DATE:-22/09/22

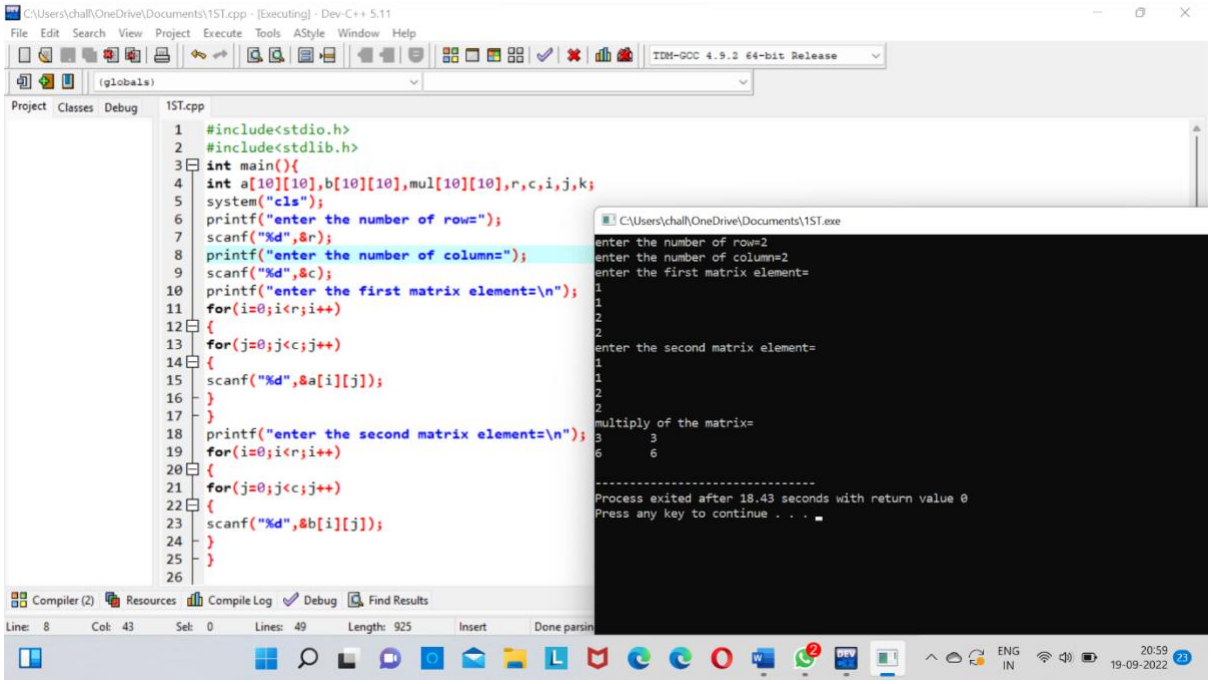
COURSE NAME:-DATA STRUCTURES FOR EXPRESSION EVALUATION

COURSE CODE:-CSA0374

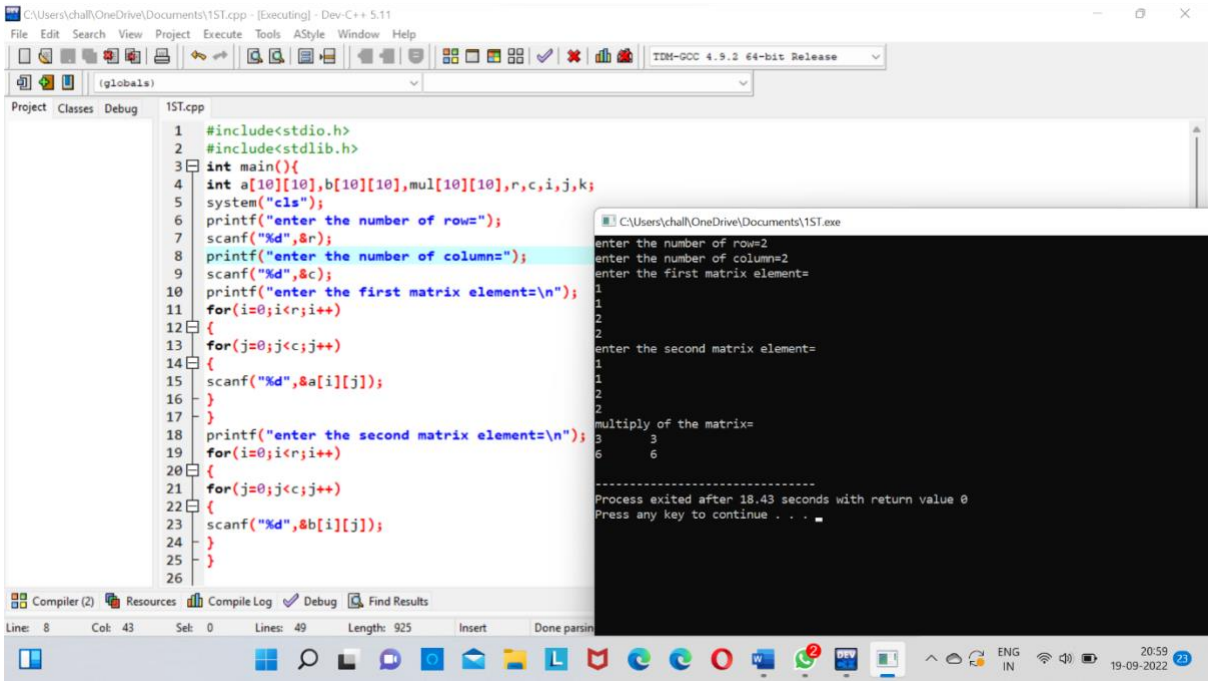
NAME OF THE STUDENT:- DILEEP.M

REGNO:-192111648

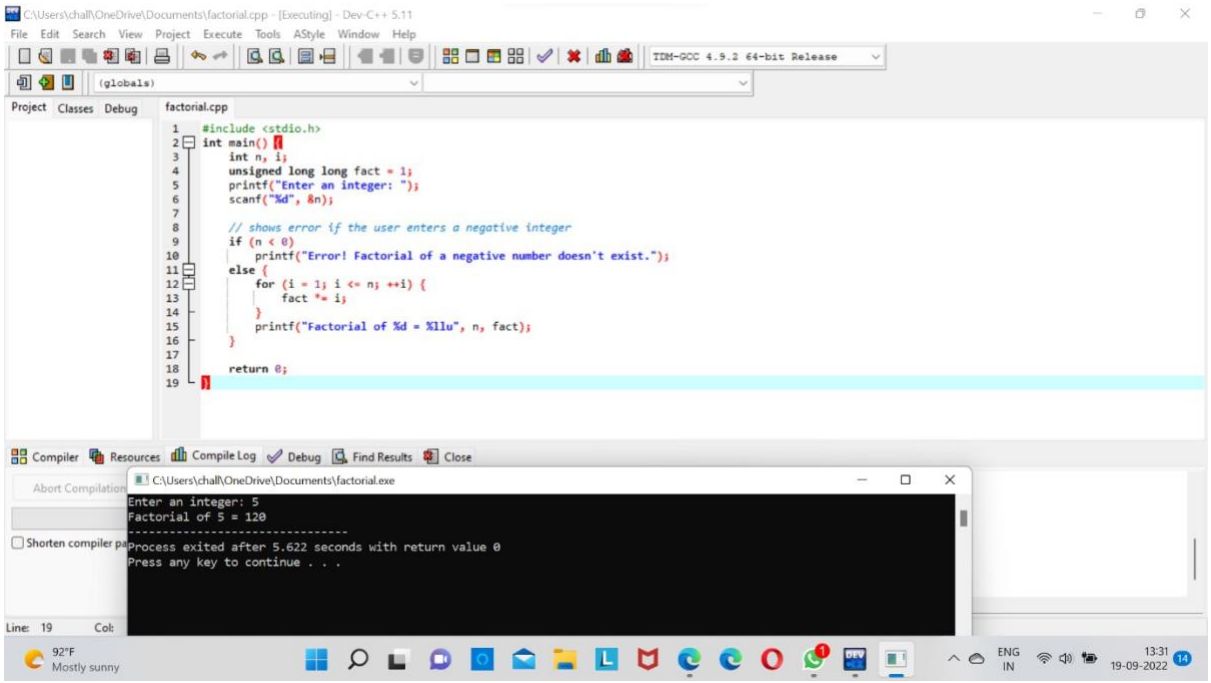
EXPERIMENT:-1(MATRIX OUT PUT)



