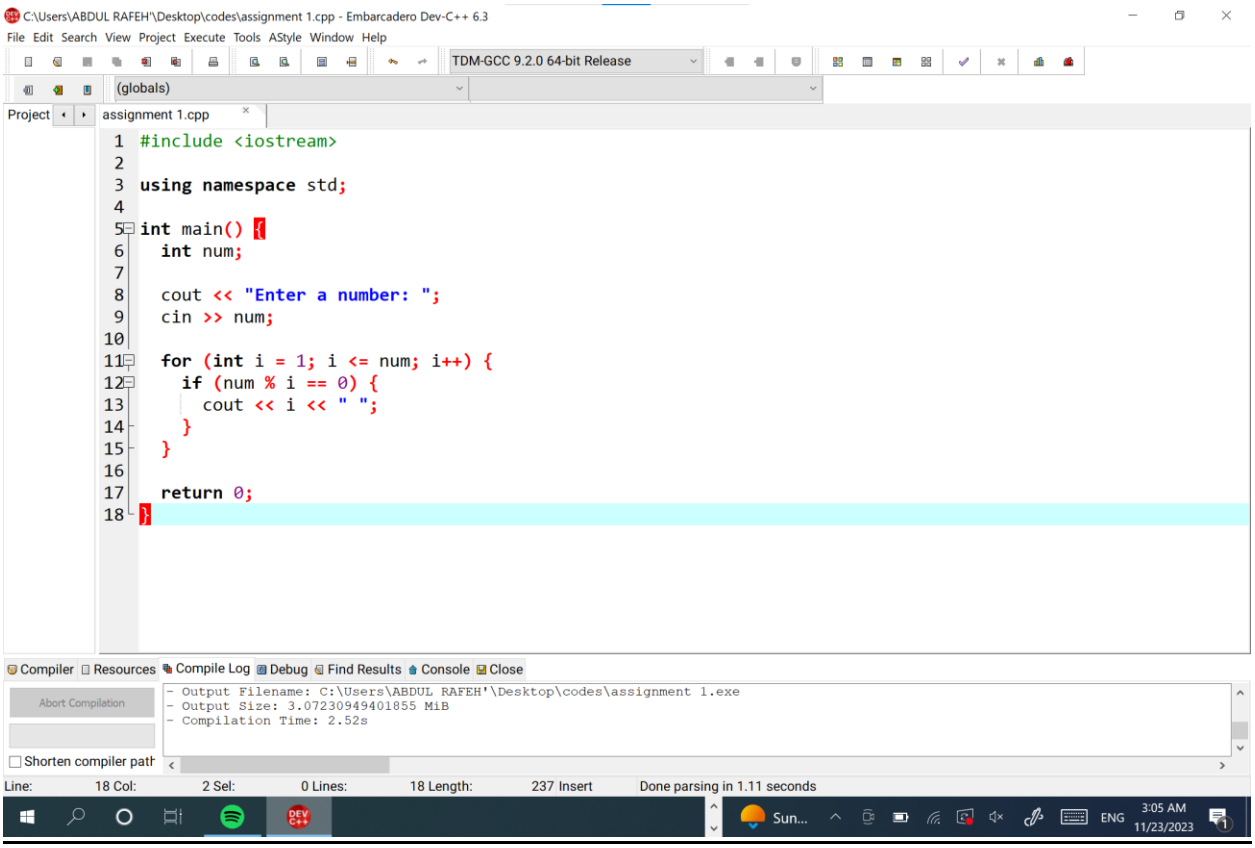
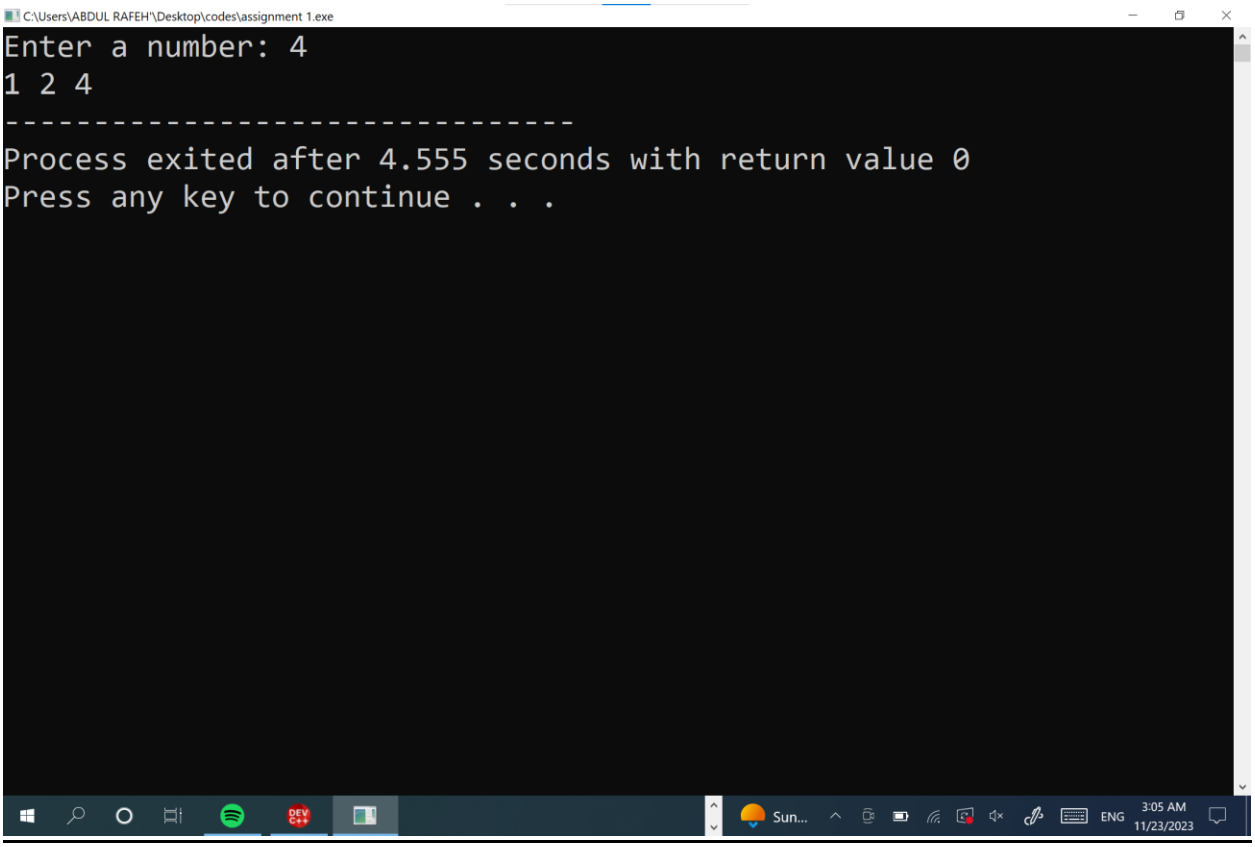
ASSIGNMENT-1

PROGRAM-1:

Write a C++ program to display factors of a number using for loops.



OUTPUT:



PROGRAM:2

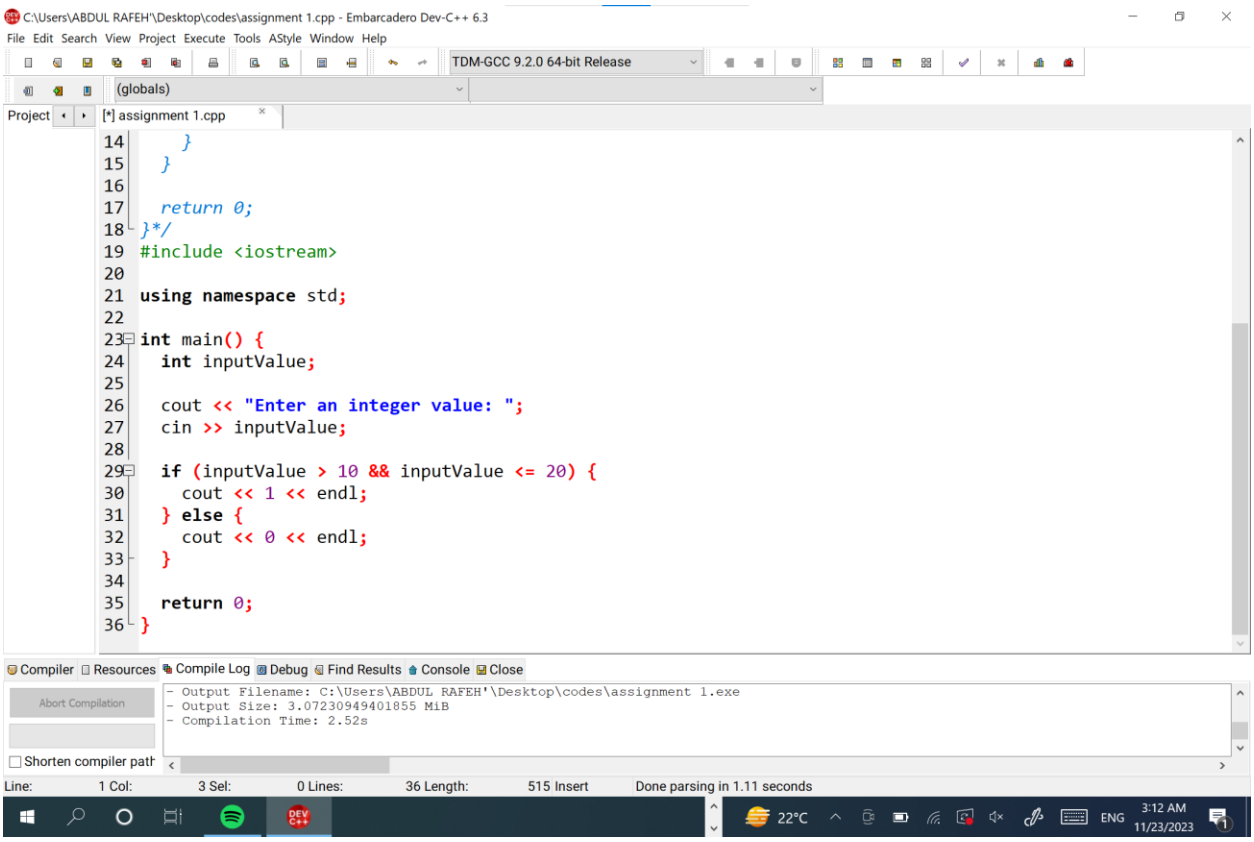
WRITE an output to the given code:

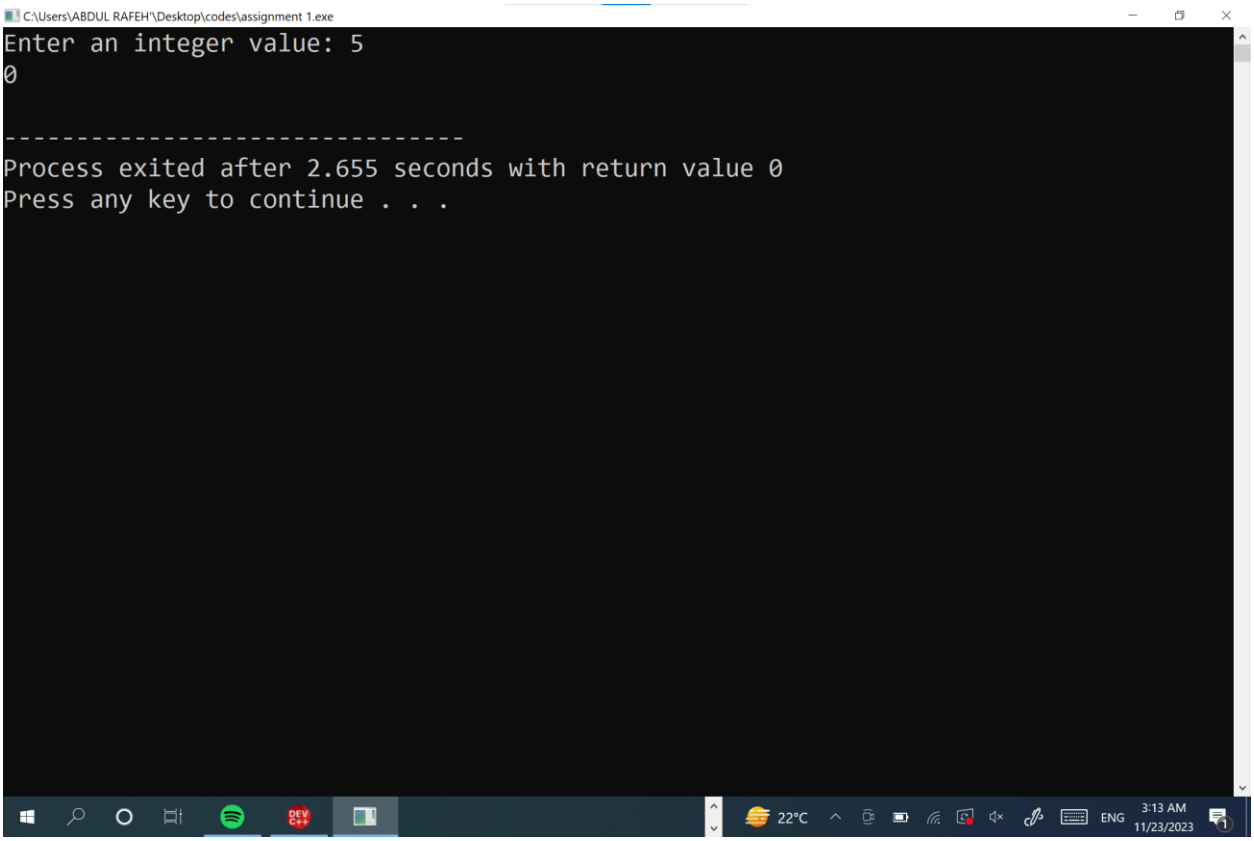
OUTPUT:

x is 5 and y is 10

PROGRAM:3

Write a C++ program, take an integer value from user and check if it's greater than 10 and less than equal to 20. Print 1 if yes and print 0 if no. Use appropriate datatype for output

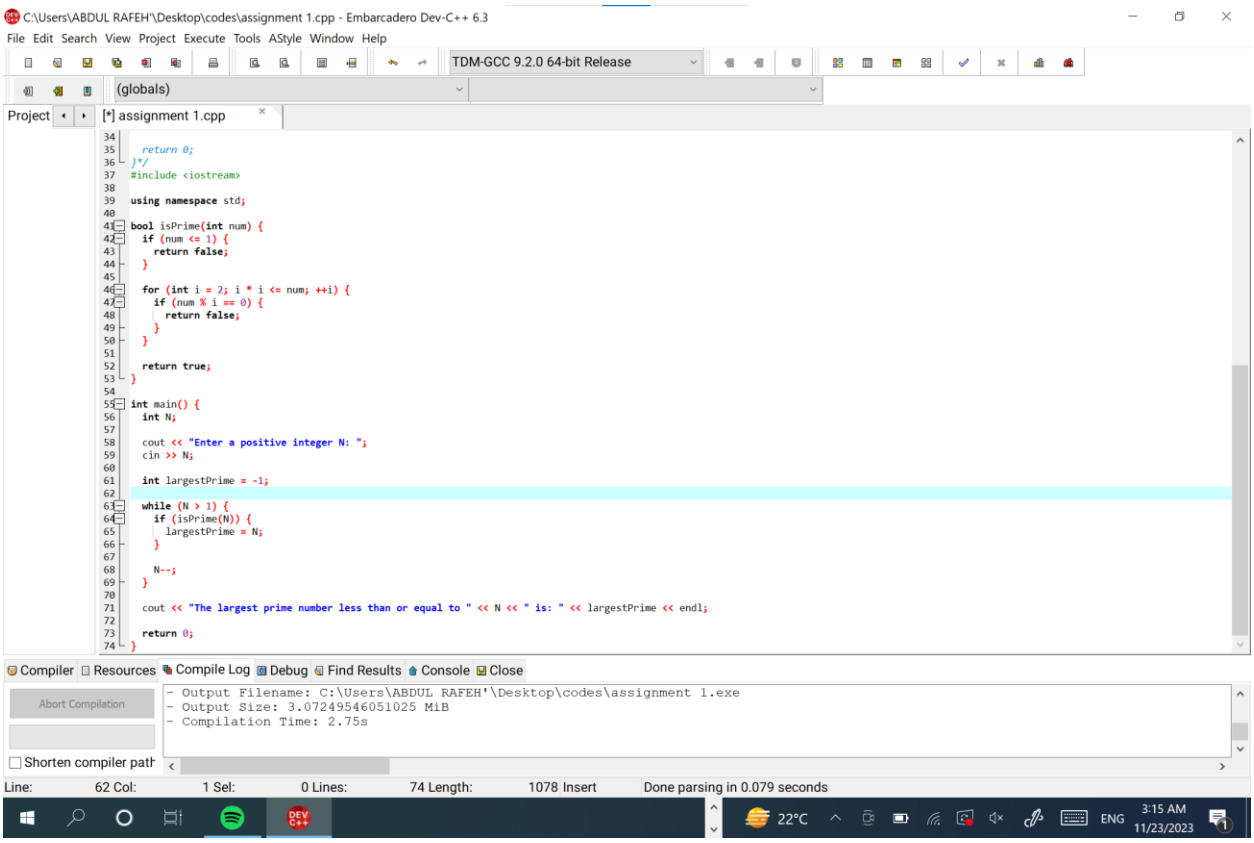

C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.cpp - Embarcadero Dev-C++ 6.3
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 9.2.0 64-bit Release
(globals)
Project
[*] assignment 1.cpp
}
}
return 0;
}*/
#include <iostream>
using namespace std;
int main() {
int inputValue;
cout << "Enter an integer value: ";
cin >> inputValue;
if (inputValue > 10 && inputValue <= 20) {
cout << 1 << endl;
} else {
cout << 0 << endl;
}
return 0;
}
Compiler Resources Compile Log Debug Find Results Console Close
Abort Compilation
- Output Filename: C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.exe
- Output Size: 3.07230949401855 MiB
- Compilation Time: 2.52s
Shorten compiler path
Line: 1 Col: 3 Sel: 0 Lines: 36 Length: 515 Insert Done parsing in 1.11 seconds
22°C
ENG
3:12 AM
11/23/2023

