

FileEditSelectionViewGoRunTerminalHelp

question1.cpp - c++lpu - Visual Studio Code

EXPLORER

C++LPU

assignment-1

a.exe

question1.cpp

question2.cpp

question3.cpp

question4.cpp

question5.cpp

Lec1

a.exe

default_value.cpp

function_overloadin...

function.cpp

a.exe

hello.cpp

variables.cpp

OUTLINE

assignment-1 > question1.cpp > main()

```
1 //Q.1 Given a number x, determine whether the given number is Armstrong number or not.
2 //A positive integer of n digits is called an Armstrong number of order n (order is number of digits) if.
3 //abcd... = pow(a,n) + pow(b,n) + pow(c,n) + pow(d,n) + ....
4
5 //SOLUTION:-
6
7 #include<bits/stdc++.h>
8 using namespace std;
9 int main() {
10
11     int num, originalNum, remainder, n = 0, result = 0, power;
12     cout << "Enter an integer: ";
13     cin >> num;
14
15     originalNum = num;
16
17     while (originalNum != 0) {
18         originalNum /= 10;
19         ++n;
20     }
21     originalNum = num;
22
23     while (originalNum != 0) {
24         remainder = originalNum % 10;
25         power = round(pow(remainder, n));
26         result += power;
27         originalNum /= 10;
28     }
29     if (result == num)
30         cout<<num<< " YES"<<endl<<" It is an Armstrong number" ;
31     else
32         cout << " NO"<<endl<<" It is not an Armstrong number ";
33     return 0;
34 }
```

0 0 0

Ln 32, Col 62 Spaces: 3 UTF-8 CRLF C++ Win32

Type here to search

6/8/2021 4:49 PM

question1.cpp - c++lpu - Visual Studio Code

EXPLORER

- function_overloading.cpp
- toggle.cpp
- toggle.cpp
- question1.cpp X
- question2.cpp assignment-1
- question3.cpp
- question4.cpp
- question5.cpp

C++LPU

- assignment-1
 - a.exe
 - question1.cpp
 - question2.cpp
 - question3.cpp
 - question4.cpp
 - question5.cpp
- Lec1
 - a.exe
 - default_value.cpp
 - function_overloadin...
 - function.cpp
 - a.exe
 - hello.cpp
 - variables.cpp

assignment-1 > question1.cpp > main()

```
1 //Q.1 Given a number x, determine whether the given number is Armstrong number or not.
2 //A positive integer of n digits is called an Armstrong number of order n (order is number of digits) if.
3 //abcd... = pow(a,n) + pow(b,n) + pow(c,n) + pow(d,n) + ....
4
5 //SOLUTION:-
6
7 Command Prompt
8 Microsoft Windows [Version 10.0.18363.1556]
9 (c) 2019 Microsoft Corporation. All rights reserved.
10
11 C:\Users\hp>cd C:\Users\hp\Desktop\c++lpu\assignment-1
12
13 C:\Users\hp\Desktop\c++lpu\assignment-1>g++ question1.cpp
14
15 C:\Users\hp\Desktop\c++lpu\assignment-1>a
16 Enter an integer: 1253
17 NO
18 It is not an Armstrong number
19 C:\Users\hp\Desktop\c++lpu\assignment-1>a
20 Enter an integer: 1634
21 1634 YES
22 It is an Armstrong number
23 C:\Users\hp\Desktop\c++lpu\assignment-1>
24
25
26
27
28
29
30
31
32
33
34
```

Ln 32, Col 62 Spaces: 3 UTF-8 CRLF C++ Win32

Type here to search

4:51 PM 6/8/2021

File Edit Selection View Go Run Terminal Help

question2.cpp - c++lpu - Visual Studio Code

EXPLORER

...
C++LPU
assignment-1
a.exe
question1.cpp
question2.cpp
question3.cpp
question4.cpp
question5.cpp
Lec1
a.exe
default_value.cpp
function_overloadin...
function.cpp
a.exe
hello.cpp
variables.cpp

