

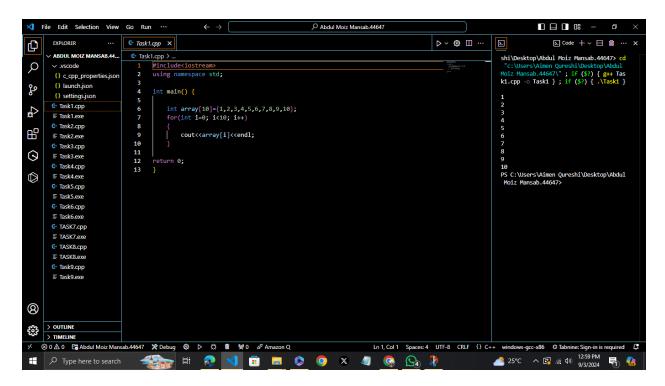
Name: Abdul Moiz Mansab

SAP ID: 44647

Course: Data Structure And Algorithem

Submitted To: Mr. Shahzad Ahmed Khan

TASK # 1



Code

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                                 C→ Task2.cpp > ..
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                                                                                                                                                           "c:\Users\Aimen Qureshi\Desktop\Abdul
Moiz Mansab.44647\" ; if ($?) { g++ Tas
k2.cpp -o Task2 } ; if ($?) { .\Task2 }
        .vscode
         {} c_cpp_properties.json
                                         using namespace std;
         {} launch.json
مړ
                                         int main() {
   int Value;
         {} settings.json
                                                                                                                                                            Enter search value:
                                                                                                                                                           45
Search not found
PS C:\Users\Aimen Qureshi\Desktop\Abdul
Moiz Mansab.44647>
        G Task1.cpp
                                              cout<<"Enter search value: "<<endl:</pre>
2
                                             Courck enter search value: <<end1;
cin>>Value;
bool found-false;
int numbers[10]=(13, 14, 12, 15, 16, 32, 56, 47, 78, 29);
for(int i=0; i<10; i++)

    Task1.exe

        C Task2.cpp
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        C Task3.cpp
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    Task3.exe

                                                  if(numbers[i]==Value)
        G Task4.cpp
                                                       found=true;
cout<<"search found"<<endl;</pre>
≡ Task4.exe
        C+ Task5.cpp

    Task5.exe

        C Task6.cpp
        ≡ Task6.exe
                                              if(found==false)
        C+ TASK7.cpp
        ≡ TASK7.exe
                                                  cout<<"Search not found"<<endl;</pre>
        C+ TASK8.cpp

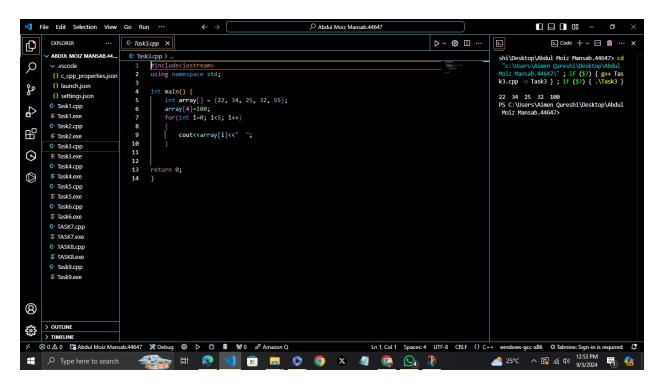
    TASK8.exe

        C Task9.cpp

    Task9.exe

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TASK #3



Code

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                               G Task4.cpp > ...

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       ABDUL MOIZ MANSAB.44..
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Moiz Mansab.44647\" ; if ($?) { g++ Tas
k4.cpp -o Task4 } ; if ($?) { .\Task4 }
       .vscode
        () c_cpp_properties.jsor
                                       using namespace std;
        {} launch.json
مړ
                                      int main() {
   int value[] = {22, 34, 25, 32, 55};
                                                                                                                                                 22 34 25 55
PS C:\Users\Aimen Qureshi\Desktop\Abdul
Moiz Mansab.44647>
        {} settings.json
       G Task1.cpp
                                          value[3]=value[4];
value[4]=value[5];
for(int i=0; (i+1)<5; i++)</pre>
2

    Task1.exe

       C Task2.cpp
品

    Task2.exe

                                               cout<<value[i]<<" ";
       C Task3.cpp
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\odot
                                 11
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    Task3.exe

       G Task4.cpp
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≡ Task4.exe
                                      return 0:
       C+ Task5.cpp

    Task5.exe

       C Task6.cpp
        ≡ Task6.exe
       C+ TASK7.cpp
        ≡ TASK7.exe
       C TASK8.cpp

    TASK8.exe

       C Task9.cpp

    Task9.exe

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> OUTLINE > TIMELINE
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TASK # 5

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                                 C Task5.cpp ×
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                                  G+ Task5.cpp > ...
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Moiz Mansab.44647\" ; if ($?) { g++ Tas
k5.cpp -o Task5 } ; if ($?) { .\Task5 }
        .vscode
                                         #include <iostr
         {} c cpp properties.ison
                                         using namespace std:
         {} launch.json
β
         {} settings.json
                                         int main() {
    const int number=6;
    int arr[number];
    cout << "Enter 6 integer values:"<<endl;
    for (int i=0; i<number; i++)</pre>
                                                                                                                                                             Enter 6 integer values:
        G Task1.cpp
2

    Task1.exe
        C Task2.cpp
品

    Task2.exe

                                                                                                                                                            The array is not a palindrome
PS C:\Users\Aimen Qureshi\Desktop\Abdul
Moiz Mansab.44647>
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        C+ Task3.cpp
(3)