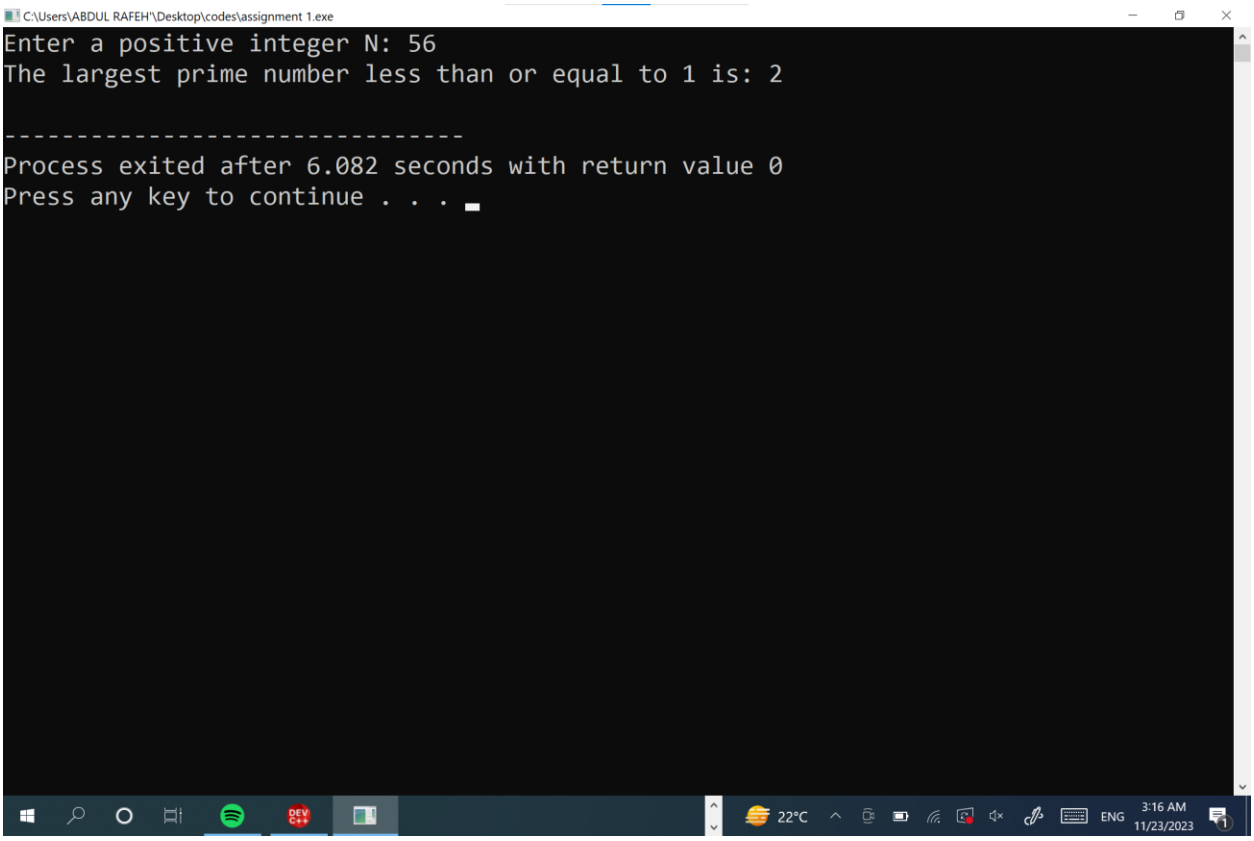

C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.exe
Enter an integer value: 5
0

Process exited after 2.655 seconds with return value 0
Press any key to continue . . .
22°C
ENG
3:13 AM
11/23/2023

PROGRAM:4

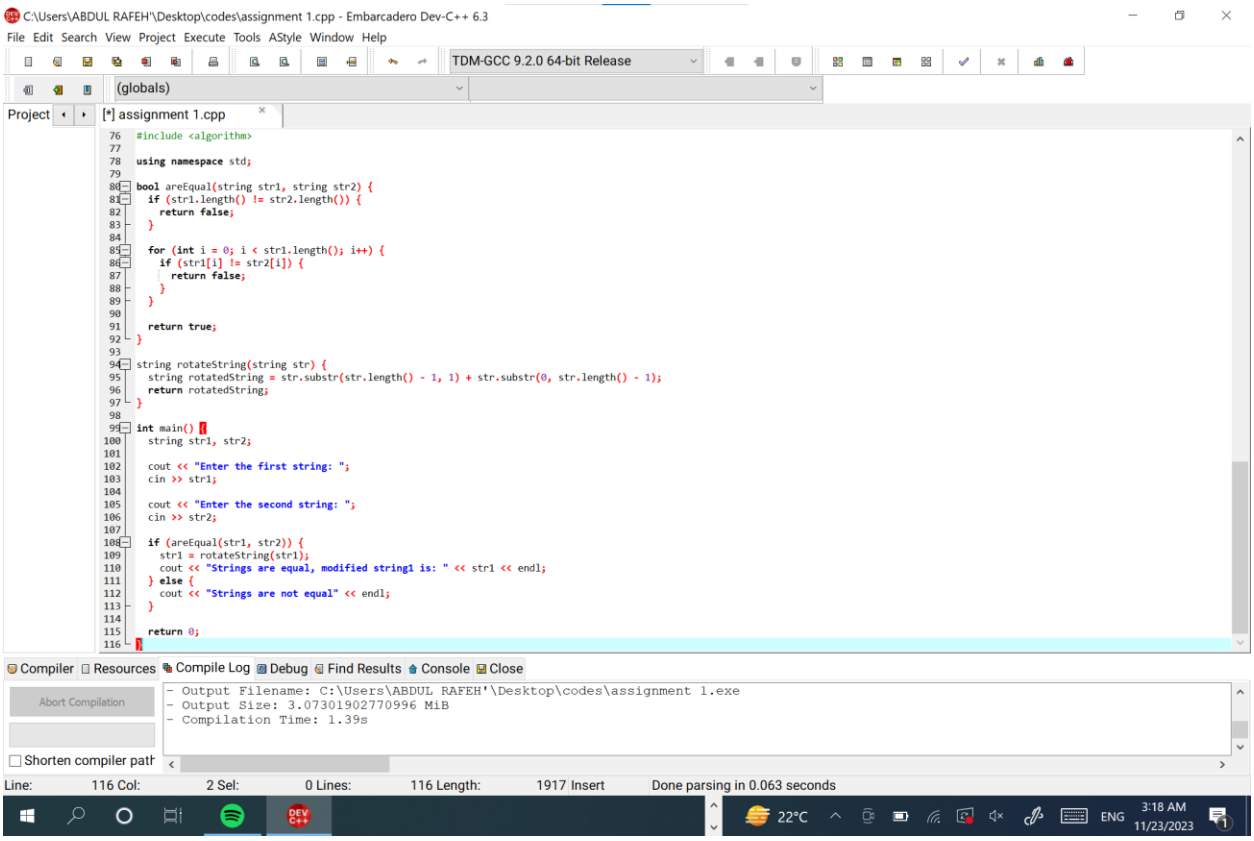
Write a C++ program that uses a while loop to find the largest prime number less than a given positive integer N. Your program should take the value of N as input from the user and then find the largest prime number less than or equal to N. You are not allowed to use any library or pre-existing functions to check for prime numbers.

