

Experiment No.7

Write a program in C++ to use map associative container. The keys will be the names of states, and the values will be the populations of the states. When the program runs, the user is prompted to type the name of a state. The program then looks in the map, using the state name as an index, and returns the population of the state.

```
#include <iostream>
#include <map>
#include <string>
using namespace std;
int main()
{
    string state;
    int population;
    char ans = 'y';
    int choice;
    map<string,int> m;
    map<string,int>::iterator i;
    do
    {
        cout << "\n Main Menu";
        cout << "\n1. Insert an element";
        cout << "\n2. Display";
        cout << "\n3. Search an state";

        cout << "\n Enter your choice: ";
        cin >> choice;
        switch (choice)
        {
            case 1:cout << "\n Enter the name of state: ";
                    cin >> state;
                    cout << "\n Enter the population(in Cr): ";
                    cin >> population;
                    m.insert(pair<string,int>(state,population));
                    break;
            case 2:cout << "State and Populations are: ";
                    for (i = m.begin(); i != m.end(); i++)//i is for iterator
                        cout << "[" << (*i).first << ", " << (*i).second << "]" ";
                    break;
            case 3:cout << "\n Enter the name of state for searching its population: ";
                    cin >> state;
                    if(m.count(state)!=0) // first represents key and second represents value
                        cout << "Population is " << m.find(state)->second << "Cr";
```

```

        else
            cout << "State is not present in the list" << endl;
            break;
    }
    cout << "\n Do you want to continue?(y/n): ";
    cin >> ans;
} while (ans == 'y' || ans == 'Y');
return 0;
}

```

Output

Main Menu

1. Insert an element
2. Display
3. Search an state

Enter your choice: 1

Enter the name of state: Maharashtra

Enter the population(in Cr): 126

Do you want to continue?(y/n): y

Main Menu

1. Insert an element
2. Display
3. Search an state

Enter your choice: 1

Enter the name of state: Gujrat

Enter the population(in Cr): 72

Do you want to continue?(y/n): y

Main Menu

1. Insert an element
2. Display
3. Search an state

Enter your choice: 1

Enter the name of state: Punjab

Enter the population(in Cr): 4

Do you want to continue?(y/n): y

Main Menu

1. Insert an element
2. Display
3. Search an state

Enter your choice: 2

State and Populations are: [Maharashtra, 126] [Gujrat, 72] [Punjab, 4]

Do you want to continue?(y/n): y

Main Menu

1. Insert an element
2. Display
3. Search an state

Enter your choice: 3

Enter the name of state for searching its population: Maharashtra

Population is 126 Cr

Do you want to continue?(y/n): n