

```

//*****
//
//      File:                state2.cpp
//
//      Student:             Kenneth Nicholas
//
//      Assignment:          Assignment #4: States2
//
//      Course Name:         Programming II
//
//      Course Number:       COSC 1560 - 03
//
//      Due:                 Sept 20, 2017
//
//
//      This program uses a class in order to represent US states; Each instance of the class
//      represents one US State. More specifically, each instance of the class contains the following
//      data: the state's name, abbreviation, Capitol, the date the state was granted statehood, the
//      state's population, and the state's nickname. The program reads this data from a file
//      and then echos the data to an output file titled "a4.txt" in an easy to read format.
//
//      Other files required:
//          2.    state.txt - text file of input
//          1.    a4.txt   - text file of output
//
//*****

```

49
50 pts

```

#include <iostream>
#include <string>
#include <fstream>

```

```
using namespace std;
```

```

class State
{
    private:
        string name,
            abbr,
            capitol,
            statehood,
            nickname;
        int population;

    public:
        void setStateName(string nameOf);
        void setStateAbbr(string abbrOf);
        void setStateCapitol(string capitolOf);
        void setStateStatehood(string statehoodOf);
        void setStateNickname(string nicknameOf);
        void setStatePopulation(int populationOf);

        string getStateName();
        string getStateAbbr();
        string getStateCapitol();
        string getStateStatehood();
        string getStateNickname();
        int getStatePopulation();

        State();
};

```

```

State::State()
{
    name = "",
    abbr = "",
    capitol = "",

```

place
after main class
w/ other
definitions

-1 pt

```
    statehood = "",
    nickname = "";
    population = 0;
};
```

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```
void outputData(class State s, fstream &outFile);
void readData(State &s, fstream &inFile);
```

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```
int main()
```

```
{
    State s1;

    fstream inputFile;
    inputFile.open("state.txt", ios::in);

    fstream outputFile;
    outputFile.open("a4.txt", ios::out);

    outputFile << "PROGRAM RESULTS:" << endl
               << endl;

    cout << "PROGRAM RESULTS:" << endl
         << endl;

    for (int i = 0; i < 21; i++)
    {
        readData(s1, inputFile);
        outputData(s1, outputFile);
    }

    outputFile.close();
    inputFile.close();

    return 0;
}
```

```
//*****
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```
void State::setStateName(string nameOf)
{
    name = nameOf;
}
```

```
//*****
```

```
void State::setStateAbbr(string abbrOf)
{
    abbr = abbrOf;
}
```

```
//*****
```

```
void State::setStateCapitol(string capitolOf)
{
    capitol = capitolOf;
}
```

```
//*****
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```
void State::setStateStatehood(string statehoodOf)
{
    statehood = statehoodOf;
}
```

```
}

//*****

void State::setStateNickname(string nicknameOf)
{
    nickname = nicknameOf;
}

//*****

void State::setStatePopulation(int populationOf)
{
    population = populationOf;
}

//*****

string State::getStateName()
{
    return name;
}

//*****

string State::getStateAbbr()
{
    return abbr;
}

//*****

string State::getStateCapitol()
{
    return capitol;
}

//*****

string State::getStateStatehood()
{
    return statehood;
}

//*****

string State::getStateNickname()
{
    return nickname;
}

//*****

int State::getStatePopulation()
{
    return population;
}

//*****

void outputData(State s, fstream &outFile)
{
    outFile << "      Name:      " << s.getStateName() << endl
    << "      Abbr.:    " << s.getStateAbbr() << endl
    << "      Capitol:  " << s.getStateCapitol() << endl
    << "      Statehood: " << s.getStateStatehood() << endl
```



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        << "      Population:" << s.getStatePopulation() << endl
        << "      Nickname: " << s.getStateNickname() << endl
        << endl;

    cout << "      Name:      " << s.getStateName() << endl
        << "      Abbr.:    " << s.getStateAbbr() << endl
        << "      Capitol:   " << s.getStateCapitol() << endl
        << "      Statehood: " << s.getStateStatehood() << endl
        << "      Population:" << s.getStatePopulation() << endl
        << "      Nickname: " << s.getStateNickname() << endl
        << endl;
}

//*****

void readData(State &s, fstream &inFile)
{
    string stringHolder;
    int intHolder;

    getline(inFile, stringHolder);
    s.setStateName(stringHolder);
    getline(inFile, stringHolder);
    s.setStateAbbr(stringHolder);
    getline(inFile, stringHolder);
    s.setStateCapitol(stringHolder);
    getline(inFile, stringHolder);
    s.setStateStatehood(stringHolder);
    inFile >> intHolder;
    s.setStatePopulation(intHolder);
    getline(inFile, stringHolder);
    getline(inFile, stringHolder);
    s.setStateNickname(stringHolder);
}