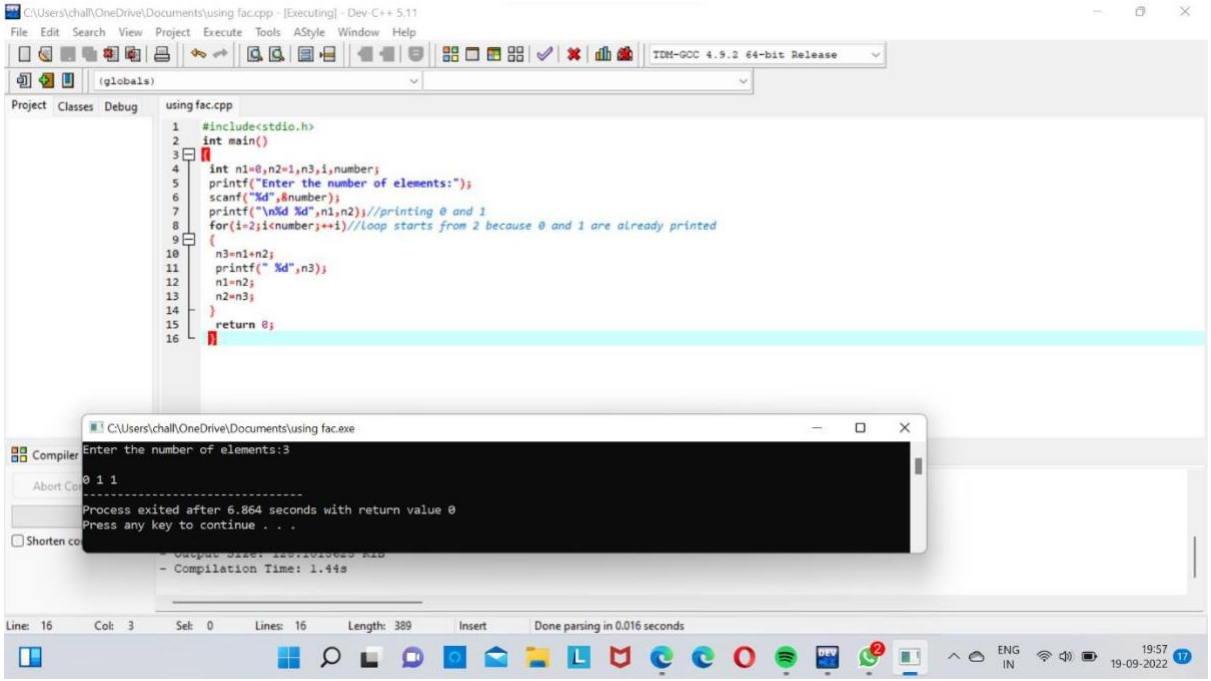
EXPERIMENT:-2(EVEN ODD OUTPUT)



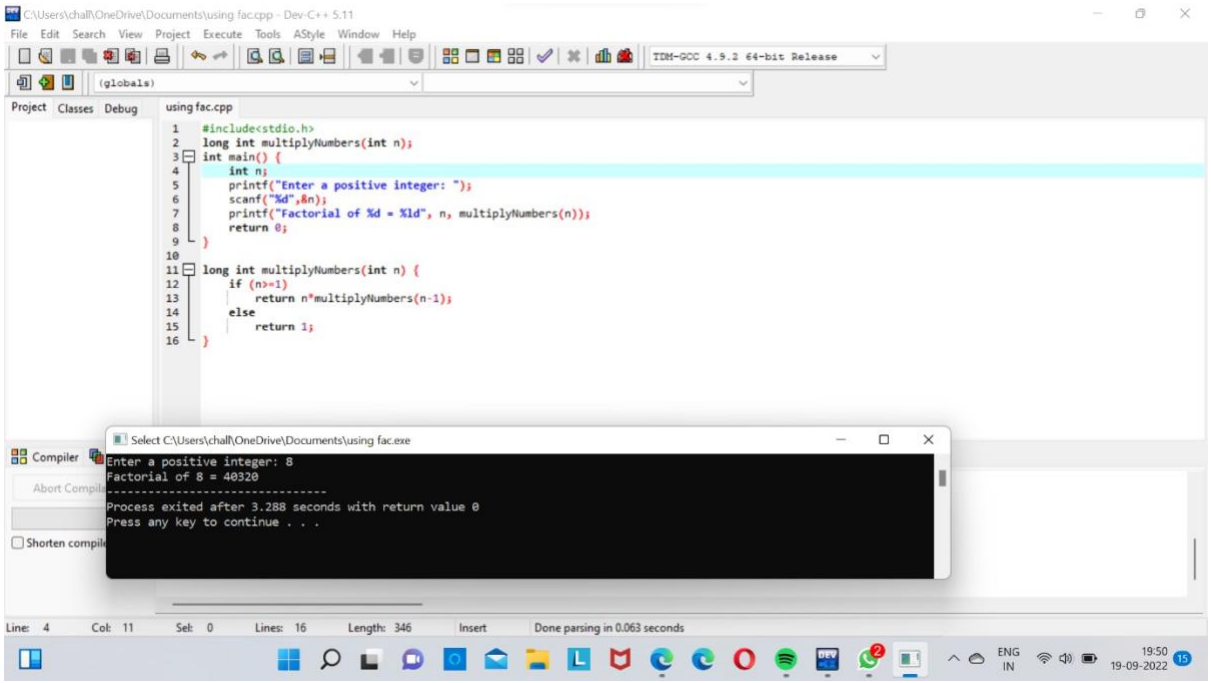
EXPERIMENT:-3(FACTORIAL WITHOUT OUTPUT)



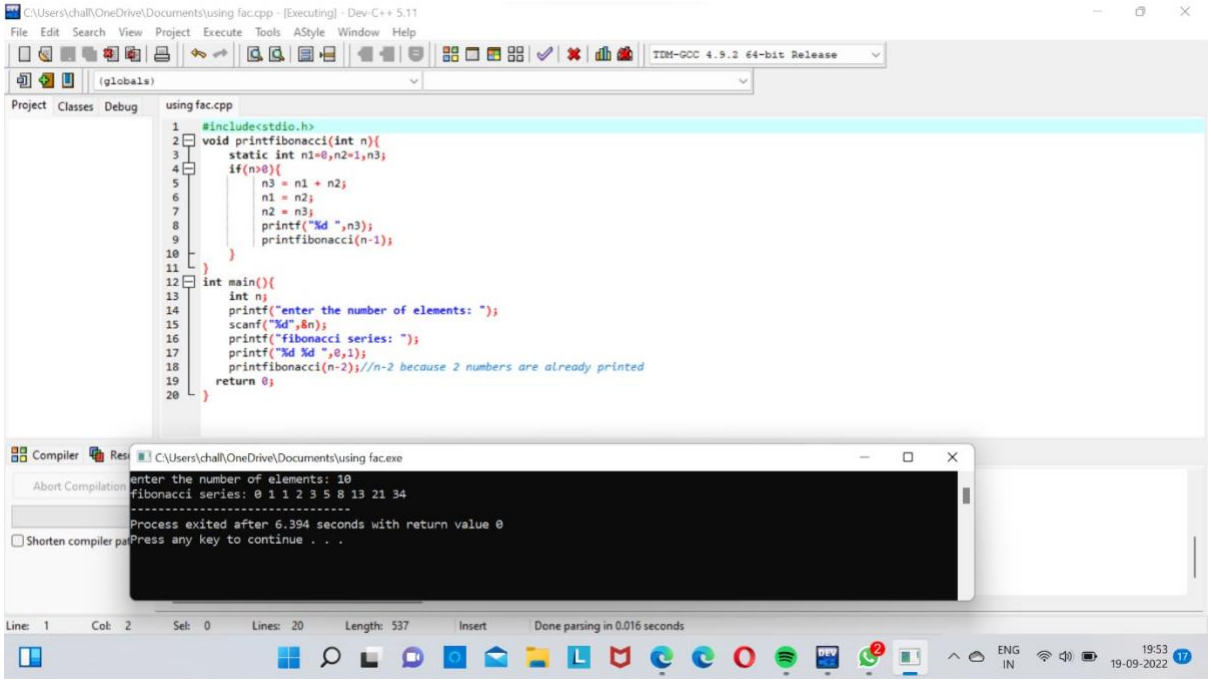
EXPERIMENT:4(FIBINOCCI WITHOUT OUTPUT)



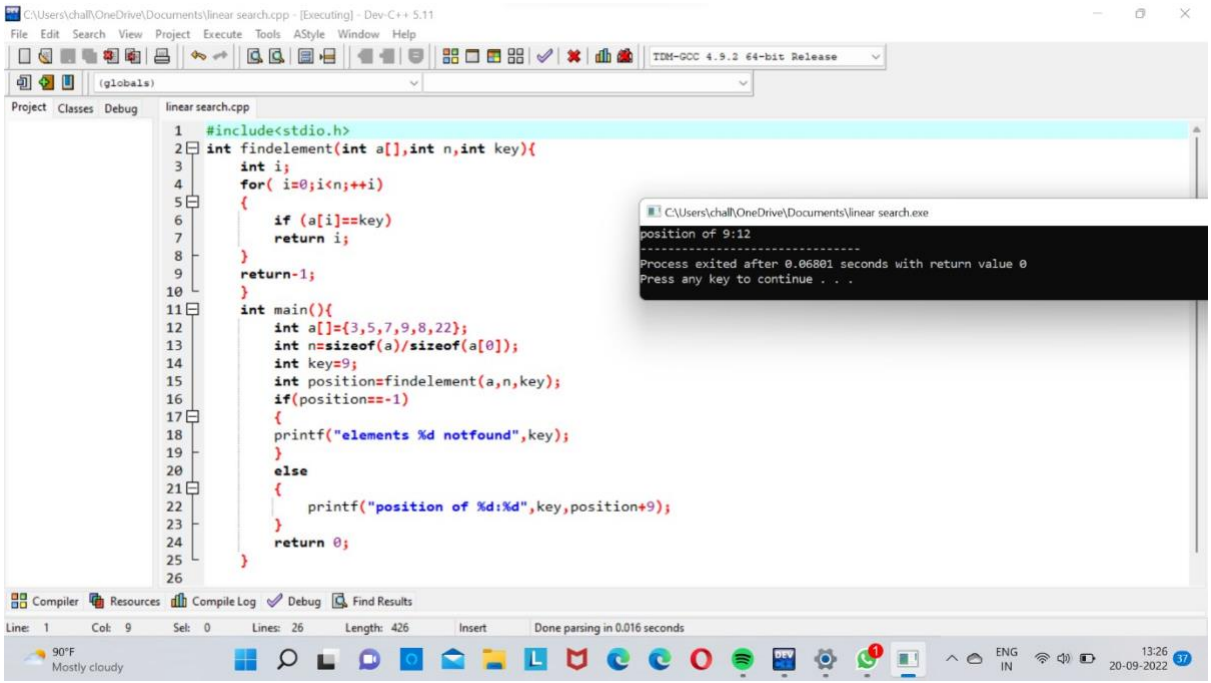
EXPERIMENT:5(FACTORIAL USING OUTPUT)



