Assignment no: 10 SYCOA124

Aim:- Set A of customers like pizza and set B of customers like a burger. Write a C++ program to store two set using an array. Compute and display.

Theory:-

1] Explain syntax to create an array by specifying size
→ An array of specified size can be created as follows;
Step 1: Give data type.
Step 2: Declare a variable and put '[]' this brackets at end of variable.
Step 3: Now write the size as an integer value inside '[]'.
Step 4: Your array of given size is created.

2] How to insert and print element in array?
→ For insertion:-
step 1:- take a data from user.
step 2:- Now use cin and insertion operator; after that write the array name.
step 3:- Now specify the index at which you want data to be stored. 0 for data at first position.

For printing:-
To print a single element use cout and extraction operator after that give the array and its index to display a particular record/element.

For printing whole array run a for loop till the size of array and print the array elements one after other.

3] Advantage and disadvantage of an array in c++.

→ Advantages :-

Array represents multiple data items of same type using a single name.

In array the elements can be accessed randomly by using the index number.

No memory allocation can be done at the time of run.

Disadvantage :-

The size of array should be known in advance

An array is a static structure once declared it's size cannot be modified.

insertion and deletion is hard as elements are in consecutive memory.

Conclusion :-

We have successfully implemented array using c++ for finding out the choice of customers for items like pizza and burger.

CODE:

```
#include <iostream>

using namespace std;
void display1(int arr[], int n)
{
    int i = 0;
    for (i = 0; i < n; i++)
    {
        if (arr[i] >= 1 && arr[i] <= 3)
            cout << i + 1 << " ";
    }
    cout << endl;
}
void display2(int arr[], int n)
{
    int i = 0;
    for (i = 0; i < n; i++)
    {
        if (arr[i] == 1)
            cout << i + 1 << " ";
    }
    cout << endl;
}
void display3(int arr[], int n)
{
    int i = 0;
    for (i = 0; i < n; i++)
    {
        if (arr[i] == 2)
            cout << i + 1 << " ";
    }
    cout << endl;
}
void display4(int arr[], int n)
{
    for (int i = 0; i < n; i++)
    {
        if (arr[i] == 3)
            cout << i + 1 << " ";
    }
    cout << endl;
}
void display5(int arr[], int n)
{
    for (int i = 0; i < n; i++)
    {
        if (arr[i] == 4)
```

```
            cout << i + 1 << " ";
    }
    cout << endl;
}

int main()
{
    int arr[100], choice, i = 0, n;
    cout << "enter the number of customers:" << endl;
    cin >> n;
    cout << endl
         << "ented the choice" << endl
         << "1)only burger" << endl
         << "2)only pizza" << endl
         << "3)both" << endl
         << "4)none" << endl;
    cout << "enter the choice per customer:" << endl;
    for (i = 0; i < n; i++)
    {
        cout << "for custoner " << i + 1 << ":";
        cin >> arr[i];
    }
    while (1)
    {
        cout << "menu" << endl
             << "1)display customer with choice burger or pizza or both"
             << endl
             << "2)only burger" << endl
             << "3)only pizza" << endl
             << "4)both pizza and burger"
             << endl
             << "5)none " << endl
             << "6)exit" << endl;
        cin >> choice;
        switch (choice)
        {
        case 1:
            cout << "the customers are :" << endl;
            display1(arr, n);
            break;
        case 2:
            cout << "the customers arr :" << endl;
            display2(arr, n);
            break;
        case 3:
            cout << "the customers are :" << endl;
            display3(arr, n);
            break;
```

```
        case 4:
            cout << "the customers are :" << endl;
            display4(arr, n);
            break;
        case 5:
            cout << "tge customers are :" << endl;
            display5(arr, n);
            break;
        case 6:
            return 0;
            break;
        default:
            cout << "wrong choice" << endl;
            break;
        }
    }
    return 0;
}
```

OUTPUT:

```
enter the number of customers:
5

ented the choice
1)only burger
2)only pizza
3)both
4)none
enter the choice per customer:
for custoner 1:1
for custoner 2:2
for custoner 3:3
for custoner 4:1
for custoner 5:4
menu
1)display customer with choice burger or pizza or both
2)only burger
3)only pizza
4)both pizza and burger
5)none
6)exit
1
the customers are :
1 2 3 4
menu
1)display customer with choice burger or pizza or both
2)only burger
3)only pizza
4)both pizza and burger
5)none
6)exit
2
the customers arr :
1 4
```

```
menu
1)display customer with choice burger or pizza or both
2)only burger
3)only pizza
4)both pizza and burger
5)none
6)exit
3
the customers are :
2
menu
1)display customer with choice burger or pizza or both
2)only burger
3)only pizza
4)both pizza and burger
5)none
6)exit
4
the customers are :
3
menu
1)display customer with choice burger or pizza or both
2)only burger
3)only pizza
4)both pizza and burger
5)none
6)exit
5
tge customers are :
5
```

```
menu
1)display customer with choice burger or pizza or both
2)only burger
3)only pizza
4)both pizza and burger
5)none
6)exit
6
PS D:\program\secondyear>
```