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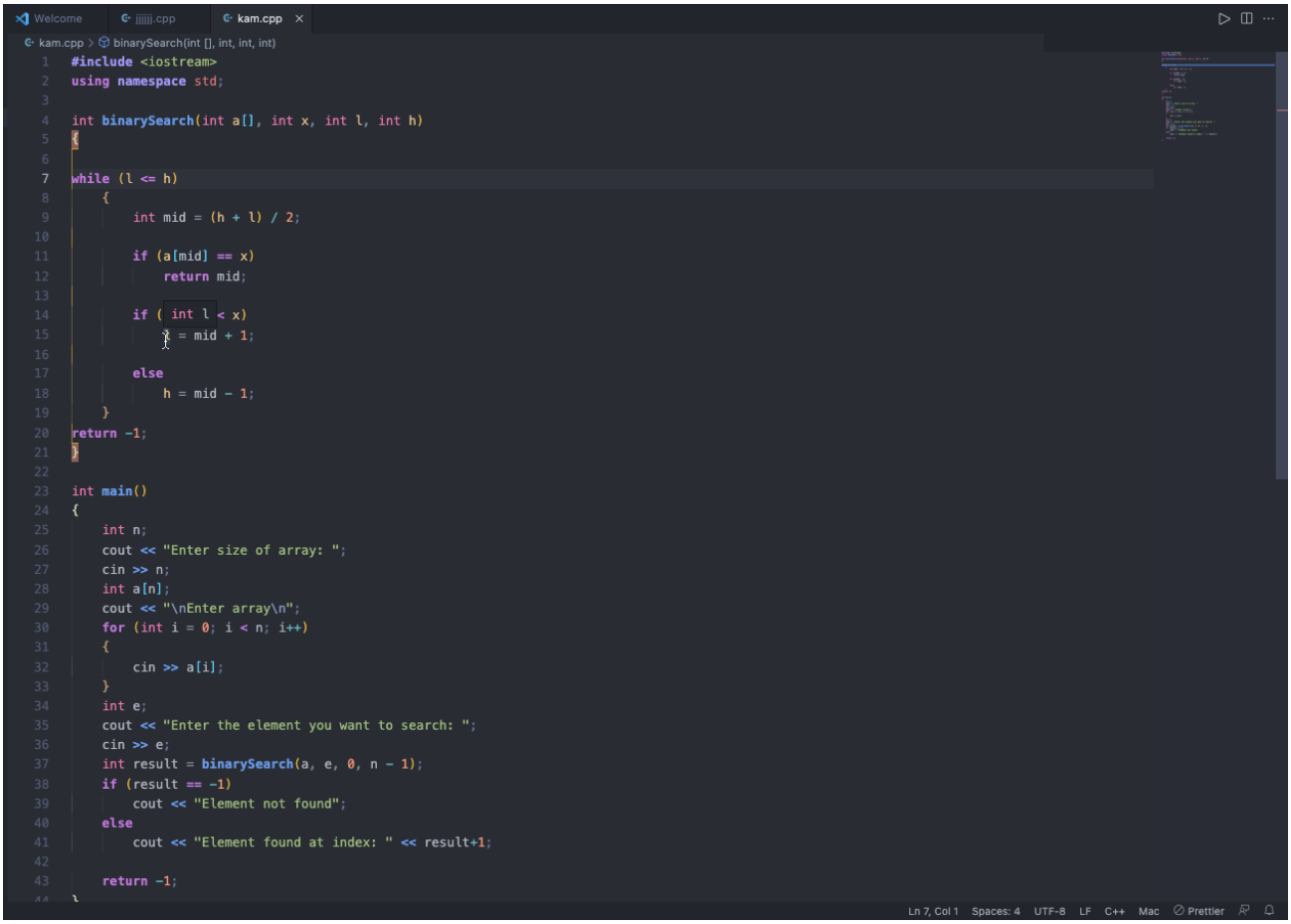
BRANCH – BTECH CSE	**SEC = 13 A**
UID -20BCS2761	
SUB- DS LAB MST	

Q - Write a menu driven program that implements Binary Search (for successful and unsuccessful search)

Solution –

Code in Compiler –



Code IN Text Form-

```
#include <iostream>

using namespace std;


int binarySearch(int a[], int x, int l, int h)

{


   while (l <= h)

   {

      int mid = (h + l) / 2;


      if (a[mid] == x)

         return mid;


      if (a[mid] < x)

         l = mid + 1;


      else

         h = mid - 1;

   }


   return -1;

}


int main()

{

   int n;

   cout << "Enter size of array: ";
```

```
    cin >> n;
    int a[n];
    cout << "\nEnter array\n";
    for (int i = 0; i < n; i++)
    {
        cin >> a[i];
    }
    int e;
    cout << "Enter the element you want to search: ";
    cin >> e;
    int result = binarySearch(a, e, 0, n - 1);
    if (result == -1)
        cout << "Element not found";
    else
        cout << "Element found at index: " << result+1;

    return -1;
}
```

OUTPUT