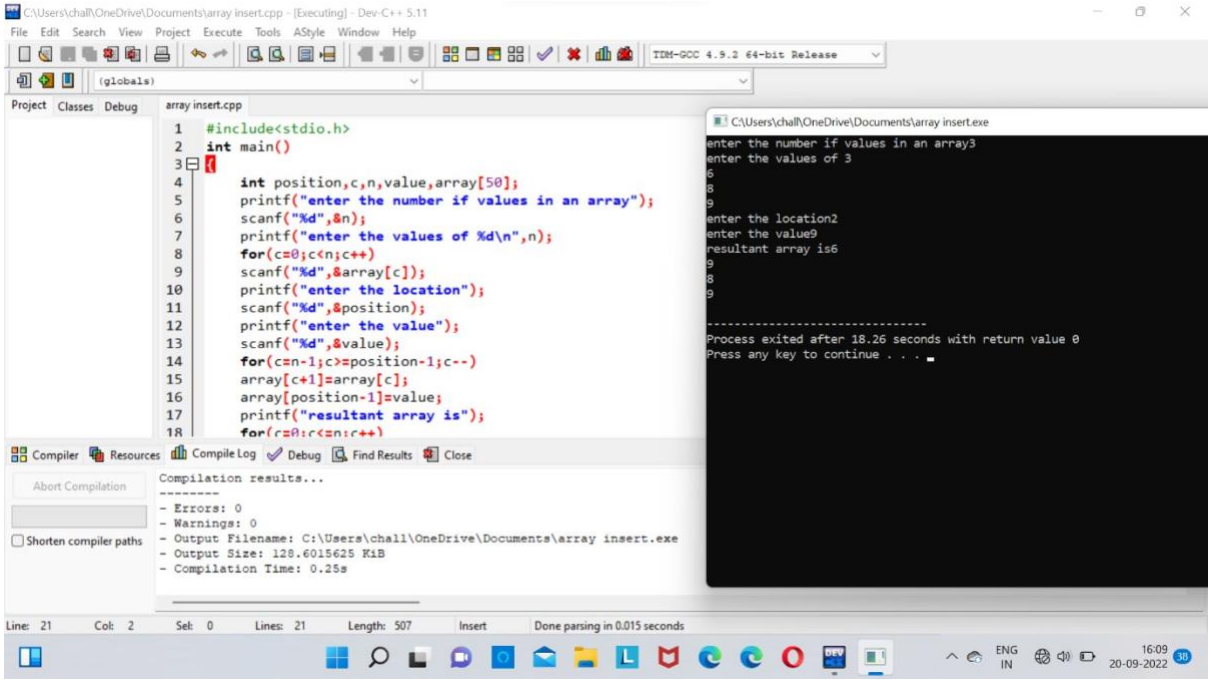
EXPERIMENT:6(FIBINOCCI USING OUTPUT)



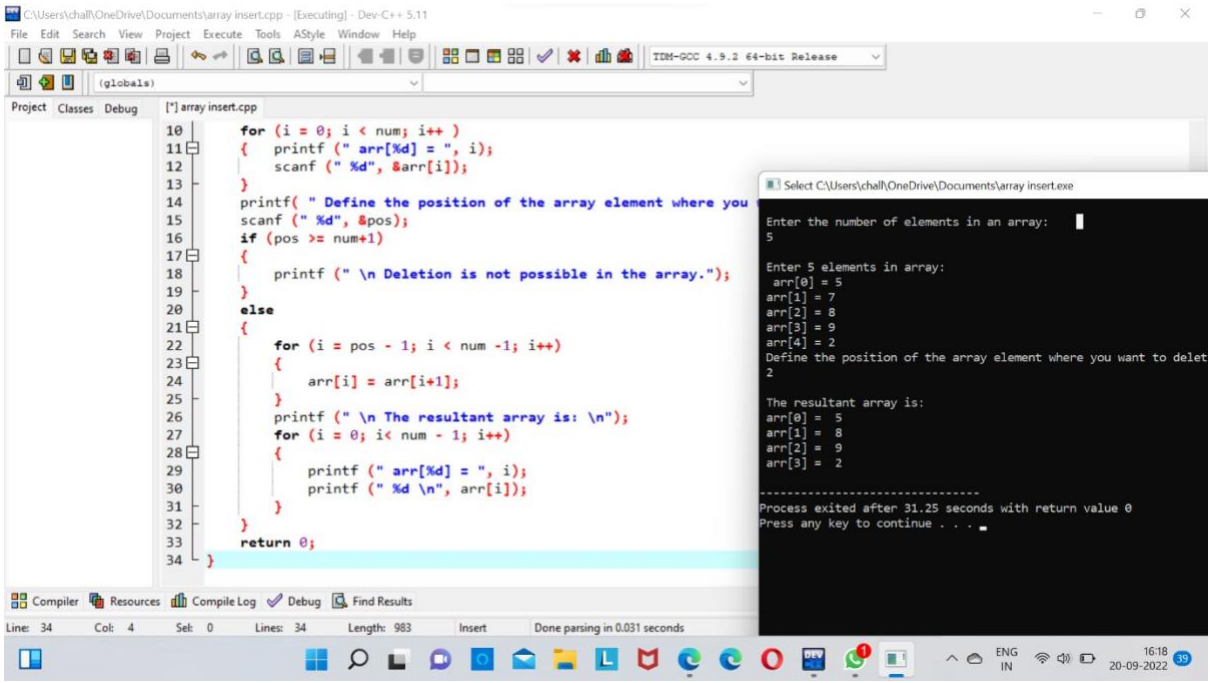
EXPERIMENT:-7(ARRAY OUTPUT)



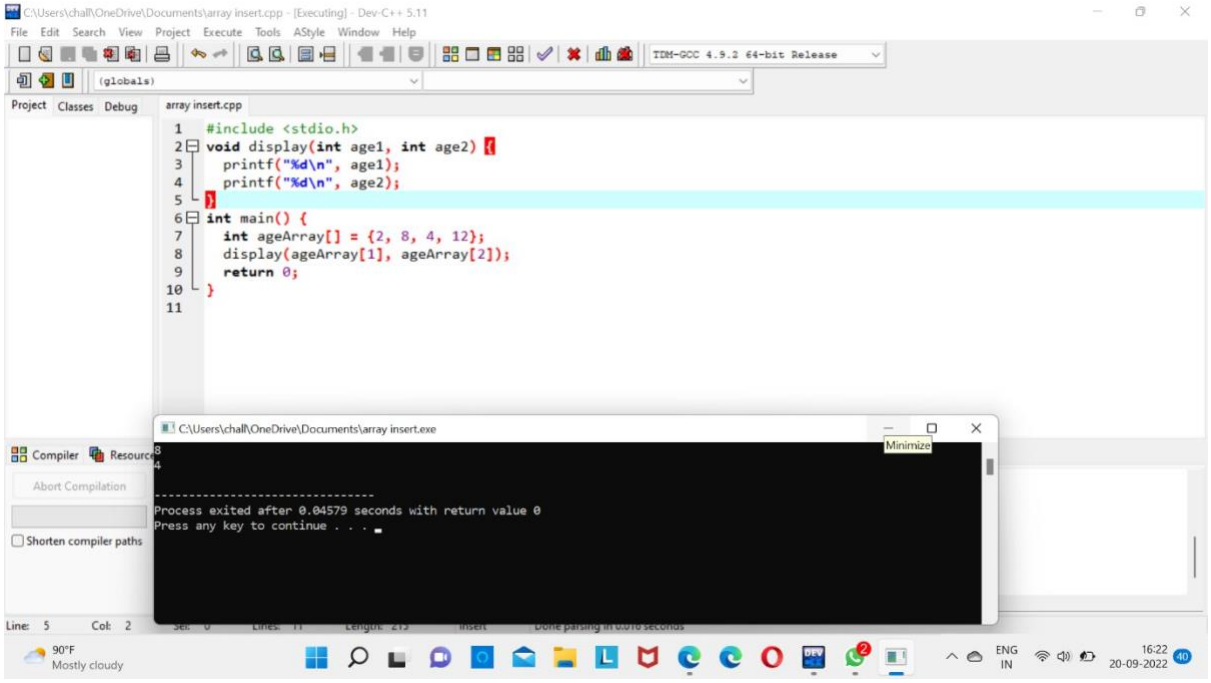
ARRAY INSERTION(OUTPUT)



