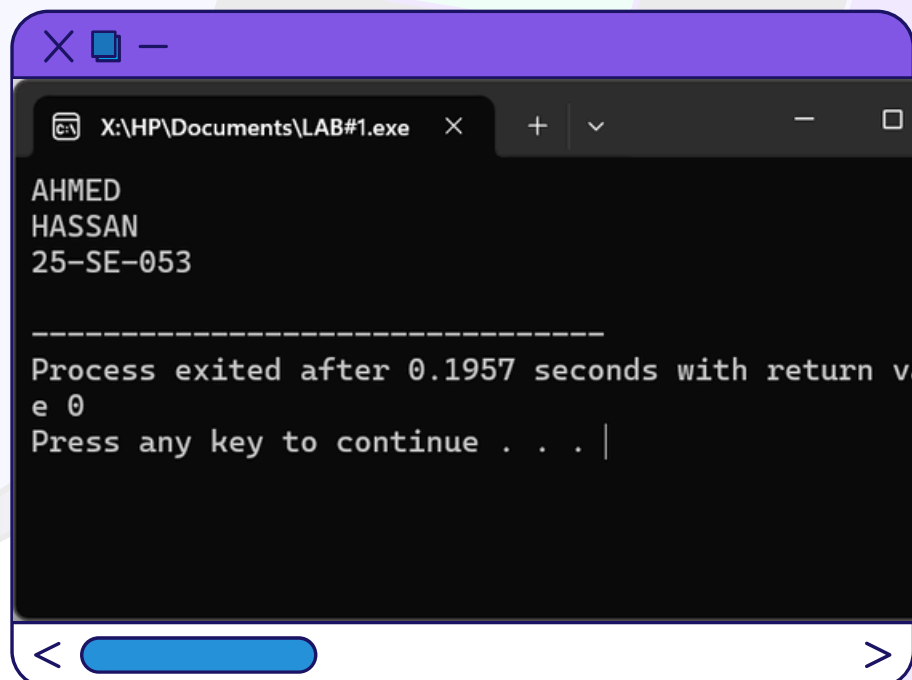
‣ Click on Finish and run Dev CPP.

2. Write and run a program to print your first name on the first line, your last name on the second line and your registration number on the third line using only "cout" statement.

1. **CODE :**

```cpp
LAB#1.cpp
1    #include <iostream>
2    using namespace std;
3
4    int main()
5    {
6        cout << "AHMED" << endl
7             << "HASSAN" << endl
8             << "25-SE-053" << endl;
9        return 0;
10   }
```
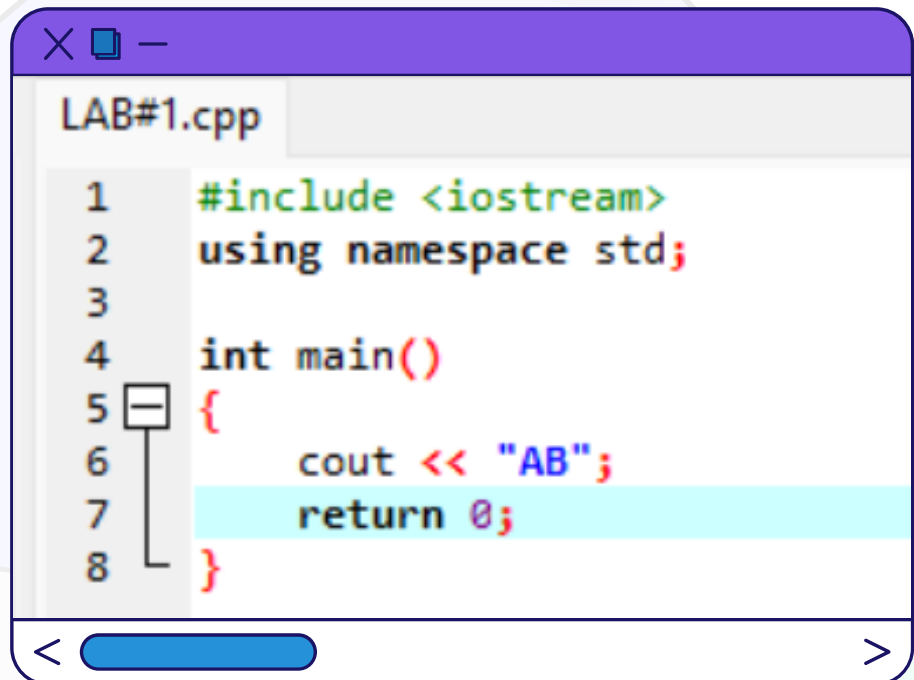
OUTPUT :

```
X:\HP\Documents\LAB#1.exe          X    +    ∨

AHMED
HASSAN
25-SE-053


-----------------------------------
Process exited after 0.1957 seconds with return v
e 0
Press any key to continue . . . |
```