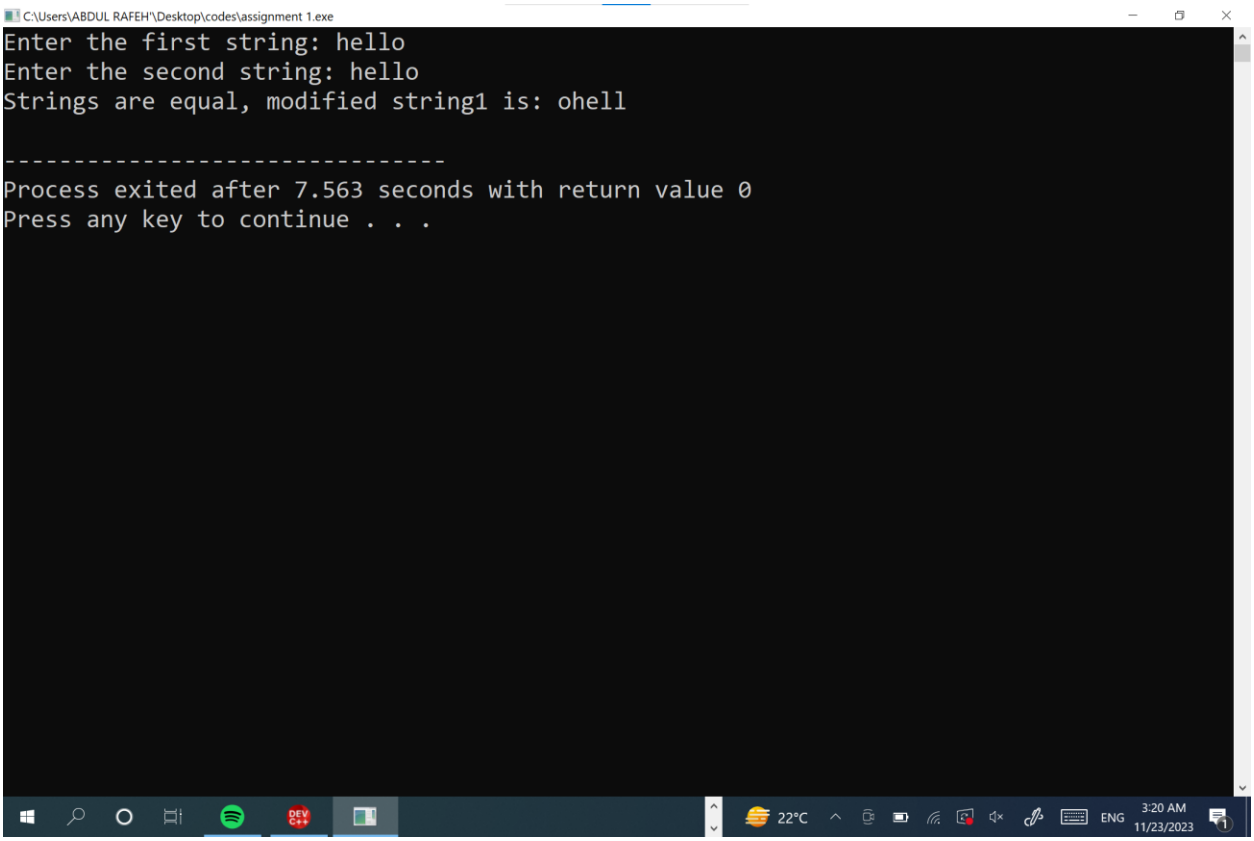




PROGRAM:5

Write a C++ program, take two string as input from user and check if both strings are equal or not. If they are equal make them unequal by rotating string. e.g., Hello is turned into olleH etc.

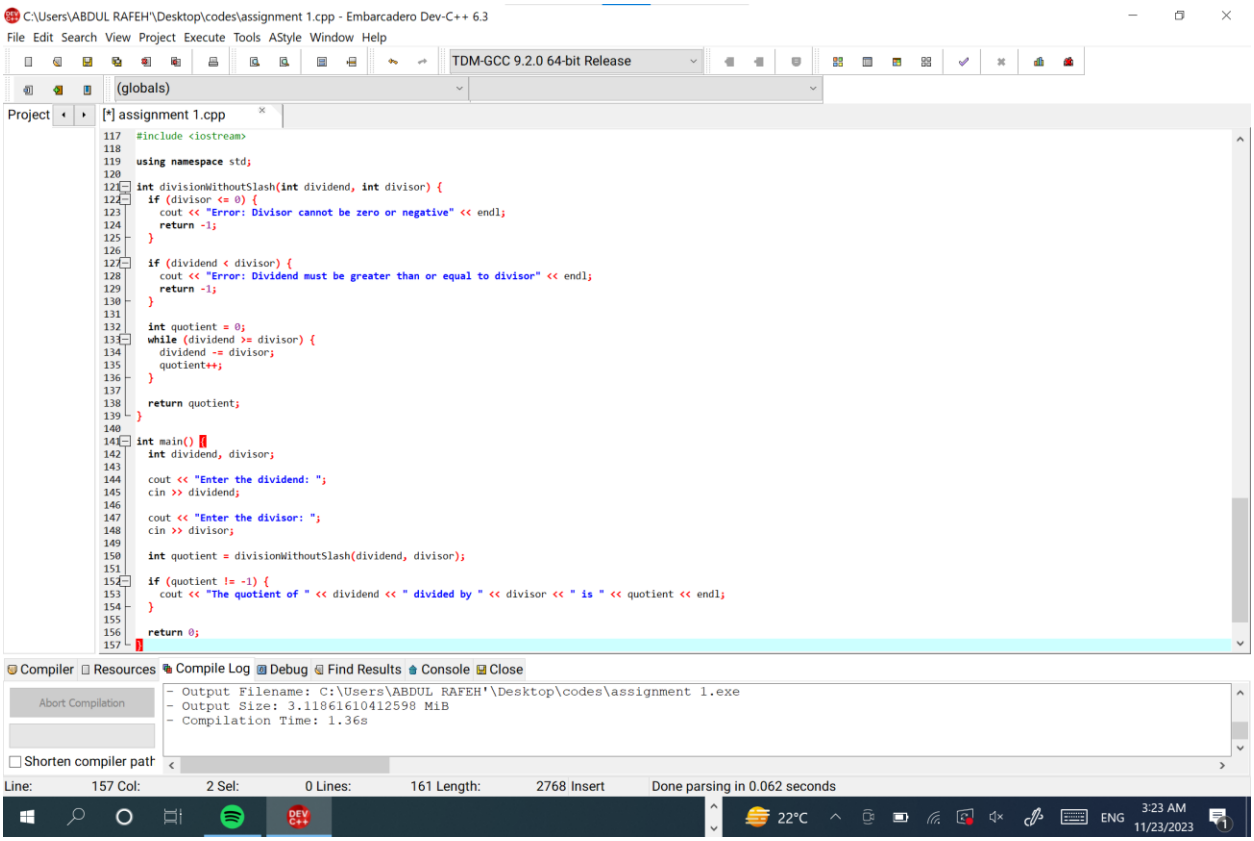

C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.cpp - Embarcadero Dev-C++ 6.3
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 9.2.0 64-bit Release
(globals)
Project
[*] assignment 1.cpp
#include <algorithm>
using namespace std;
bool areEqual(string str1, string str2) {
if (str1.length() != str2.length()) {
return false;
}
for (int i = 0; i < str1.length(); i++) {
if (str1[i] != str2[i]) {
return false;
}
}
return true;
}
string rotateString(string str) {
string rotatedString = str.substr(str.length() - 1, 1) + str.substr(0, str.length() - 1);
return rotatedString;
}
int main() {
string str1, str2;
cout << "Enter the first string: ";
cin >> str1;
cout << "Enter the second string: ";
cin >> str2;
if (areEqual(str1, str2)) {
str1 = rotateString(str1);
cout << "Strings are equal, modified string1 is: " << str1 << endl;
} else {
cout << "Strings are not equal" << endl;
}
return 0;
}
Compiler Resources Compile Log Debug Find Results Console Close
Abort Compilation
Shorten compiler path
- Output Filename: C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.exe
- Output Size: 3.073019027709961 MiB
- Compilation Time: 1.39s
Line: 116 Col: 2 Sel: 0 Lines: 116 Length: 1917 Insert
Done parsing in 0.063 seconds
22°C
ENG
3:18 AM
11/23/2023