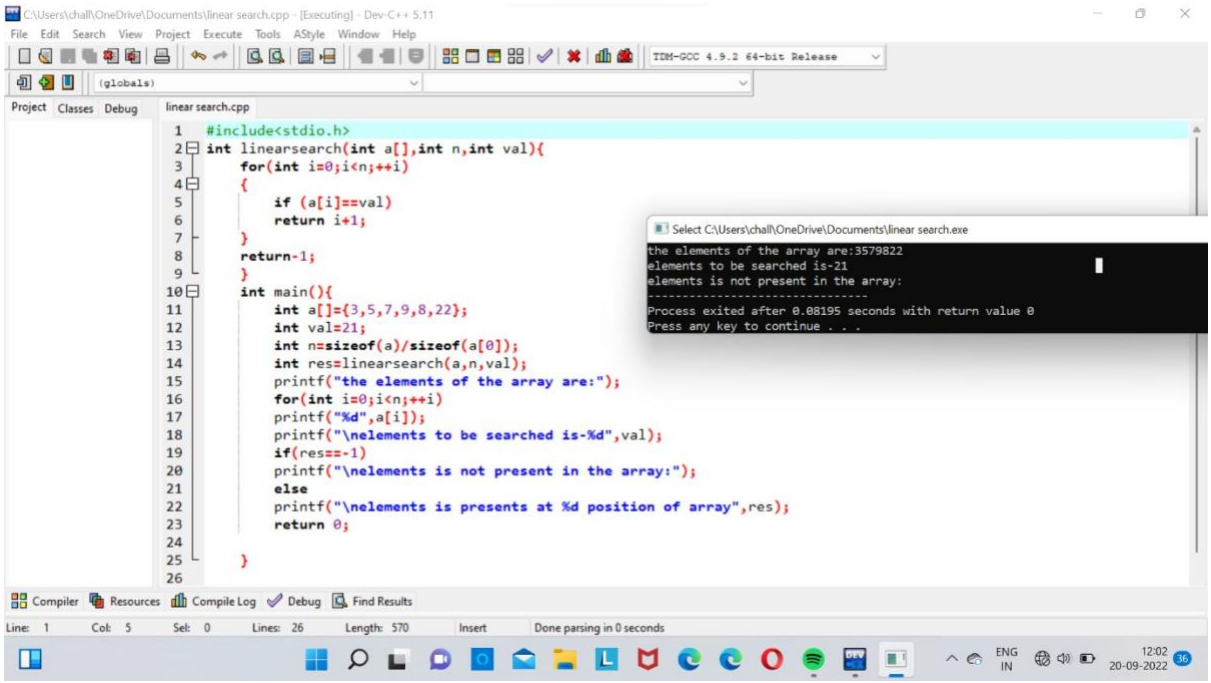
ARRAY DELETION(OUTPUT)



ARRAY DISPLAY(OUTPUT)



EXPERIMENT:-8(LINEARSEARCH(OUTPUT))

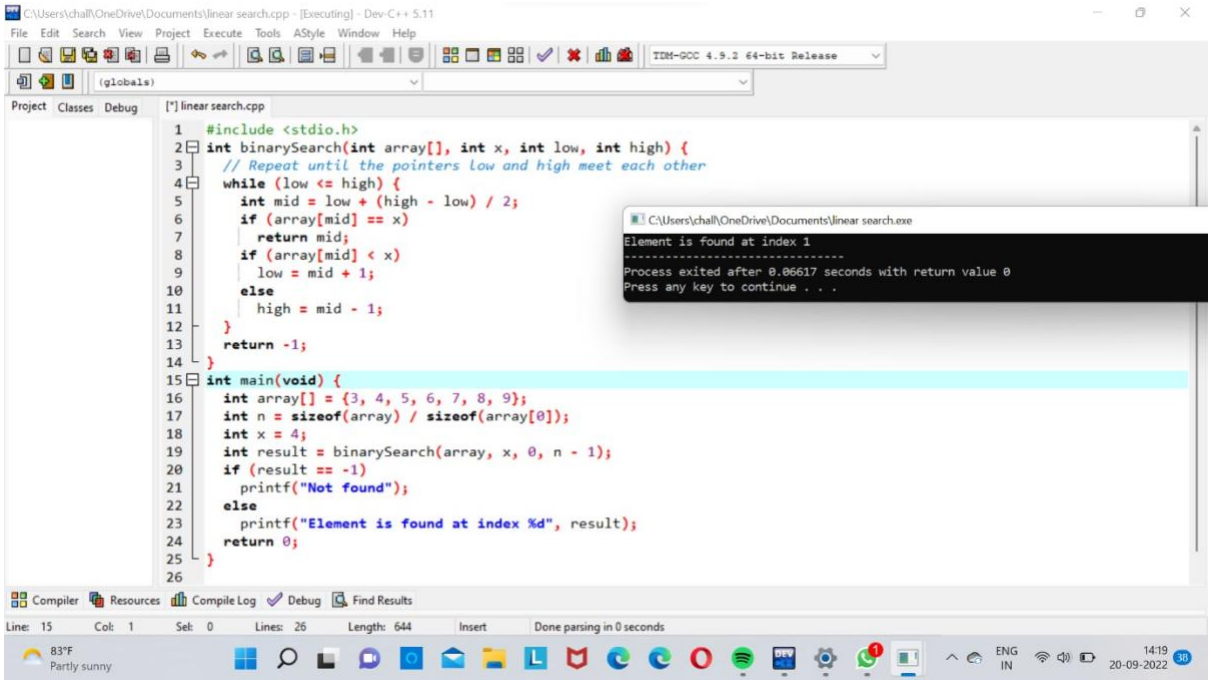


```
#include<stdio.h>
int linearsearch(int a[],int n,int val){
    for(int i=0;i<n;++i)
    {
        if (a[i]==val)
        return i+1;
    }
    return-1;
    }
    int main(){
        int a[]={3,5,7,9,8,22};
        int val=21;
        int n=sizeof(a)/sizeof(a[0]);
        int res=linearsearch(a,n,val);
        printf("the elements of the array are:");
        for(int i=0;i<n;++i)
        printf("%d",a[i]);
        printf("\nelements to be searched is-%d",val);
        if(res==-1)
        printf("\nelements is not present in the array:");
        else
        printf("\nelements is presents at %d position of array",res);
        return 0;

    }
```

```
Select C:\Users\chall\OneDrive\Documents\linear search.exe
the elements of the array are:3579822
elements to be searched is-21
elements is not present in the array:
--------------------------------
Process exited after 0.08195 seconds with return value 0
Press any key to continue . . .
```

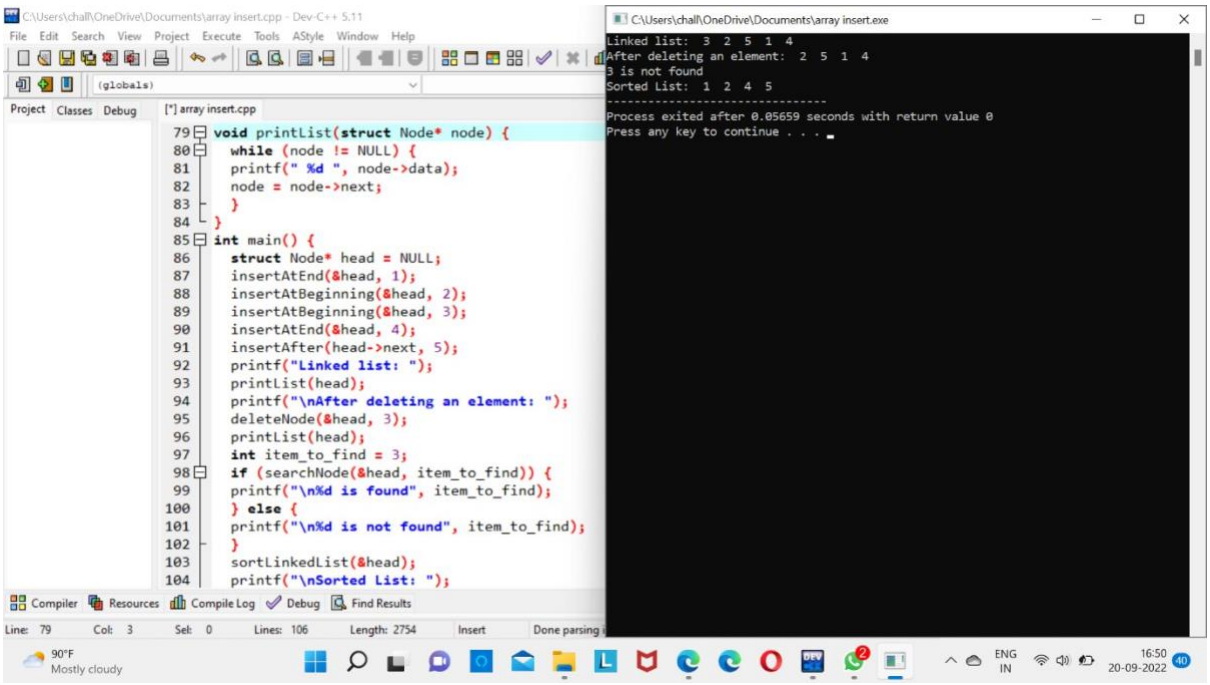
EXPERIMENT:9(BINARYSEARCH(OUTPUT)