> OUTLINE

assignment-1 > question2.cpp > ...
1 //Q.2 Given a sorted array with possibly duplicate elements,
2 // the task is to find indexes of first and last occurrences of an element x in the given array.
3
4 //SOLUTION:-
5
6 #include <bits/stdc++.h>
7 using namespace std;
8 void FirstAndLast (int arr[], int n, int x)
9 {
10 int first = -1, last = -1;
11 for (int i = 0; i < n; i++) {
12 if (x != arr[i])
13 continue;
14 if (first == -1)
15 first = i;
16 last = i;
17 }
18 if (first != -1)
19 cout << "First Occurrence = " << first
20 << "\nLast Occurrence = " << last;
21 else
22 cout << "Not Found";
23 }
24 int main()
25 {
26 int arr[] = { 1, 3, 5, 5, 5, 5, 7, 123, 125};
27 int n = sizeof(arr) / sizeof(int);
28 int x = 7;
29 FirstAndLast(arr, n, x);
30 return 0;
31 }
32

Command Prompt
Microsoft Windows [Version 10.0.18363.1556]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\hp>cd C:\Users\hp\Desktop\c++lpu\assignment-1

C:\Users\hp\Desktop\c++lpu\assignment-1>g++ question2.cpp

C:\Users\hp\Desktop\c++lpu\assignment-1>a
First Occurrence = 6
Last Occurrence = 6
C:\Users\hp\Desktop\c++lpu\assignment-1>

Ln 4, Col 13 Tab Size: 4 UTF-8 CRLF C++ Win32

Type here to search

3:51 PM 6/8/2021

FileEditSelectionViewGoRunTerminalHelp

question3.cpp - c++lpu - Visual Studio Code

EXPLORER

assignment-1

question3.cpp

question1.cpp

question2.cpp

question3.cpp

question4.cpp

question5.cpp

Lec1

a.exe

default_value.cpp

function_overloadin...

function.cpp

a.exe

hello.cpp

variables.cpp

assignment-1 > question3.cpp > ...

```
1 //Q.3 1. You are given a number n.
2 // 2. You've to create a pattern of * and separated by tab as shown in output format.
3
4 #include <bits/stdc++.h>
5 using namespace std;
6 void printstar(int n)
7 {
8     int k = 2 * n - 2;
9     for (int i = 0; i < n; i++) {
10         for (int j = 0; j < k; j++)
11             cout << " ";
12         k = k - 2;
13         for (int j = 0; j <= i; j++) {
14             cout << "* ";
15         }
16         cout << endl;
17     }
18 }
19 int main()
20 {
21     int n = 5;
22     printstar(n);
23     return 0;
24 }
25
```

Command Prompt

Microsoft Windows [Version 10.0.18363.1556]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\hp>cd C:\Users\hp\Desktop\c++lpu\assignment-1