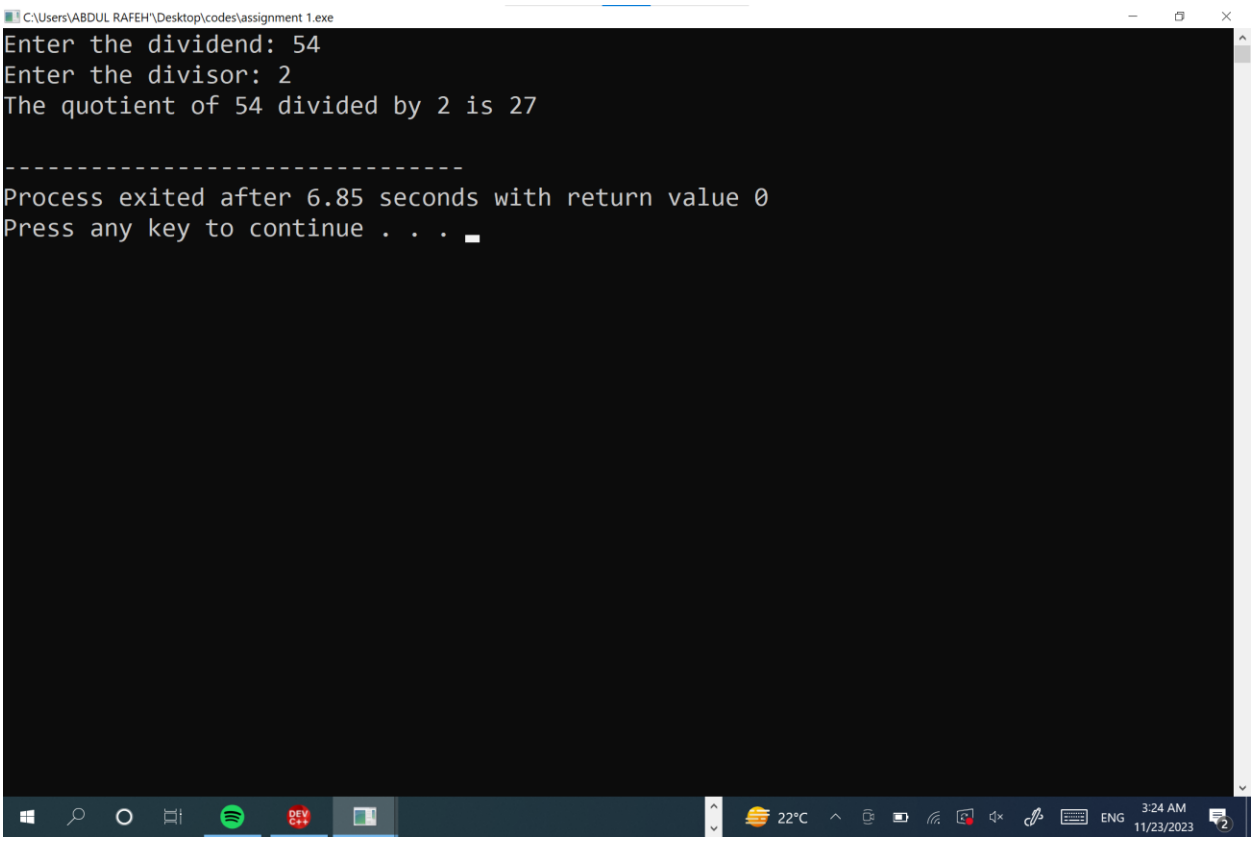

C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.exe
Enter the first string: hello
Enter the second string: hello
Strings are equal, modified string1 is: ohell

Process exited after 7.563 seconds with return value 0
Press any key to continue . . .
22°C
ENG
3:20 AM
11/23/2023

PROGRAM 6:

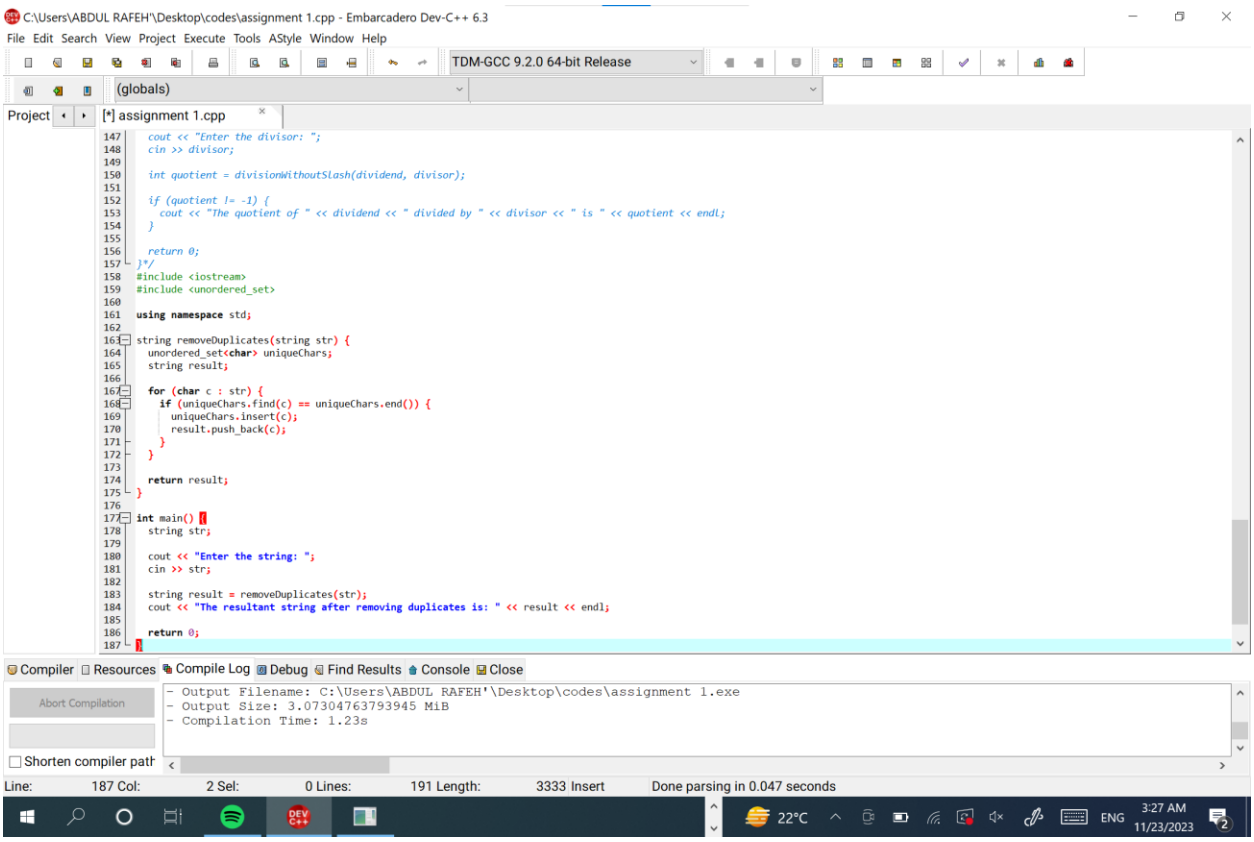
Perform division in C++ without / using for loops. You can use / only to display the final results. Your dividend must be greater than divisor.

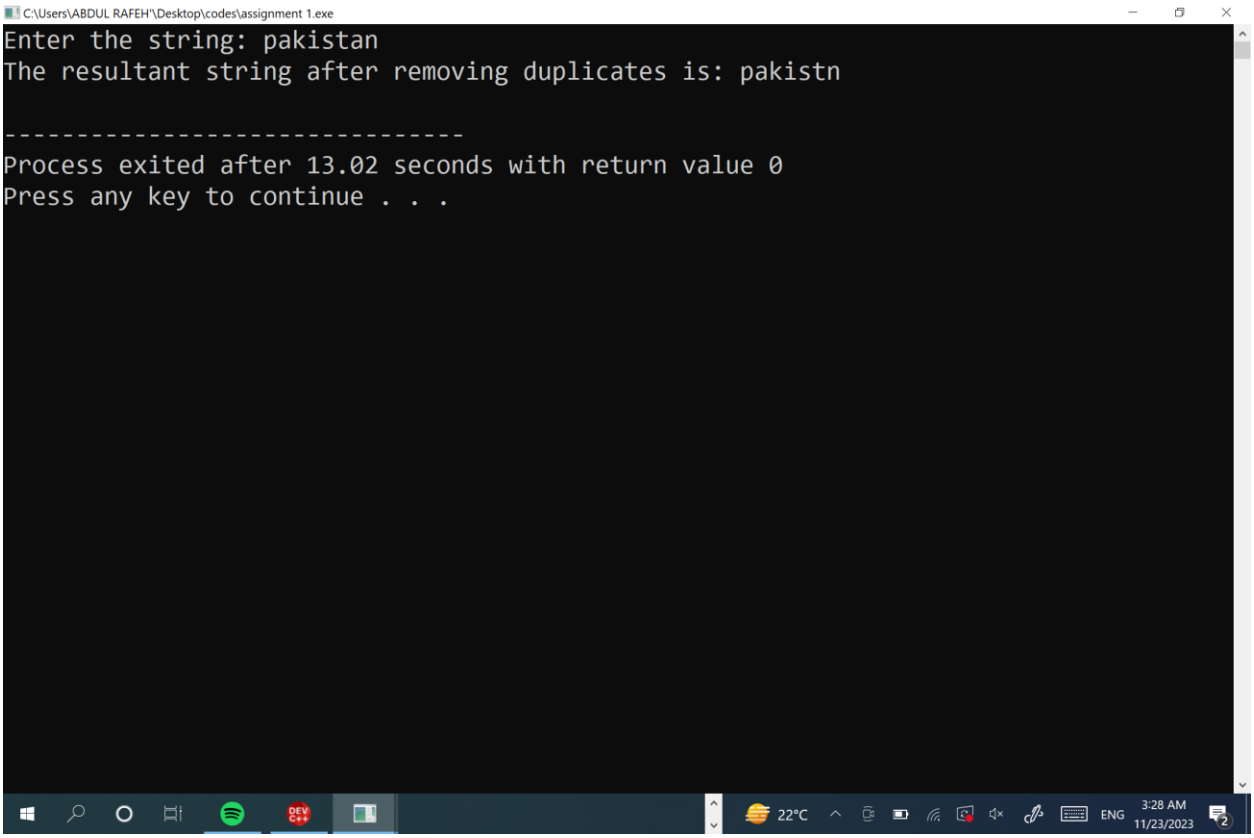




PROGRAM:7

Write a C++program for a string which may contain lowercase and uppercase characters. The task is to remove all duplicate characters from the string and find the resultant string.