2 . CODE :

```cpp
LAB#1.cpp

1    #include <iostream>
2    using namespace std;
3
4    int main()
5    {
6        cout << "AB";
7        return 0;
8    }
```

OUTPUT :

```
X:\HP\Documents\LAB

AB
------------------------------------
Process exited after 0.1875 seconds wit
rn value 0
Press any key to continue . . .
```

3. CODE :

```cpp
using namespace std;

int main() {
    int n;
    cout << "Enter how many numbers you want to sum (4 or 5): ";
    cin >> n;

    if (n < 4 || n > 5) {
        cout << "Please enter only 4 or 5 numbers!" << endl;
        return 0;
    }

    int num, sum = 0;
    cout << "Enter " << n << " numbers: " << endl;
    for (int i = 1; i <= n; i++) {
        cin >> num;
        sum += num;
    }

    cout << "The sum of the " << n << " numbers is: " << sum << endl;
    return 0;
}
```

OUTPUT :

```
Enter how many numbers you want to sum (4 or 5): 5
Enter 5 numbers:
9
30000000
8432
93
1
The sum of the 5 numbers is: 30008535

--------------------------------
Process exited after 79.62 seconds with return value 0
Press any key to continue . . .
```
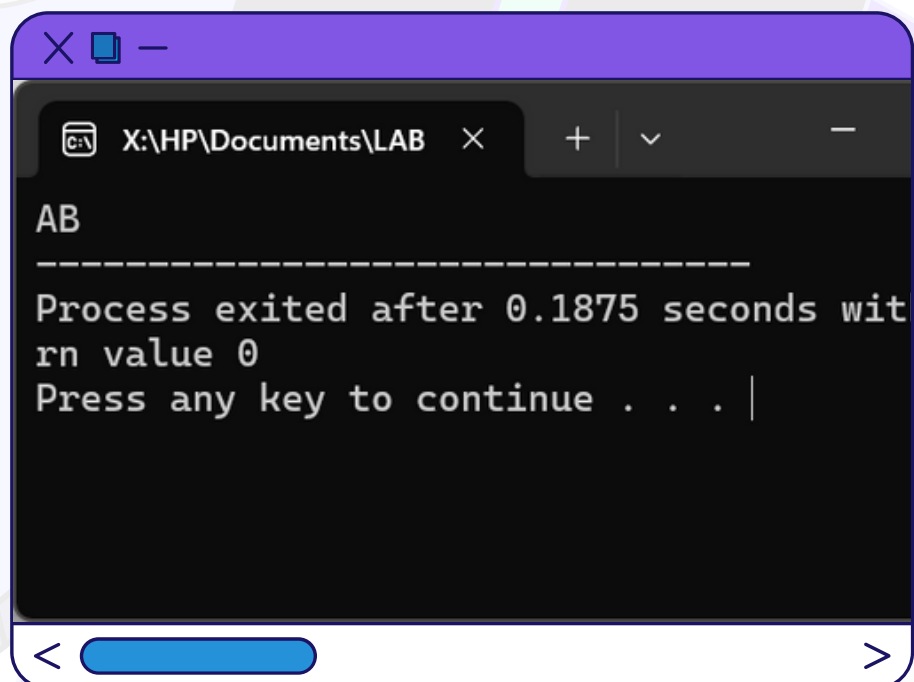
4. CODE :

```cpp
#include <iostream>
using namespace std;

int main()
{
    cout << "#" << endl;
    cout << "# #" << endl;
    cout << "# # #" << endl;
    cout << "# # # #" << endl;
    cout << "# # # # #" << endl;

    return 0;
```

OUTPUT :

```
X:\HP\Documents\LAB#1.e

#
# #
# # #
# # # #
# # # # #

_____
Process exited after 0.1772 seconds with re
 value 0
Press any key to continue . . .
```

CONCLUSION :

‣   In this lab, I learned how to install and set up Dev C++ properly and got familiar with its basic features. I also practiced writing simple C++ programs using the "cout" statement to display text, print patterns, and perform basic calculations like finding the sum of numbers. Overall, this lab helped me understand the basic structure of a C++ program and how coding actually works step by step..