//*****
//
// PROGRAM RESULTS:
//
//      Name:      Nebraska
//      Abbr.:     Ne
//      Capitol:   Omaha
//      Statehood: March 1, 1867
//      Population:1845525
//      Nickname:  Cornhusker State
//
//      Name:      California
//      Abbr.:     CA
//      Capitol:   Sacramento
//      Statehood: Sept. 9, 1850
//      Population:37253956
//      Nickname:  Golden State
//
//      Name:      Missouri
//      Abbr.:     MO
//      Capitol:   Jefferson City
//      Statehood: Aug. 10, 1821
//      Population:5988927
//      Nickname:  Show Me State
//
//      Name:      Wyoming
//      Abbr.:     WY
//      Capitol:   Cheyenne
//      Statehood: July 10, 1890
//      Population:576412
//      Nickname:  Equality State

```

```
//
//      Name:      Washington
//      Abbr.:     WA
//      Capitol:   Olympia
//      Statehood: Nov. 11, 1889
//      Population:6897012
//      Nickname:  The Evergreen State
//
//      Name:      Colorado
//      Abbr.:     CO
//      Capitol:   Denver
//      Statehood: Aug. 1, 1876
//      Population:5187582
//      Nickname:  Centennial State
//
//      Name:      Connecticut
//      Abbr.:     CT
//      Capitol:   Hartford
//      Statehood: Jan. 9, 1788
//      Population:3590347
//      Nickname:  The Constitution State
//
//      Name:      Alaska
//      Abbr.:     AK
//      Capitol:   Juneau
//      Statehood: Jan. 3, 1959
//      Population:731449
//      Nickname:  The Last Frontier
//
//      Name:      Florida
//      Abbr.:     FL
//      Capitol:   Tallahassee
//      Statehood: Mar. 3, 1845
//      Population:19317568
//      Nickname:  The Sunshine State
//
//      Name:      Virginia
//      Abbr.:     VA
//      Capitol:   Richmond
//      Statehood: June 25, 1788
//      Population:8185866
//      Nickname:  Old Dominion
//
//      Name:      Hawaii
//      Abbr.:     HI
//      Capitol:   Honolulu
//      Statehood: Aug. 21, 1959
//      Population:1392313
//      Nickname:  The Aloha State
//
//      Name:      Utah
//      Abbr.:     UT
//      Capitol:   Salt Lake City
//      Statehood: Jan. 4, 1896
//      Population:2855287
//      Nickname:  Beehive State
//
//      Name:      Minnesota
//      Abbr.:     MN
//      Capitol:   Saint Paul
//      Statehood: May 11, 1858
//      Population:5379139
//      Nickname:  Land of 10,000 Lakes
//
//      Name:      Georgia
//      Abbr.:     GE
```

```
//      Capitol:  Atlanta
//      Statehood: Jan. 2, 1788
//      Population:9919945
//      Nickname:  Peach State
//
//      Name:      Maryland
//      Abbr.:     MA
//      Capitol:   Annapolis
//      Statehood: April 28, 1788
//      Population:5928814
//      Nickname:  Old Line State
//
//      Name:      Texas
//      Abbr.:     TX
//      Capitol:   Austin
//      Statehood: December 29, 1845
//      Population:26448193
//      Nickname:  Lone Star State
//
//      Name:      Iowa
//      Abbr.:     IA
//      Capitol:   Des Moines
//      Statehood: December 28, 1846
//      Population:3090416
//      Nickname:  Hawkeye State
//
//      Name:      Idaho
//      Abbr.:     ID
//      Capitol:   Boise
//      Statehood: July 3, 1890
//      Population:1612136
//      Nickname:  Gem State
//
//      Name:      Louisiana
//      Abbr.:     LA
//      Capitol:   Baton Rouge
//      Statehood: April 30, 1812
//      Population:4625470
//      Nickname:  Pelican State
//
//      Name:      Vermont
//      Abbr.:     VT
//      Capitol:   Montpelier
//      Statehood: March 4, 1791
//      Population:626630
//      Nickname:  Green Mountain State
//
//      Name:      Alabama
//      Abbr.:     AL
//      Capitol:   Montgomery
//      Statehood: December 14, 1819
//      Population:4833722
//      Nickname:  Yellowhammer State
//
//*****
```

PROGRAM RESULTS:

Name: Nebraska
Abbr.: Ne
Capitol: Omaha
Statehood: March 1, 1867
Population: 1845525
Nickname: Cornhusker State

Name: California
Abbr.: CA
Capitol: Sacramento
Statehood: Sept. 9, 1850
Population: 37253956
Nickname: Golden State



Name: Missouri
Abbr.: MO
Capitol: Jefferson City
Statehood: Aug. 10, 1821
Population: 5988927
Nickname: Show Me State

Name: Wyoming
Abbr.: WY
Capitol: Cheyenne
Statehood: July 10, 1890
Population: 576412
Nickname: Equality State

Name: Washington
Abbr.: WA
Capitol: Olympia
Statehood: Nov. 11, 1889
Population: 6897012
Nickname: The Evergreen State

Name: Colorado
Abbr.: CO
Capitol: Denver
Statehood: Aug. 1, 1876
Population: 5187582
Nickname: Centennial State

Name: Connecticut
Abbr.: CT
Capitol: Hartford
Statehood: Jan. 9, 1788