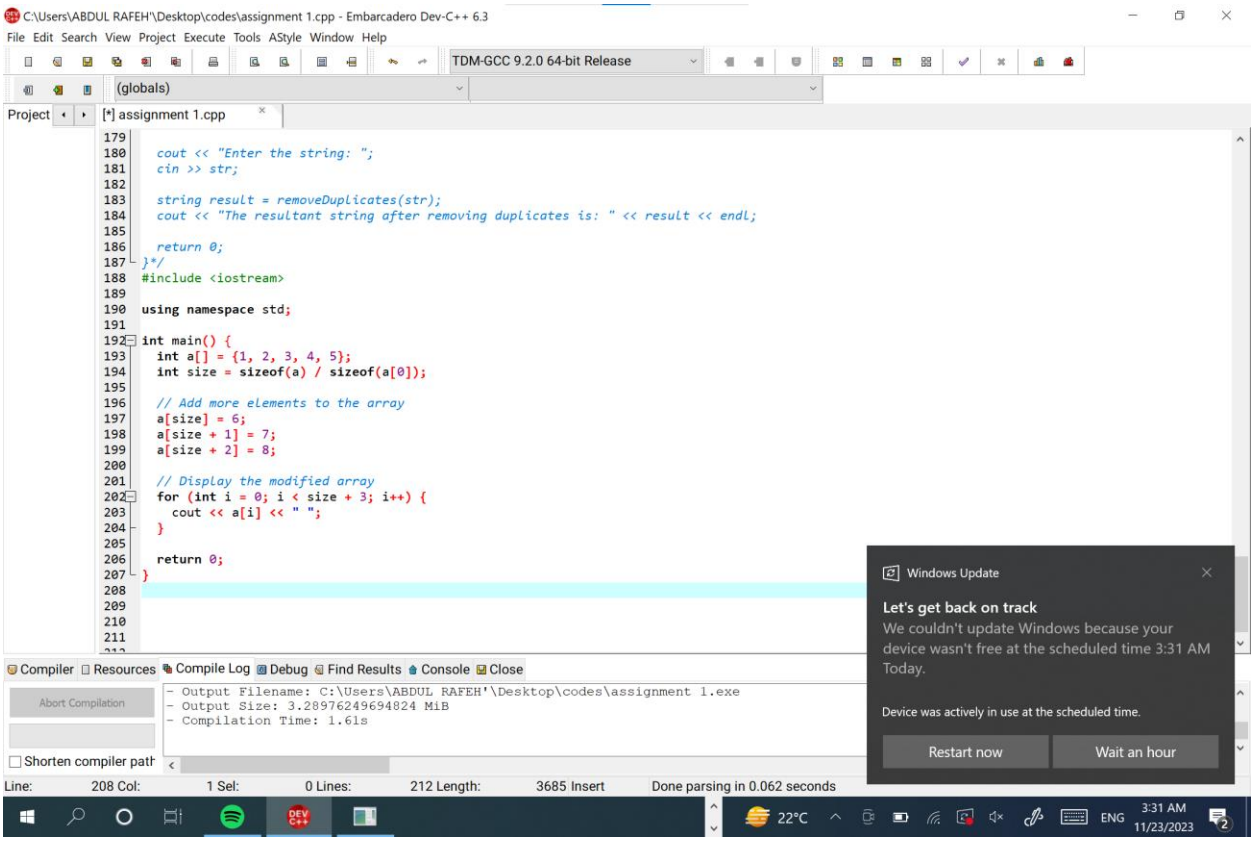

C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.cpp - Embarcadero Dev-C++ 6.3
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 9.2.0 64-bit Release
(globals)
Project
[*] assignment 1.cpp
cout << "Enter the divisor: ";
cin >> divisor;
int quotient = divisionWithoutSlash(dividend, divisor);
if (quotient != -1) {
cout << "The quotient of " << dividend << " divided by " << divisor << " is " << quotient << endl;
}
return 0;
}*/
#include <iostream>
#include <unordered_set>
using namespace std;
string removeDuplicates(string str) {
unordered_set<char> uniqueChars;
string result;
for (char c : str) {
if (uniqueChars.find(c) == uniqueChars.end()) {
uniqueChars.insert(c);
result.push_back(c);
}
}
return result;
}
int main() {
string str;
cout << "Enter the string: ";
cin >> str;
string result = removeDuplicates(str);
cout << "The resultant string after removing duplicates is: " << result << endl;
return 0;
}
Compiler Resources Compile Log Debug Find Results Console Close
Abort Compilation
Shorten compiler path
- Output Filename: C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.exe
- Output Size: 3.07304763793945 MiB
- Compilation Time: 1.23s
Line: 187 Col: 2 Sel: 0 Lines: 191 Length: 3333 Insert
Done parsing in 0.047 seconds
22°C
ENG
3:27 AM
11/23/2023

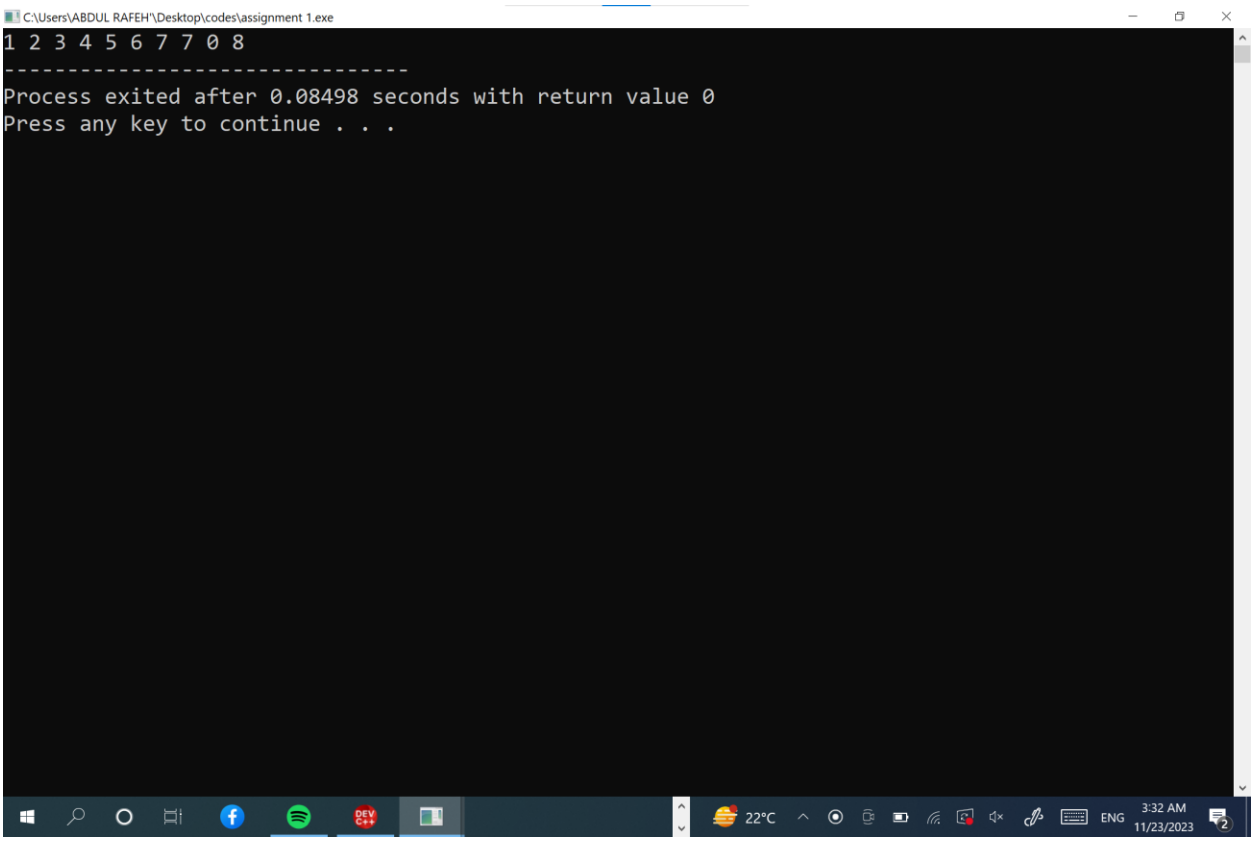

C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.exe
Enter the string: pakistan
The resultant string after removing duplicates is: pakistn

