

/*

Title: -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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Roll No:-

Class:-SE Computer

Sub:-OOPL & CGL

Date:-

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Program-

```
#include <iostream>
```

```
#include <map>
```

```
#include <string>
```

```
#include <utility>
```

```
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));

// Erase the end element using the erase function
// Because it's ordered map (by key),
// 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();

}
```

/*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*/
```