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## OBJECT ORIENTED PROGRAMMING LABORATORY LAB ASSIGNMENT 7

### Problem Statement:

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.

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### Main Program

```
#include <iostream>
#include <map>
#include <string>
using namespace std;
int main()
{
    typedef map<string, int> mapType;
    mapType populationMap;
    populationMap.insert(pair<string, int>("China", 1339));
    populationMap.insert(pair<string, int>("India", 1187));
    populationMap.insert(mapType::value_type("US", 310));
    populationMap.insert(mapType::value_type("Indonesia", 234));
    populationMap.insert(make_pair("Brasil", 193));
    populationMap.insert(make_pair("Pakistan", 170));
    // map elements are not in the order of the entry
    // In this map it's US since it's ordered alphabetically.
    mapType::iterator iter = --populationMap.end();
    populationMap.erase(iter);
    // output the size of the map
    cout << "Size of populationMap: " << populationMap.size() << "\n";
    for (iter = populationMap.begin(); iter != populationMap.end(); ++iter)
    { cout << iter->first << ": "
      << iter->second << " million\n";
    }
    // find will return an iterator to the matching element if it is found
    // or to the end of the map if the key is not found
    string country("Indonesia");
    iter = populationMap.find(country);
    if( iter != populationMap.end() ){
        cout << country << "'s populations is "
        << iter->second << " million\n";
    }
    else {
        cout << "Key is not in populationMap" << "\n";
    }
}
```

```
// clear the entries in the map
populationMap.clear();
}
```

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**OUTPUT:**

Size of populationMap: 5  
Brasil: 193 million  
China: 1339 million  
India: 1187 million  
Indonesia: 234 million  
Pakistan: 170 million  
Indonesia's populations is 234 million