Process exited after 13.02 seconds with return value 0
Press any key to continue . . .
22°C
ENG
3:28 AM
11/23/2023

PROGRAM 8:

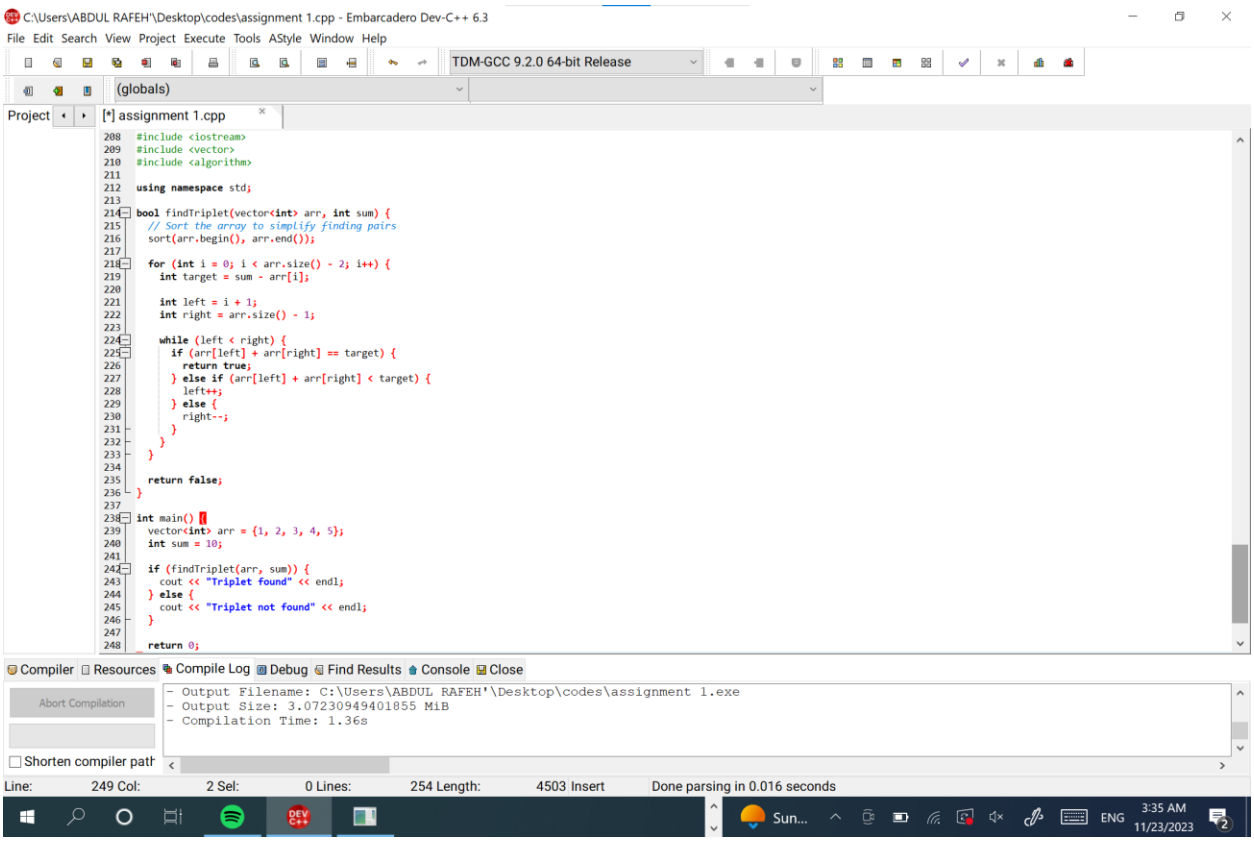
Suppose an integer array a[5] = {1,2,3,4,5}. Add more elements to it and display them in C++.

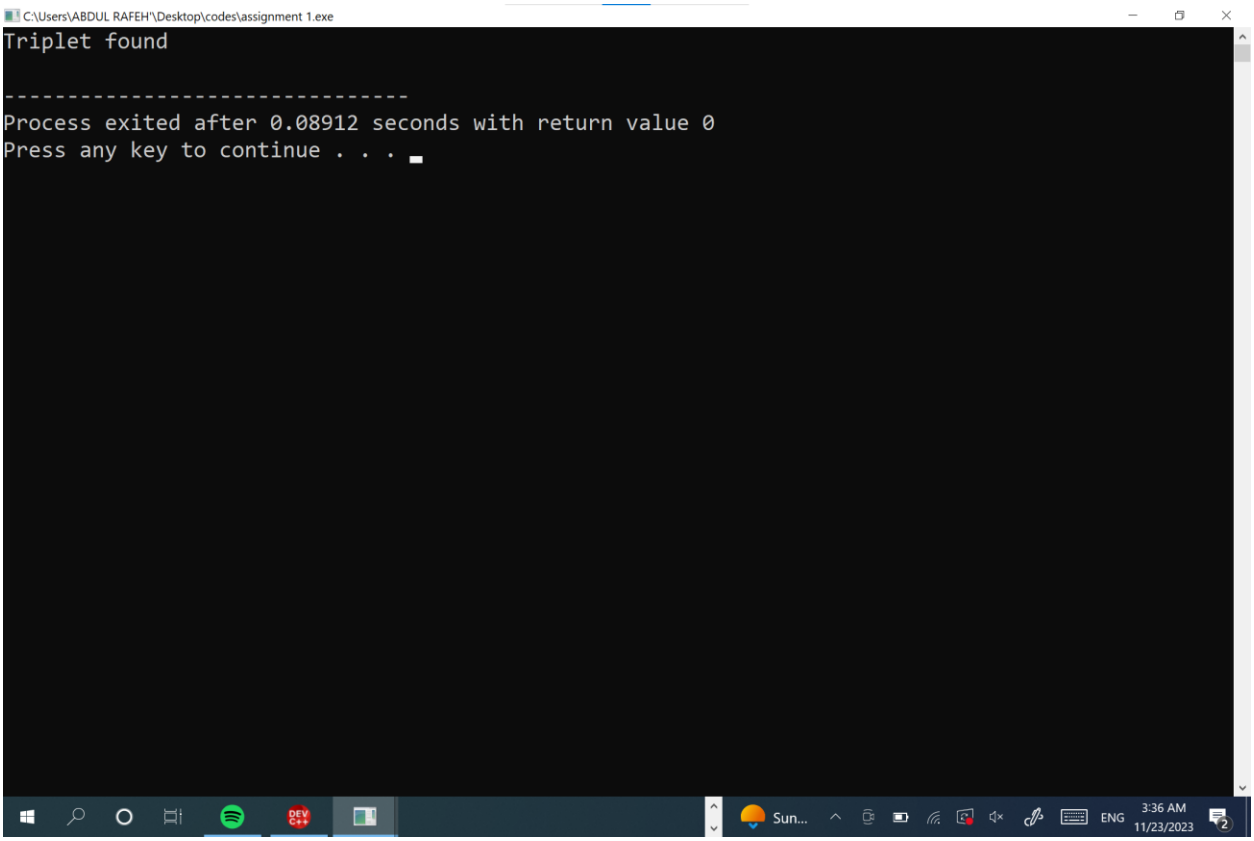




PROGRAM 9:

Given an integer array and an integer X. Find if there's a triplet in the array which sums up to the given integer X.