    Task3.exe

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        C Task4.cpp
                                              for (int i=0; i<number /2; i++) {
  if (arr[i]!= arr[number-1-i]) {
  isPalindrome = false;
\bigcirc

    Task5.exe

        C Task6.cpp

    Task6.exe

        C+ TASK7.cpp
                                              f (isPalindrome) {
    cout << "The array is a palindrome" << endl;
} else {</pre>
        C TASK8.cpp
        ≡ TASK8.exe
                                                   cout << "The array is not a palindrome" << endl;</pre>
        C Task9.cpp
                                   25
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27

    Task9.exe

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     > TIMELINE
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Code

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Moiz Mansab.44647\" ; if ($?) { g++ Tas
k6.cpp -o Task6 } ; if ($?) { .\Task6 }
                          .vscode
                                                                                                                                 using namespace std;
int factorial(int n) {
                            {} c_cpp_properties.json
                            {} launch.json
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                                                                                                                                             int result = 1;
for (int i = 1; i <= n; i++) {
  result *= i;</pre>
                            {} settings.json
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Enter the size of the array (1 to 5): 3
                        G- Task1.cpp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Enter element 1 (0 to 5): 1
Enter element 2 (0 to 5): 2
Enter element 3 (0 to 5): 3
Average of the elements: 2
Factorials of the elements: 1 2 6
 2

≡ Task1.exe
                         C Task2.cpp
                                                                                                                                             return result;
 品

    Task2.exe

                         C Task3.cpp
                                                                                                             10
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                           PS C:\Users\Aimen Qureshi\Desktop\Abdul
Moiz Mansab.44647> 4
                                                                                                                                             int size;
cout<<"Enter the size of the array (1 to 5): ";</pre>
                         G Task4.cpp
                                                                                                             13
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    Task4.exe

                                                                                                                                              cin>>size;
while(size <1|| size >5)
                         C Task5.cpp
                                                                                                             15
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    Task5.exe

                                                                                                                                                cout<<"Invalid size! Please enter a size between 1 and 5: ";</pre>
                         C Task6.cpp
                          ≡ Task6.exe
                                                                                                            19
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                          C TASK7.cpp
                          ≡ TASK7.exe
                         G+ TASK8.cpp
                                                                                                                                                 for (int i=0; i<size; i++)

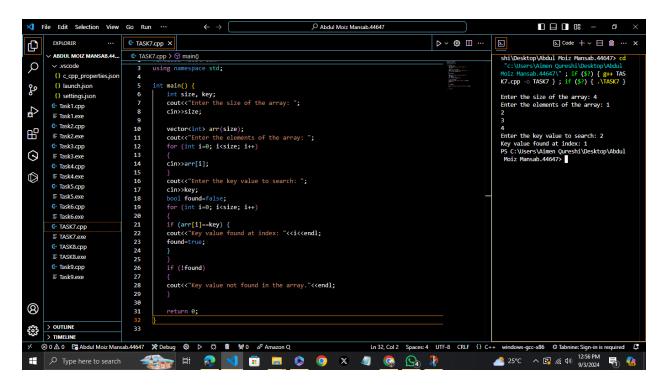
    TASK8.exe

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                                                                                                                                               cout<<"Enter element "<<i+1<<" (0 to 5): ";
cin>arr[i];
                         G Task9.cpp

    Task9.exe

                                                                                                                                               while (arr[i]<0 || arr[i]>5)
8
                                                                                                                                               cout<<"Invalid input! Please enter a number between 0 and 5: ";</pre>
                  > OUTLINE
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                                                                                                                                               sum+=arr[i];
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TASK #7



Code

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                             .vscode
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Moiz Mansab.44647\" ; if ($?) { g++ TAS K8.cpp -0 TASK8 } ; if ($?) { .\TASK8 }
                               {} c_cpp_properties.json
                                                                                                                                                using namespace std;
                               {} launch.json
 ည
                               {} settings.json
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Enter elements of the 4x4 matrix:
                           G- Task1.cpp
                                                                                                                                                            main() {
  int matrix[4][4], searchValue, found = 0;
  cout << "Enter elements of the 4x4 matrix:\n";
  for (int i = 0; i < 4; i++) {
    for (int j = 0; j < 4; j++) {
      cin >> matrix[i][j];
    }
}
 2

≡ Task1.exe
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                            C Task2.cpp
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    Task2.exe

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                              G Task4.cpp
                                                                                                                                                              cout << "Enter the value to be searched: ";
cin >> searchValue;
for (int i = 0; i < 4; i++) {
for (int j = 0; j < 4; j++) {
  if (matrix[i][j] == searchValue)
}</pre>
                                                                                                                          13
14
 C Task5.cpp
                                                                                                                          15
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    Task5.exe

                            C Task6.cpp
                             ≡ Task6.exe
                                                                                                                                                                    found = 1; cout << "Value found at row " << i + 1 << ", column " << j + 1 << endl;
                                                                                                                          19
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                             C TASK7.cpp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Enter the value to be searched: 8
Value found at row 2, column 4
PS C:\Users\Aimen Qureshi\Desktop\Abdul
Moiz Mansab.44647>
                             ≡ TASK7.exe
                            C+ TASK8.cpp

    TASK8.exe

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                                                                                                                                                                  if (found) {
                            G Task9.cpp
                                                                                                                                                               break:

    Task9.exe

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                                                                                                                                                               if (!found)
                                                                                                                                                               cout << "Value not found in the matrix." << endl;</pre>
                    > OUTLINE
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TASK #9