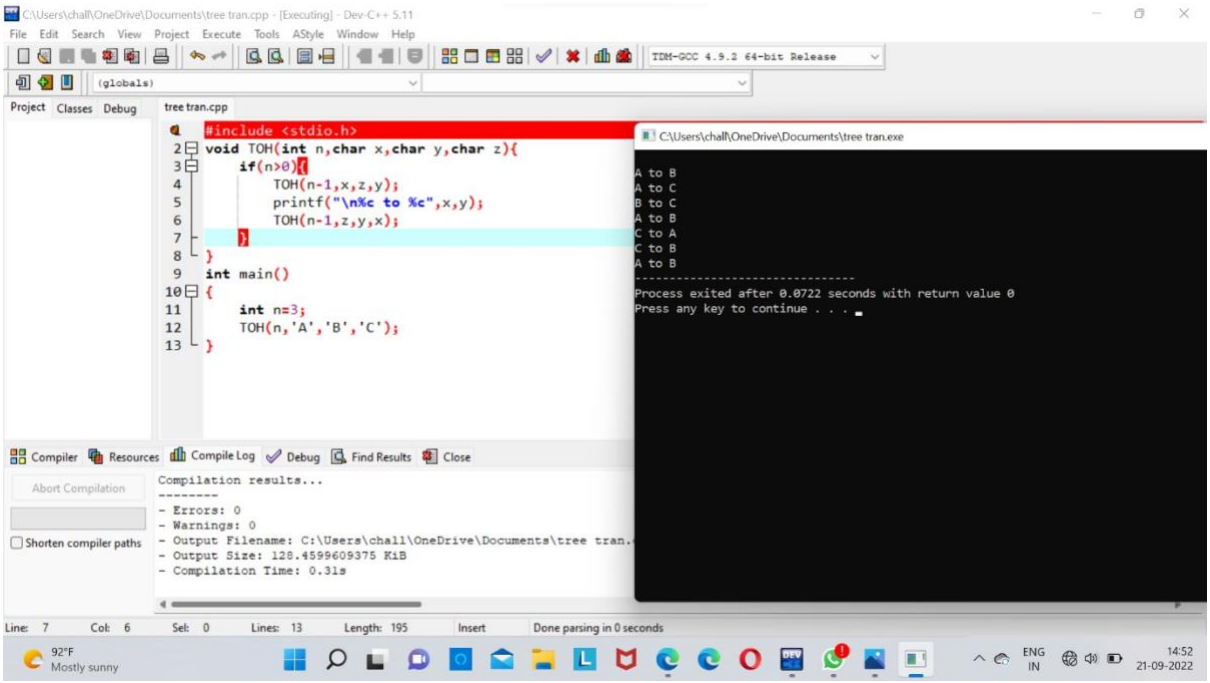
```
#include <stdio.h>
int binarySearch(int array[], int x, int low, int high) {
  // Repeat until the pointers low and high meet each other
  while (low <= high) {
    int mid = low + (high - low) / 2;
    if (array[mid] == x)
      return mid;
    if (array[mid] < x)
      low = mid + 1;
    else
      high = mid - 1;
  }
  return -1;
}
int main(void) {
  int array[] = {3, 4, 5, 6, 7, 8, 9};
  int n = sizeof(array) / sizeof(array[0]);
  int x = 4;
  int result = binarySearch(array, x, 0, n - 1);
  if (result == -1)
    printf("Not found");
  else
    printf("Element is found at index %d", result);
  return 0;
}
```

```
C:\Users\chall\OneDrive\Documents\linear search.exe
Element is found at index 1
--------------------------------
Process exited after 0.06617 seconds with return value 0
Press any key to continue . . .
```

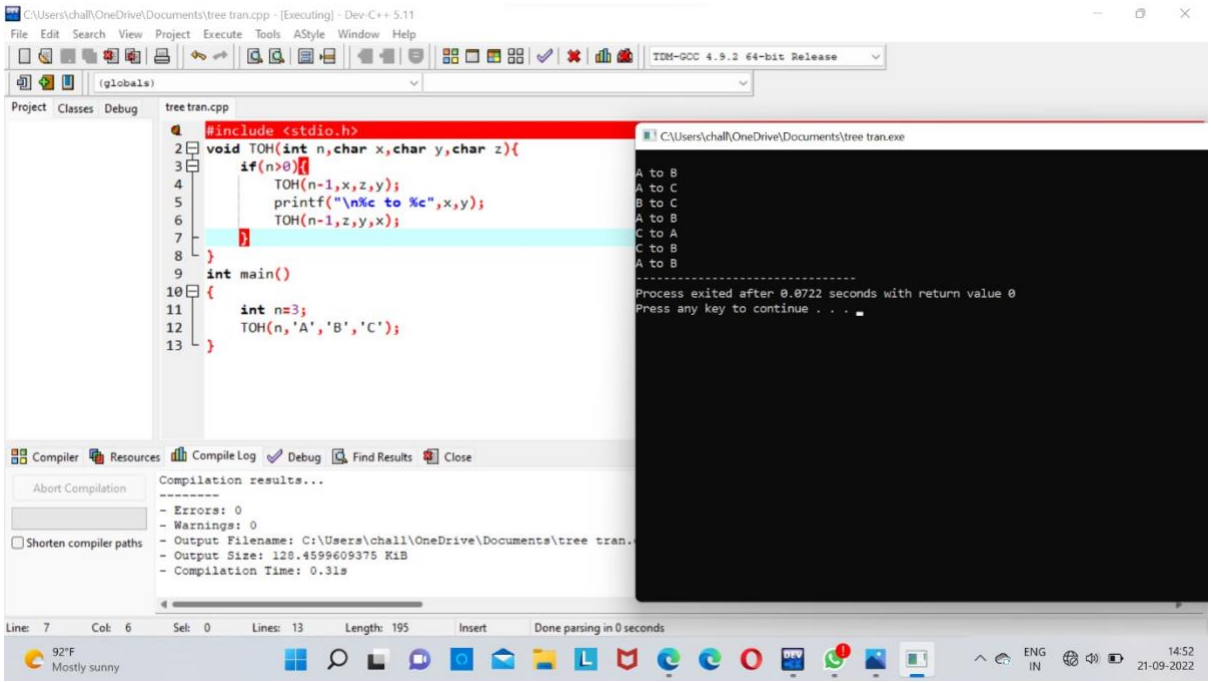
EXPERIMENT:10(LINKED LIST(OUTPUT))



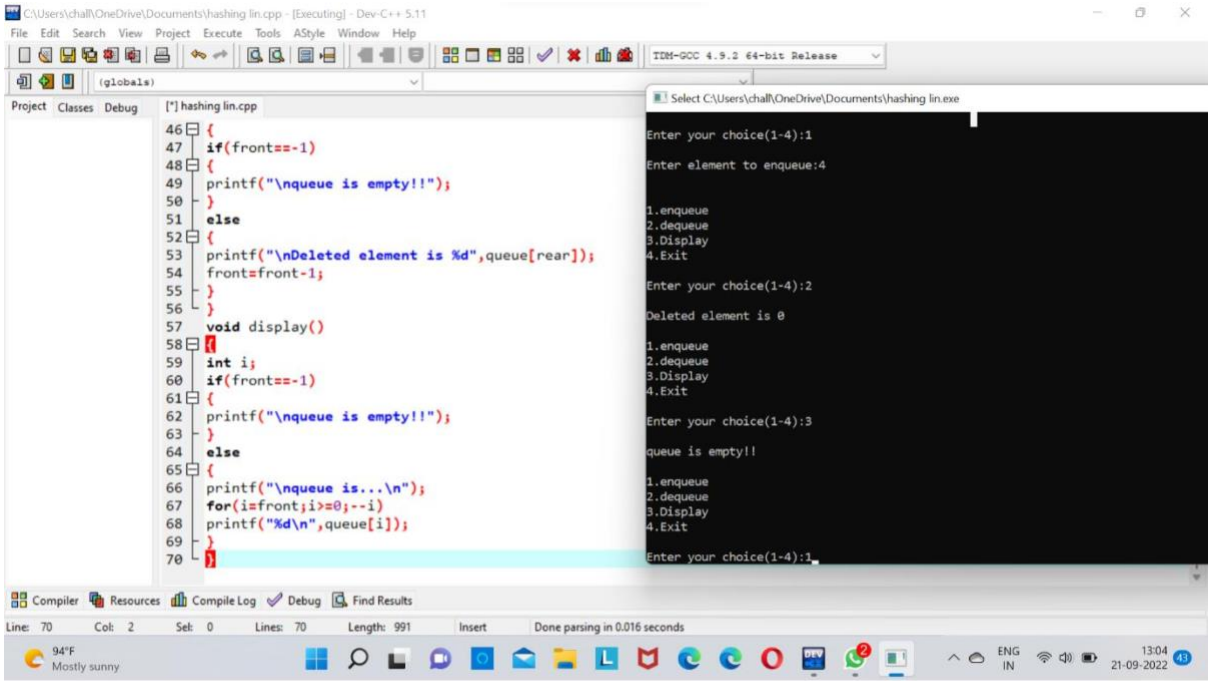
EXPERIMENT:11(STACK OPERATIONS(OUTPUT))



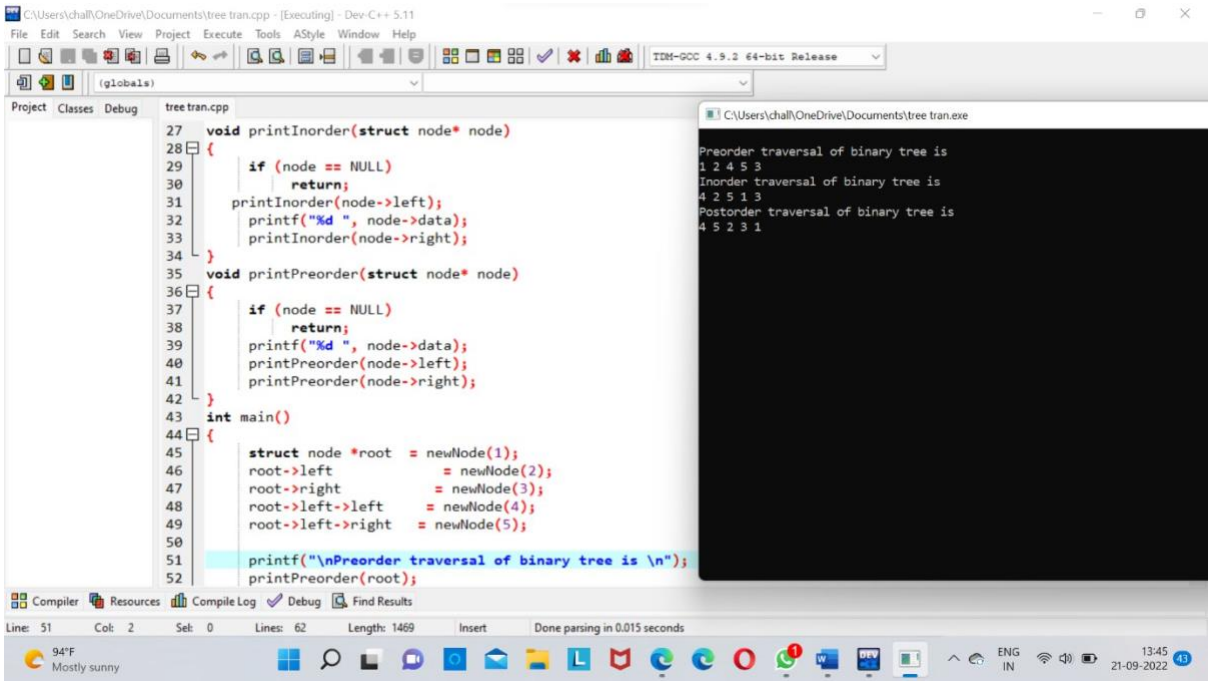
EXPERIMENT:12(STACK APPLICATION)