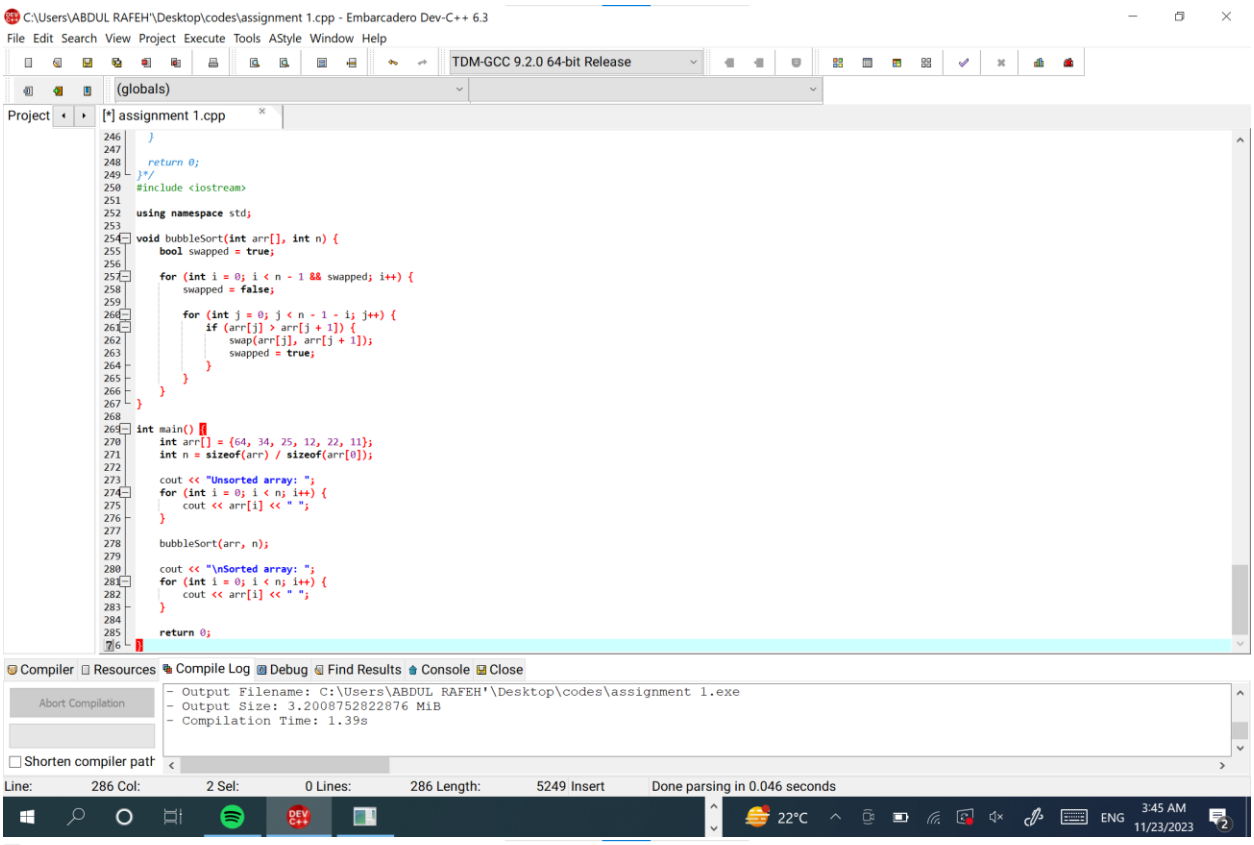

C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.cpp - Embarcadero Dev-C++ 6.3
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 9.2.0 64-bit Release
(globals)
Project
[*] assignment 1.cpp
#include <iostream>
#include <vector>
#include <algorithm>
using namespace std;
bool findTriplet(vector<int> arr, int sum) {
// Sort the array to simplify finding pairs
sort(arr.begin(), arr.end());
for (int i = 0; i < arr.size() - 2; i++) {
int target = sum - arr[i];
int left = i + 1;
int right = arr.size() - 1;
while (left < right) {
if (arr[left] + arr[right] == target) {
return true;
} else if (arr[left] + arr[right] < target) {
left++;
} else {
right--;
}
}
}
return false;
}
int main() {
vector<int> arr = {1, 2, 3, 4, 5};
int sum = 10;
if (findTriplet(arr, sum)) {
cout << "Triplet found" << endl;
} else {
cout << "Triplet not found" << endl;
}
return 0;
Compiler Resources Compile Log Debug Find Results Console Close
Abort Compilation
Shorten compiler path
- Output Filename: C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.exe
- Output Size: 3.07230949401855 MiB
- Compilation Time: 1.36s
Line: 249 Col: 2 Sel: 0 Lines: 254 Length: 4503 Insert Done parsing in 0.016 seconds
Sun...
ENG
3:35 AM
11/23/2023

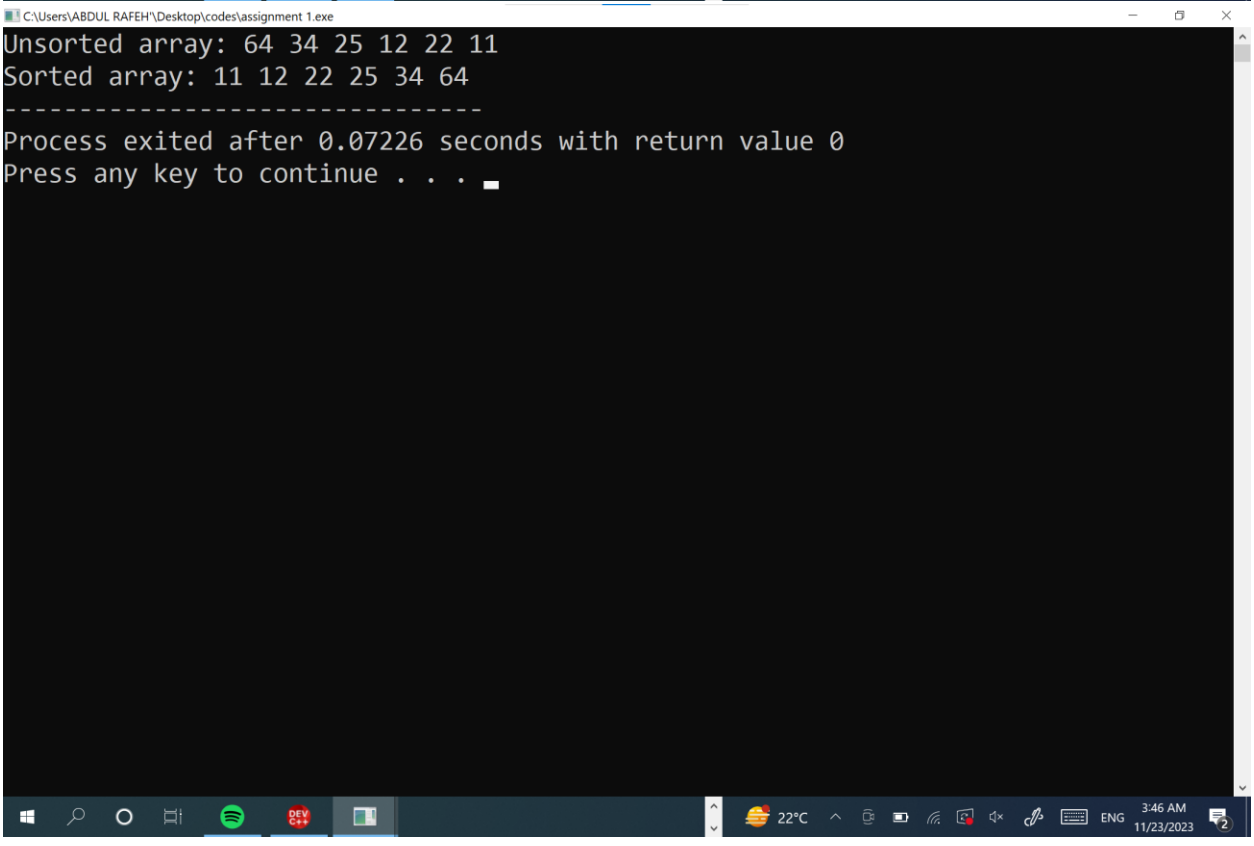

C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.exe
Triplet found

Process exited after 0.08912 seconds with return value 0
Press any key to continue . . .
Sun...
ENG
3:36 AM
11/23/2023

PROGRAM 10:

Implement Bubble Sort on an array of 6 integers.


C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.cpp - Embarcadero Dev-C++ 6.3
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 9.2.0 64-bit Release
(globals)
Project
[*] assignment 1.cpp
}
return 0;
}*/
#include <iostream>
using namespace std;
void bubbleSort(int arr[], int n) {
bool swapped = true;
for (int i = 0; i < n - 1 && swapped; i++) {
swapped = false;
for (int j = 0; j < n - 1 - i; j++) {
if (arr[j] > arr[j + 1]) {
swap(arr[j], arr[j + 1]);
swapped = true;
}
}
}
}
int main() {
int arr[] = {64, 34, 25, 12, 22, 11};
int n = sizeof(arr) / sizeof(arr[0]);
cout << "Unsorted array: ";
for (int i = 0; i < n; i++) {
cout << arr[i] << " ";
}
bubbleSort(arr, n);
cout << "\nSorted array: ";
for (int i = 0; i < n; i++) {
cout << arr[i] << " ";
}
return 0;
}
Compiler
Resources
Compile Log
Debug
Find Results
Console
Close
Abort Compilation
- Output Filename: C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.exe
- Output Size: 3.2008752822876 MiB
- Compilation Time: 1.39s
Shorten compiler path
Line: 286 Col: 2 Sel: 0 Lines: 286 Length: 5249 Insert Done parsing in 0.046 seconds
22°C
ENG
3:45 AM
11/23/2023


C:\Users\ABDUL RAFEH'\Desktop\codes\assignment 1.exe
Unsorted array: 64 34 25 12 22 11
Sorted array: 11 12 22 25 34 64

Process exited after 0.07226 seconds with return value 0
Press any key to continue . . .
22°C
ENG
3:46 AM
11/23/2023