C:\Users\hp\Desktop\c++lpu\assignment-1>g++ question3.cpp

C:\Users\hp\Desktop\c++lpu\assignment-1>a

* *
* * *
* * * *
* * * * *

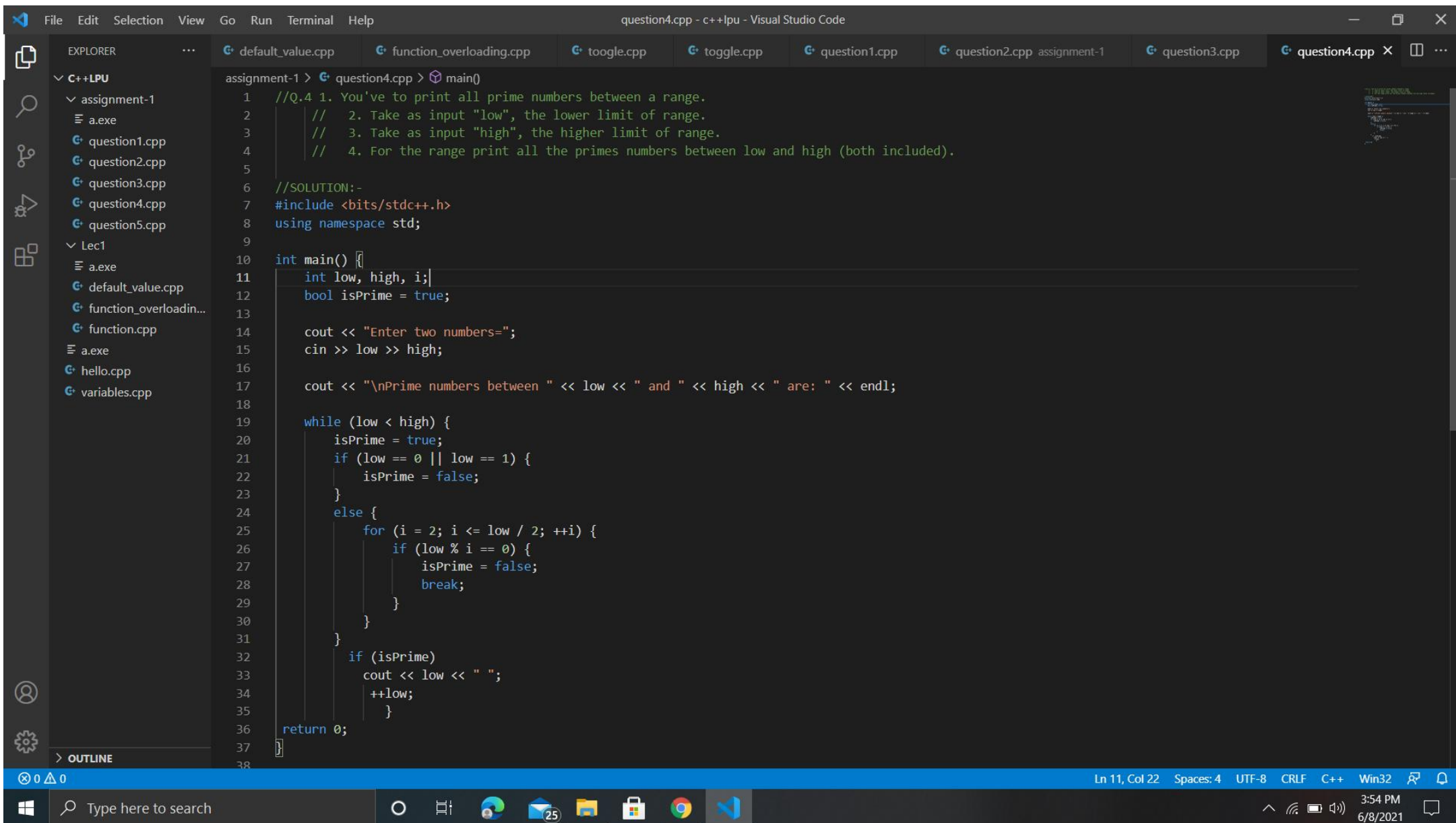
C:\Users\hp\Desktop\c++lpu\assignment-1>

Ln 25, Col 1 Tab Size: 4 UTF-8 CRLF C++ Win32

0 0 0

Type here to search

3:53 PM 6/8/2021



Visual Studio Code interface showing a C++ program for finding prime numbers in a range.

EXPLORER

- assignment-1
 - a.exe
 - question1.cpp
 - question2.cpp
 - question3.cpp
 - question4.cpp
 - question5.cpp
- Lec1
 - a.exe
 - default_value.cpp
 - function_overloadin...
 - function.cpp
 - hello.cpp
 - variables.cpp

question4.cpp

```
1 //Q.4 1. You've to print all prime numbers between a range.
2 // 2. Take as input "low", the lower limit of range.
3 // 3. Take as input "high", the higher limit of range.
4 // 4. For the range print all the primes numbers between low and high (both included).
5
6 //SOLUTION:-
7 #include <bits/stdc++.h>
8 using namespace std;
9
10 int main() {
11     int low, high, i;
12     bool isPrime = true;
13
14     cout << "Enter two numbers=";
15     cin >> low >> high;
16
17     cout << "\nPrime numbers bet
18
19     while (low < high) {
20         isPrime = true;
21         if (low == 0 || low == 1)
22             isPrime = false;
23         }
24         else {
25             for (i = 2; i <= low
26                 if (low % i == 0
27                     isPrime = fa
28                     break;
29             }
30         }
31     }
32     if (isPrime)
33         cout << low << " ";
34         ++low;
35     }
36     return 0;
37 }
```