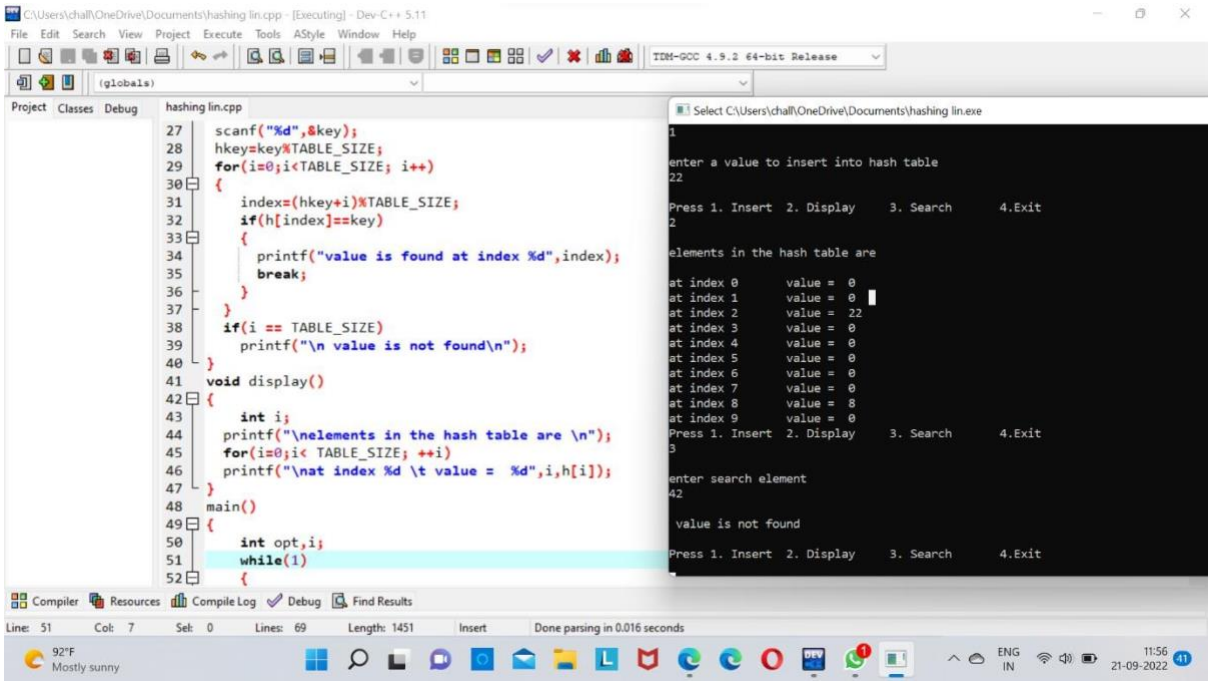
EXPERIMENT:13(QUEUE OPERATIONS(OUTPUT)



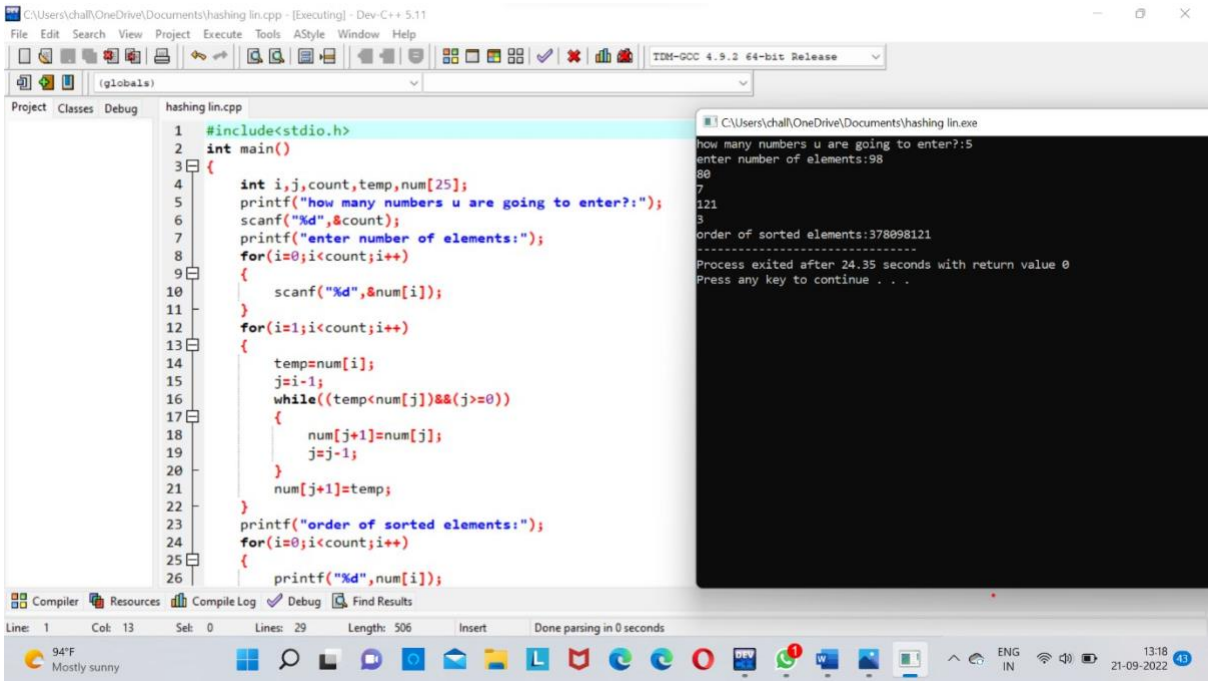
EXPERIMENT:14(TREE TRANSVERSAL(OUTPUT)



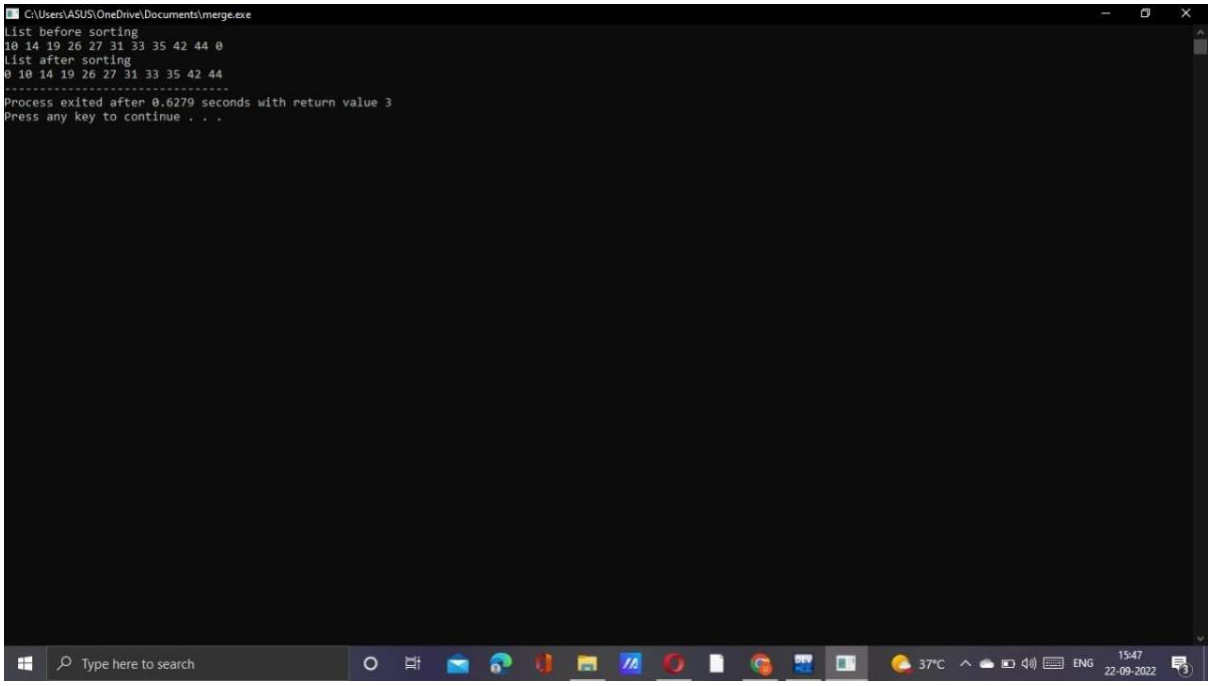
EXPERIMENT:-15(HASH USING LINEAR PROBING(OUTPUT))



