

OOP Assignment - 09

Associative Container Map

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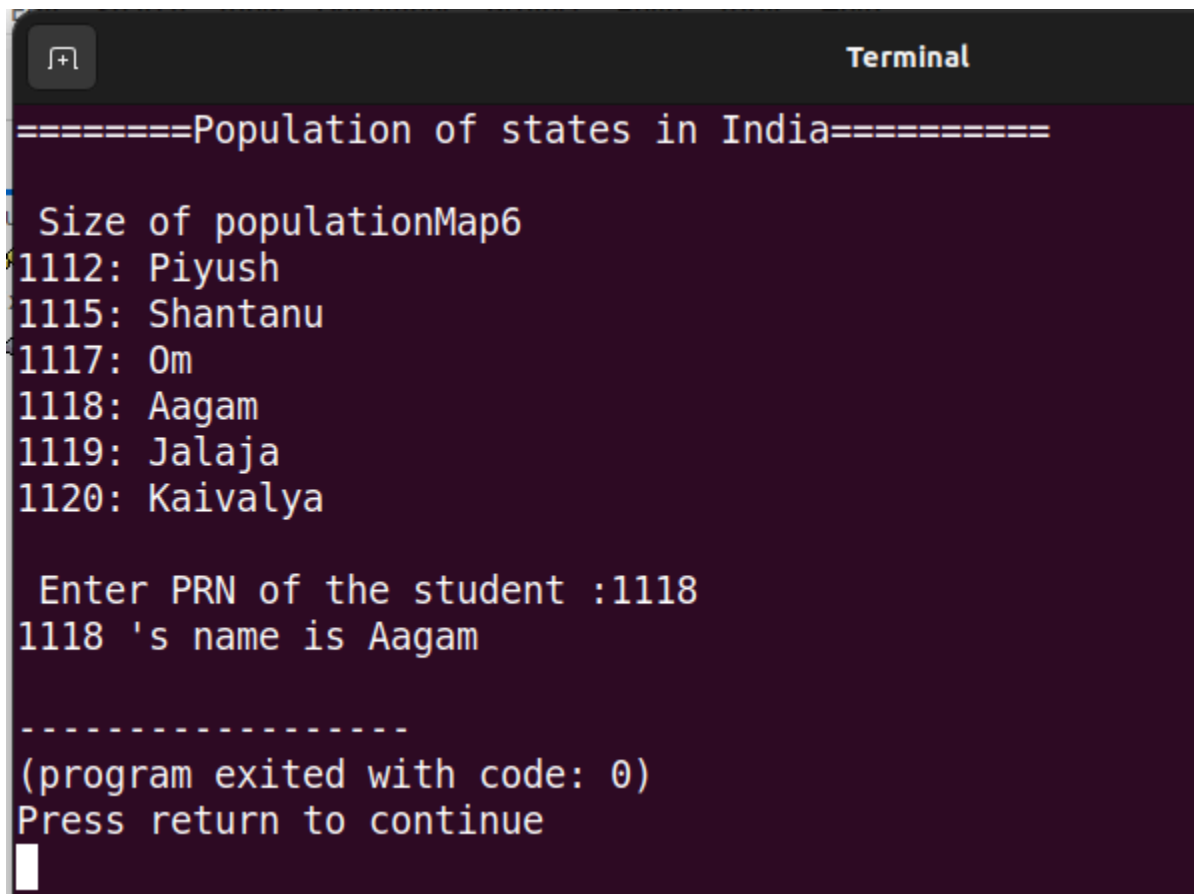
Problem Statement:- Implement a map associative container in which the keys will be the Permanent Registration Number (PRN) of the students and the values will be the name of the respective student. Develop a program that prompts the user for PRN and then it looks in the map, using the PRN as an index and returns the name of the student.

CODE

```
#include <iostream>
#include <map>
#include <string>
using namespace std;
int main()
{
    typedef map <int,string> mapType;
    mapType populationMap;
    populationMap.insert(pair<int,string>(1118,"Aagam"));
    populationMap.insert(pair<int, string>(1120, "Kaivalya"));
    populationMap.insert(pair<int, string>(1112, "Piyush"));
    populationMap.insert(pair<int, string>(1115, "Shantanu"));
    populationMap.insert(pair<int, string>(1117, "Om"));
    populationMap.insert(pair<int, string>(1119, "Jalaja"));
    mapType::iterator iter;
    cout<<"====Population of states in India====\n";
    cout<<"\n Size of populationMap"<<populationMap.size()<<"\n";
    for (iter = populationMap.begin(); iter != populationMap.end(); iter++) {
        cout << iter->first <<": " << iter->second<<"\n";
    }
    int PRN;
    cout<<"\n Enter PRN of the student :";
    cin>>PRN;
    iter = populationMap.find(PRN);
    if( iter!= populationMap.end() )
```

```
cout<<PRN <<" 's name is " <<iter->second ;  
else  
cout<<"Key is not populationMap"<<"\n";  
populationMap.clear();  
}
```

OUTPUT

A terminal window titled "Terminal" with a dark background and light-colored text. The output of a C++ program is displayed. It starts with a separator line "====Population of states in India====". Then, it prints "Size of populationMap6". Below this, a list of student records is shown: "1112: Piyush", "1115: Shantanu", "1117: Om", "1118: Aagam", "1119: Jalaja", and "1120: Kaivalya". After a blank line, it prompts "Enter PRN of the student :1118" and then displays the result "1118 's name is Aagam". This is followed by a dashed line "-----", the message "(program exited with code: 0)", and the instruction "Press return to continue". A white cursor is visible at the end of the last line.

```
====Population of states in India====  
  
Size of populationMap6  
1112: Piyush  
1115: Shantanu  
1117: Om  
1118: Aagam  
1119: Jalaja  
1120: Kaivalya  
  
Enter PRN of the student :1118  
1118 's name is Aagam  
  
-----  
(program exited with code: 0)  
Press return to continue
```