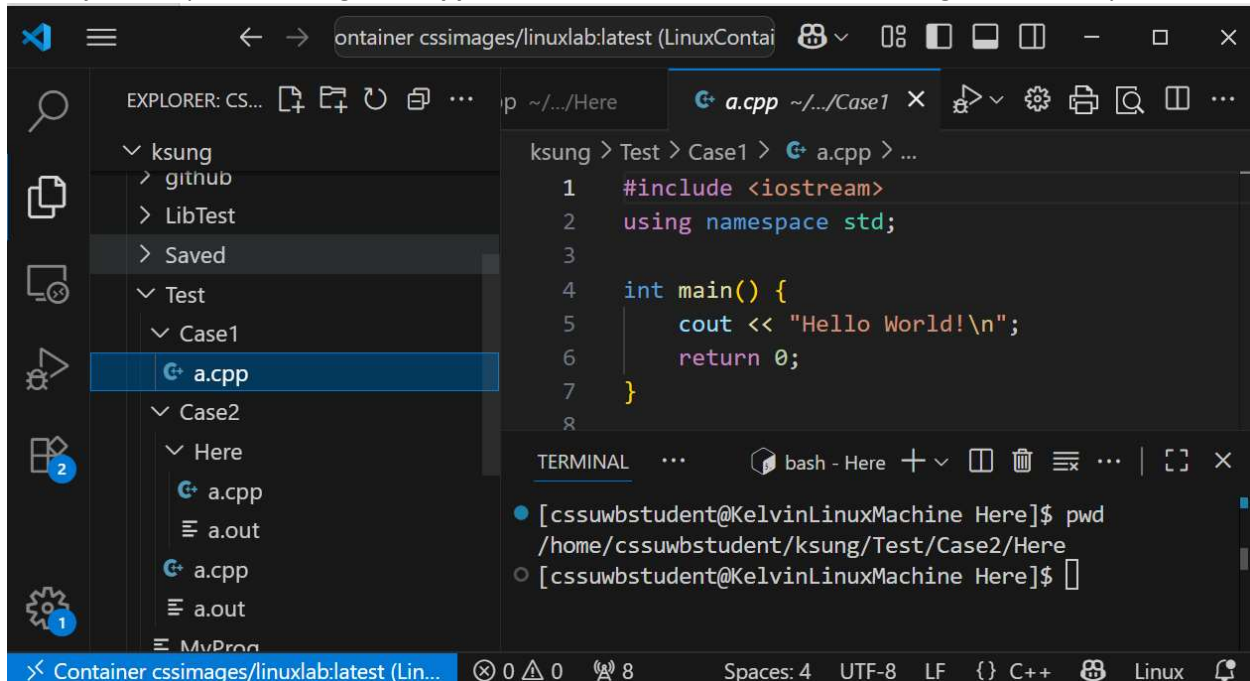


Question 1. (7pt)

I have just completed editing the **a.cpp** source code file and here is the working session of my VSC:



The screenshot shows the Visual Studio Code editor with a file explorer on the left. The file explorer shows a directory structure: 'ksung' > 'Test' > 'Case1' > 'a.cpp'. The main editor window displays the content of 'a.cpp', which is a simple C++ program that prints 'Hello World!'. The terminal window at the bottom shows the command 'pwd' being executed, returning the path '/home/cssuwbstudent/ksung/Test/Case2/Here'.

```
ksung > Test > Case1 > a.cpp > ...
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      cout << "Hello World!\n";
6      return 0;
7  }
8

TERMINAL
bash - Here
[cssuwbstudent@KelvinLinuxMachine Here]$ pwd
/home/cssuwbstudent/ksung/Test/Case2/Here
[cssuwbstudent@KelvinLinuxMachine Here]$
```

Now, I would like to compile the source code file into a program named **MyProg** and run the program. Please show the commands you will issue for each of the following cases. Please list the commands in separate lines, one command per line.

- a. (4pts) In the above CLI, what are the commands I have to issue if I want to remain in the same directory, compile the source code file, and run the resulting **MyProg** from the current working directory of the CLI?

```
g++ ../../Case1/a.cpp -o ../../Case1/MyProg      (+2)
../../Case1/MyProg                                (+2)
```

- b. (3pts) What are the commands I have to issue if I want to go to the folder that contains the source code file and then compile and run the resulting program?

```
cd ../../Case1/MyProg      (+1)
g++ a.cpp -o ./MyProg      (+1)
./MyProg                   (+1)
```

Question 2. (13pt)

- a. (1pt) What is the output of the following statements:

```
int a = 1234;
cout << a/10 << "    " << a%10 << endl;
```

- b. (5pt) Please show how to implement the following function:

```
// This function removes the rightmost digit from n.
// The function returns the removed digit and
//                modifies n by removing the right most digit
// For example:
//     n = 567
//     d = RemoveAndGetRightDigit(n)
//     cout << n << "    " << d << endl;
// will print out:
//     56  7
int RemoveAndGetRightDigit(int &n)
```

```
int right_digit = n % 10;
n = n / 10;
return right_digit;
```

- c. (7pt) Given an integer **anInt**, write a loop to print its individual digits by calling your ***RemoveAndGetRightDigit(int&)*** function. For example:

```
int anInt = 7531;
... your loop comes here
```

And, the output would be: 1 3 5 7.

```
while (anInt > 10) {
    int removed_digit = RemoveAndGetRightDigit(anInt);
    cout << removed_digit << " ";
}
```