**Practical No.7**

**#include<map>**

**#include<iostream>**

**#include<string>**

**using namespace std;**

**int main()**

**{**

**map<string,int>populationMap;**

**populationMap["Brasil"]=130;**

**populationMap["China"]=1339;**

**populationMap["India"]=1187;**

**populationMap["Indonesia"]=234;**

**string s;**

**cout<<"Enter name of the state:";**

**cin>>s;**

**cout<<"State"<<s<<" has a population of"<<populationMap[s]<<endl;**

**}**

**OOP Practical no 1**

**#include<iostream>**

**using namespace std;**

**class complex {**

**private:**

**int r, i;**

**public:**

**complex operator +(complex &c) {**

**complex t;**

**t.r = r + c.r;**

**t.i = i + c.i;**

**return t;**

**}**

**complex operator \*(complex &c) {**

**complex t;**

**t.r = (r \* c.r) - (i \* c.i);**

**t.i = (r \* c.i) + (i \* c.r);**

**return t;**

**}**

**friend istream& operator>>(istream &in, complex &c);**

**friend ostream& operator<<(ostream &out, complex &c);**

**};**

**istream& operator>>(istream &in, complex &c) {**

**cout << "Enter the real and imaginary part: ";**

**in >> c.r >> c.i;**

**return in;**

**}**

**ostream& operator<<(ostream &out, complex &c) {**

**out << c.r << " + " << c.i << "i";**

**return out;**

**}**

**int main() {**

**complex c1, c2;**

**cout << "Enter values for complex number c1:"<<endl;**

**cin >> c1;**

**cout << "Enter values for complex number c2:"<<endl;**

**cin >> c2;**

**complex c3 = c1 + c2;**

**complex c4 = c1 \* c2;**

**cout << "Sum of c1 and c2: " << c3 << endl;**

**cout << "Product of c1 and c2: " << c4 << endl;**

**return 0;**

**}**

**OOP Practical No 3**

**#include <iostream>**

**#include <fstream>**

**#include <string>**

**using namespace std;**

**int main() {**

**// Step 1: Creating an output file and writing information to it**

**ofstream outFile("example.txt");**

**if (!outFile.is\_open()) {**

**cerr << "Error opening the output file!" <<endl;**

**return 1;**

**}**

**outFile << "Hello, this is written to the file!" <<endl;**

**outFile << "You can add more lines if needed." <<endl;**

**// Step 2: Closing the output file**

**outFile.close();**

**// Step 3: Opening the file as an input file and reading information**

**ifstream inFile("example.txt");**

**if (!inFile.is\_open()) {**

**cerr << "Error opening the input file!" <<endl;**

**return 1;**

**}**

**cout << "Reading from the file:" <<endl;**

**string line;**

**while (getline(inFile, line)) {**

**cout << line <<endl;**

**}**

**// Step 4: Closing the input file**

**inFile.close();**

**return 0;**

**}**