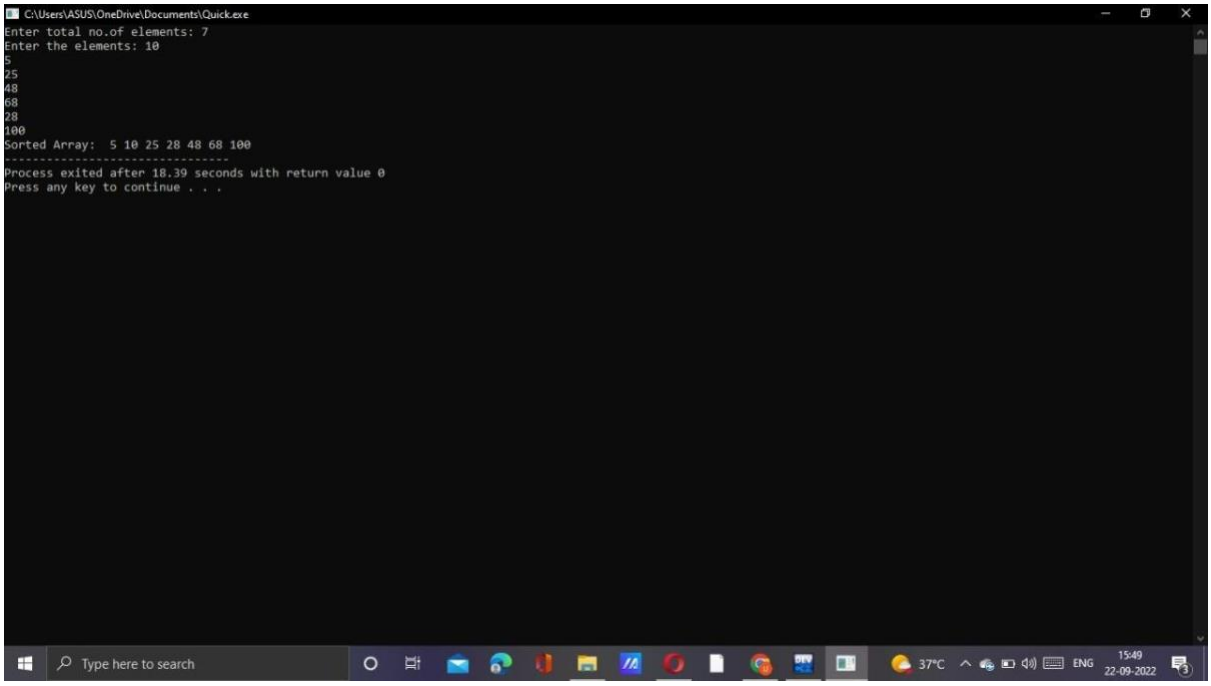
EXPERIMENT:16(INSERTION SORTING(OUTPUT)



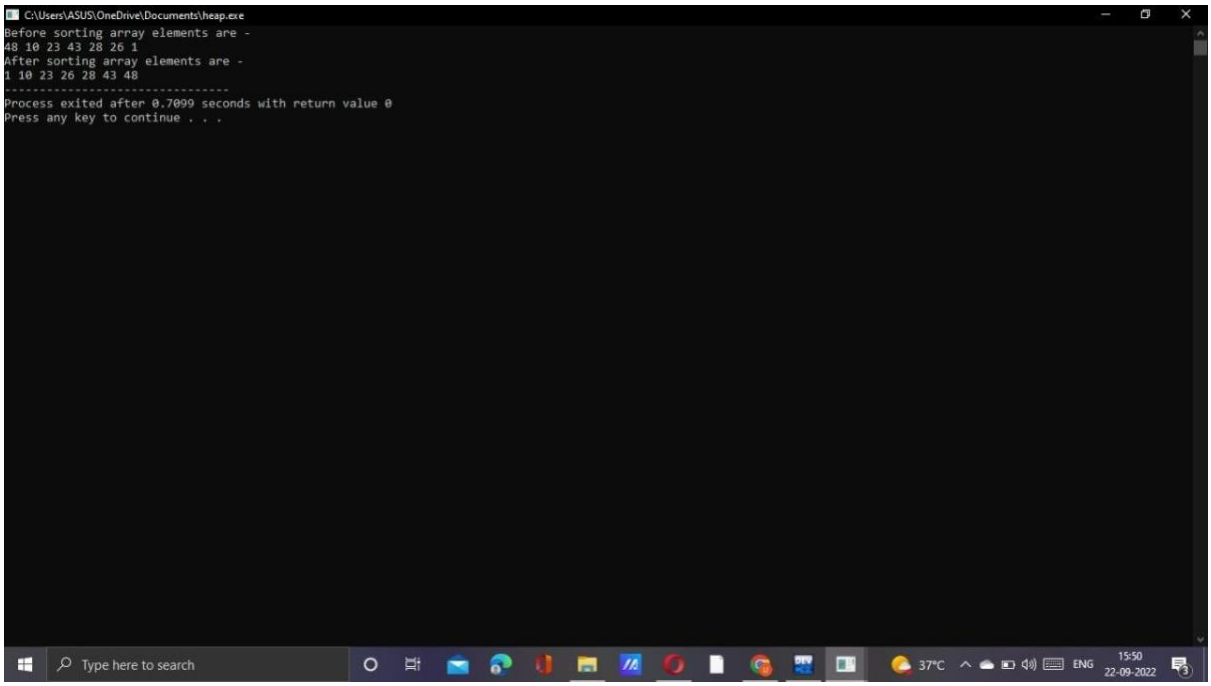
EXPERIMENT:17(MERGE SORTING)



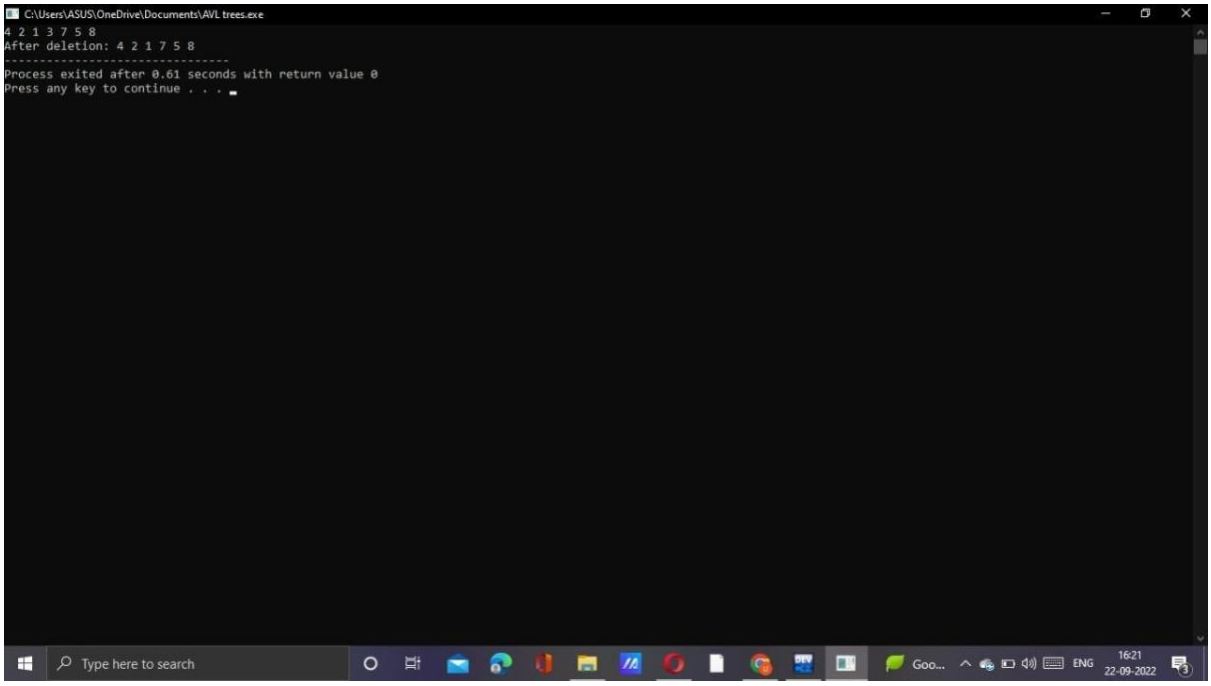
EXPERIMENT:-18(QUICK SORT(OUTPUT))



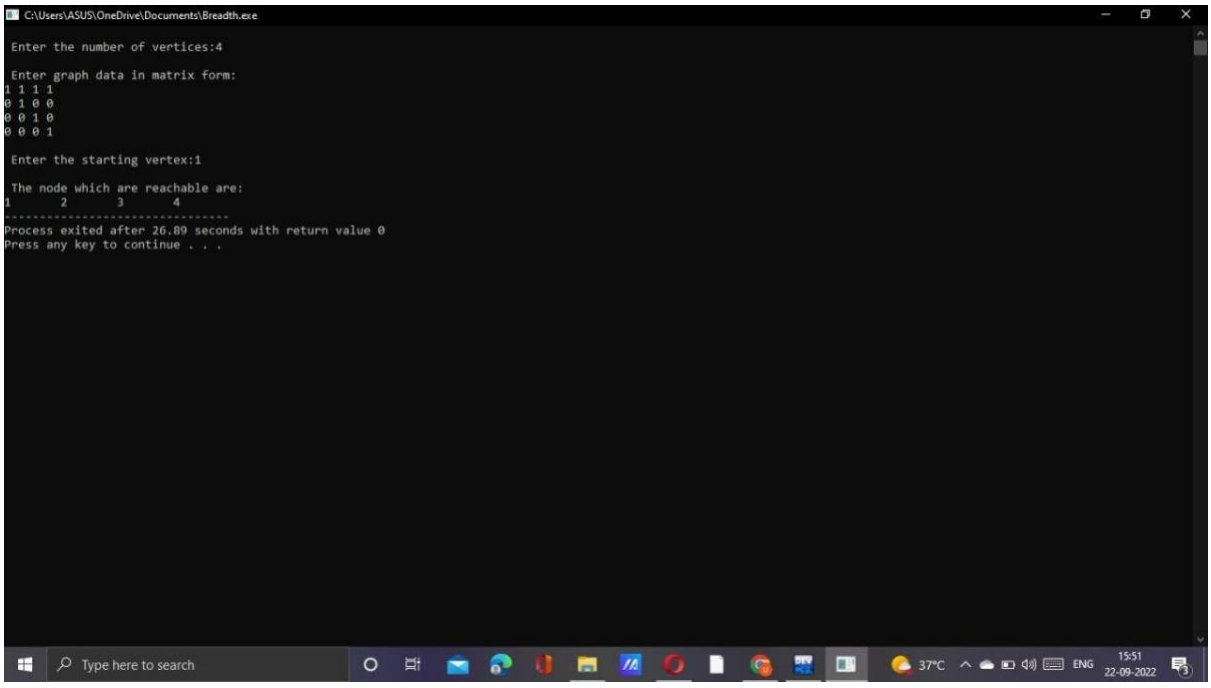
EXPERIMENT:-19(HEAP SORT (OUTPUT))