Command Prompt

```
Microsoft Windows [Version 10.0.18363.1556]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\hp>cd C:\Users\hp\Desktop\c++lpu\assignment-1
C:\Users\hp\Desktop\c++lpu\assignment-1>g++ question4.cpp
C:\Users\hp\Desktop\c++lpu\assignment-1>a
Enter two numbers=6
24
Prime numbers between 6 and 24 are:
7 11 13 17 19 23
C:\Users\hp\Desktop\c++lpu\assignment-1>
```

Ln 11, Col 22 Spaces: 4 UTF-8 CRLF C++ Win32

Type here to search

3:56 PM 6/8/2021

FileEditSelectionViewGoRunTerminalHelp

question5.cpp - c++lpu - Visual Studio Code

EXPLORER

...

function_overloading.cpptoggle.cpptoggle.cppquestion1.cppquestion2.cppassignment-1question3.cppquestion4.cppquestion5.cpp

C++LPU

assignment-1

a.exequestion1.cppquestion2.cppquestion3.cppquestion4.cppquestion5.cpp

Lec1

a.exedefault_value.cppfunction_overloadin...function.cppa.exehello.cppvariables.cpp

OUTLINE

assignment-1 > question5.cpp > main()

```
1 //Q.5 1. You are given a string that contains only lowercase and uppercase alphabets.
2 // 2. You have to toggle the case of every character of the given string.
3
4 //SOLUTION:-
5
6 #include<bits/stdc++.h>
7 using namespace std;
8
9 void toggleChars(char str[])
10 {
11     for (int i=0; str[i]!='\0'; i++)
12     {
13         if (str[i]>='A' && str[i]<='Z')
14             str[i] = str[i] + 'a' - 'A';
15         else if (str[i]>='a' && str[i]<='z')
16             str[i] = str[i] + 'A' - 'a';
17     }
18 }
19 int main()
20 {
21     char str[] = "ProGraMMer"; // as per the ques. given a string that contains only lowercase and uppercase alphabets.
22     toggleChars(str);
23     cout << "String after toggle " << endl;
24     cout << str << endl;
25     return 0;
26 }
27
```

Ln 22, Col 22Tab Size: 4UTF-8CRLFC++Win32

0 0 0

Type here to search

3:58 PM6/8/2021

FileEditSelectionViewGoRunTerminalHelp

question5.cpp - c++lpu - Visual Studio Code

function_overloading.cpptoggle.cpptoggle.cppquestion1.cppquestion2.cppassignment-1question3.cppquestion4.cppquestion5.cpp

EXPLORER

C++LPU

assignment-1

a.exe

question1.cpp

question2.cpp

question3.cpp

question4.cpp

question5.cpp

Lec1

a.exe

default_value.cpp

function_overloadin...

function.cpp

a.exe

hello.cpp

variables.cpp

OUTLINE

assignment-1 > question5.cpp > main()

1 //Q.5 1. You are given a string that contains only lowercase and uppercase alphabets.

2 // 2. You have to toggle the case of every character of the given string.

3

Command Prompt

Microsoft Windows [Version 10.0.18363.1556]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\hp>cd C:\Users\hp\Desktop\c++lpu\assignment-1

C:\Users\hp\Desktop\c++lpu\assignment-1>g++ question5.cpp

C:\Users\hp\Desktop\c++lpu\assignment-1>a

String after toggle

pROgRAmMER

C:\Users\hp\Desktop\c++lpu\assignment-1>

alphabets.

0 0 0

Ln 22, Col 22 Tab Size: 4 UTF-8 CRLF C++ Win32

Type here to search

3:58 PM 6/8/2021