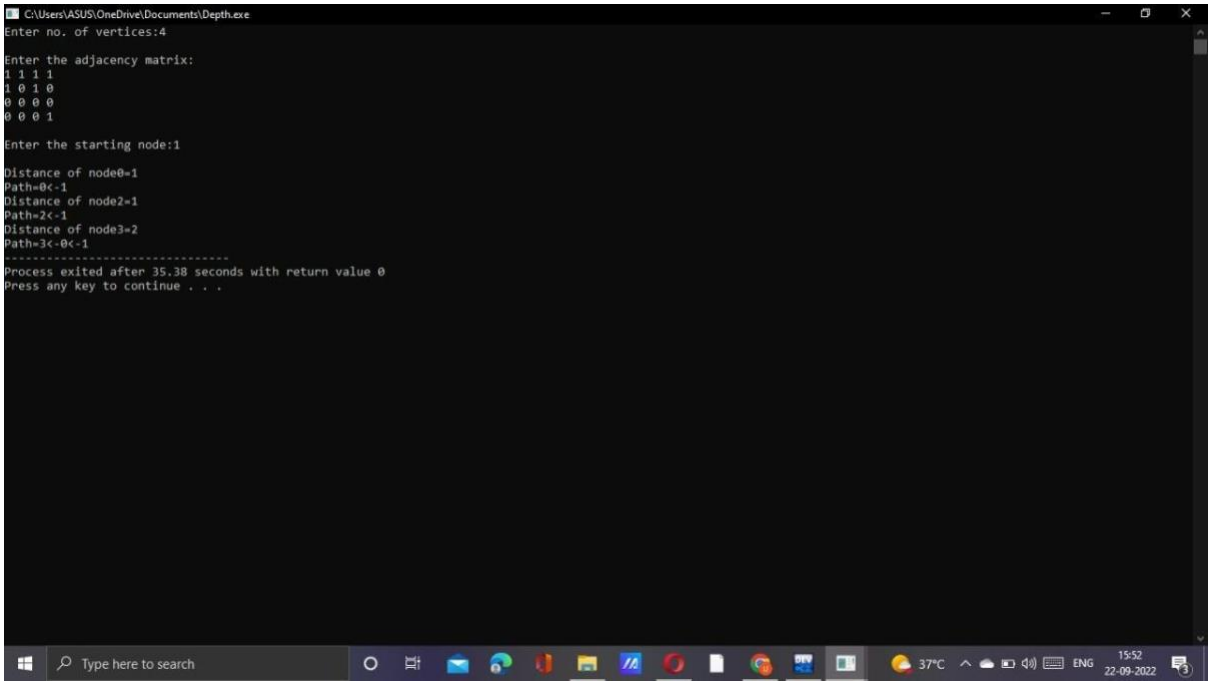
EXPERIMENT:20(AVL OPERATIONS(OUTPUT))



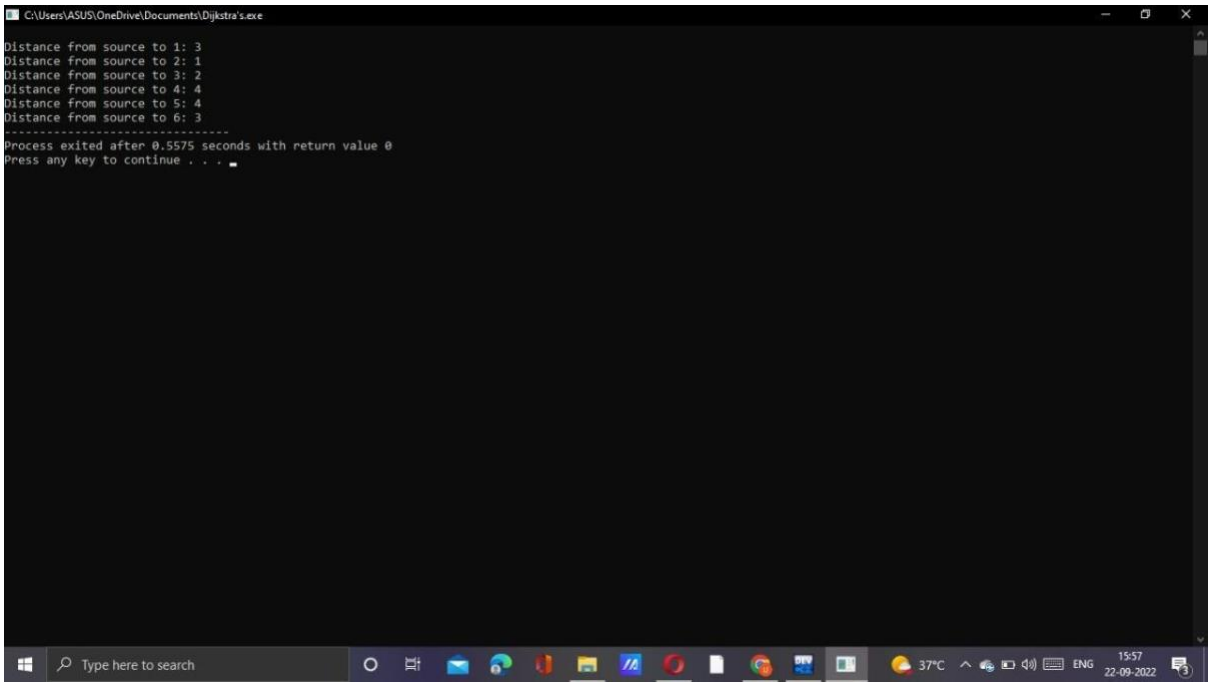
EXPERIMENT:21(BFS(OUTPUT))



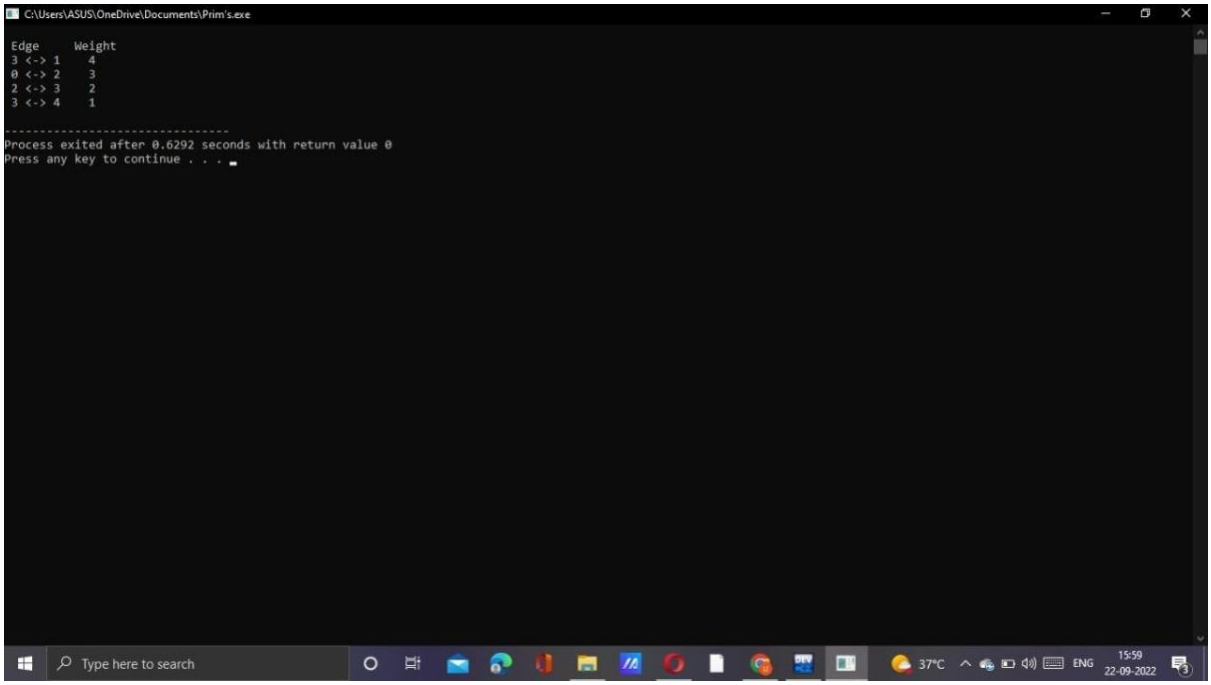
EXPERIMENT:22(DFS(OUTPUT))



EXPERIMENT:23(DIJIKSTRA ALGORITHM(OUTPUT))



EXPERIMENT:24(PRIM'S ALGORITHM(OUTPUT))



EXPERIMENT:25(KRUKAL ALGORITHM(OUTPUT)