

Ben Brandhorst
CMIS 141
December 7th 2018

HOMEWORK 4

INPUT	EXPECTED OUTPUT	ACTUAL OUTPUT	PASS ??
SCANNER INPUT: 1234 -6789 california ohIO NoNE	**OUTPUT** Enter a State or None to Exit 1234 doesn't exist in array. Enter State or None to Exit -6789 doesn't exist in array. Enter a State or None to Exit Bird: California Valley Quail Flower: Golden Poppy Enter a State or None to Exit Bird: Cardinal Flower: Scarlet Carnation Enter a State or None to Exit **** Thank you **** A summary report for each State, Bird, and Flower is: California, California Valley Quail, Golden Poppy, Ohio, Cardinal, Scarlet Carnation. Please visit our site again!	**OUTPUT** Enter a State or None to Exit 1234 doesn't exist in array. Enter State or None to Exit -6789 doesn't exist in array. Enter a State or None to Exit Bird: California Valley Quail Flower: Golden Poppy Enter a State or None to Exit Bird: Cardinal Flower: Scarlet Carnation Enter a State or None to Exit **** Thank you **** A summary report for each State, Bird, and Flower is: California, California Valley Quail, Golden Poppy, Ohio, Cardinal, Scarlet Carnation. Please visit our site again!	YES
SCANNER INPUT: NEBRASKA Rhode Island montana none	**OUTPUT** Bird: Western Meadowlark Flower: Goldenrod Enter a State or None to Exit Bird: Rhode Island Red Flower: Violet Enter a State or None to Exit Bird: Western Meadowlark Flower: Bitterroot Enter a State or None to Exit **** Thank you ***** A summary report for each State, Bird, and Flower is: Nebraska, Western Meadowlark, Goldenrod, Rhode Island, Rhode Island Red, Violet, Montana, Western Meadowlark, Bitterroot. Please visit our site again!	**OUTPUT** Bird: Western Meadowlark Flower: Goldenrod Enter a State or None to Exit Bird: Rhode Island Red Flower: Violet Enter a State or None to Exit Bird: Western Meadowlark Flower: Bitterroot Enter a State or None to Exit **** Thank you ***** A summary report for each State, Bird, and Flower is: Nebraska, Western Meadowlark, Goldenrod, Rhode Island, Rhode Island Red, Violet, Montana, Western Meadowlark, Bitterroot. Please visit our site again!	YES
SCANNER INPUT: !@#\$\$%^&*() New Mexico GeorgiA Oklahoma NONE	**OUTPUT** Enter a State or None to Exit !@#\$\$%^&*() doesn't exist in array. Enter a State or None to Exit Bird: Roadrunner Flower: Yucca	**OUTPUT** Enter a State or None to Exit !@#\$\$%^&*() doesn't exist in array. Enter a State or None to Exit Bird: Roadrunner Flower: Yucca	YES

	<p>Enter a State or None to Exit Bird: Brown Thrasher Flower: Cherokee Rose Enter a State or None to Exit Bird: Scissor-tailed Flycatcher Flower: Mistletoe Enter a State or None to Exit</p> <p>**** Thank you ****</p> <p>A summary report for each State, Bird, and Flower is: New Mexico, Roadrunner, Yucca, Georgia, Brown Thrasher, Cherokee Rose, Oklahoma, Scissor-tailed Flycatcher, Mistletoe. Please visit our site again!</p>	<p>Enter a State or None to Exit Bird: Brown Thrasher Flower: Cherokee Rose Enter a State or None to Exit Bird: Scissor-tailed Flycatcher Flower: Mistletoe Enter a State or None to Exit</p> <p>**** Thank you ****</p> <p>A summary report for each State, Bird, and Flower is: New Mexico, Roadrunner, Yucca, Georgia, Brown Thrasher, Cherokee Rose, Oklahoma, Scissor-tailed Flycatcher, Mistletoe. Please visit our site again!</p>	
--	---	---	--

TEST CASE 1: OUTPUT

```
Console X Problems Debug Shell
StateInfoDemo [Java Application] /usr/lib/jvm/java-8-oracle/bin/java (Dec 7, 2018, 10:35:38 AM)
Enter a State or None to Exit
1234
1234 doesn't exist in array.
Enter a State or None to Exit
-6789
-6789 doesn't exist in array.
Enter a State or None to Exit
california
Bird: California Valley Quail
Flower: Golden Poppy
Enter a State or None to Exit
ohio
Bird: Cardinal
Flower: Scarlet Carnation
Enter a State or None to Exit
NONE
|
**** Thank you ****
A summary report for each State, Bird, and Flower is: California, California Valley Quail, Golden Poppy, Ohio, Cardinal, Scarlet Carnation.
Please visit our site again!

Enter a State or None to Exit
```

TEST CASE 2: OUPUT

```
Enter a State or None to Exit
NEBRASKA
Bird: Western Meadowlark
Flower: Goldenrod
Enter a State or None to Exit
Rhode Island
Bird: Rhode Island Red
Flower: Violet
Enter a State or None to Exit
montana
Bird: Western Meadowlark
Flower: Bitterroot
Enter a State or None to Exit
none
|
**** Thank you ****
A summary report for each State, Bird, and Flower is: Nebraska, Western Meadowlark, Goldenrod, Rhode Island, Rhode Island Red, Violet, Montana, Western Meadowlark, Bitterroot.
Please visit our site again!
```

TEST CASE 3: OUTPUT

```
Console X Problems Debug Shell
<terminated> StateInfoDemo [Java Application] /usr/lib/jvm/java-8-oracle/bin/java (Dec 7, 2018, 10:35:38 AM)
Enter a State or None to Exit
!@#$$%^&*()
!@#$$%^&*() doesn't exist in array.
Enter a State or None to Exit
New Mexico
Bird: Roadrunner
Flower: Yucca
Enter a State or None to Exit
Georgia
Bird: Brown Thrasher
Flower: Cherokee Rose
Enter a State or None to Exit
Oklahoma
Bird: Scissor-tailed Flycatcher
Flower: Mistletoe
Enter a State or None to Exit
NONE
|
**** Thank you ****
A summary report for each State, Bird, and Flower is: New Mexico, Roadrunner, Yucca, Georgia, Brown Thrasher, Cherokee Rose, Oklahoma, Scissor-tailed Flycatcher, Mistletoe.
Please visit our site again!
```

StateInfo.java EXAMPLE:

```
*StateInfo.java X StateInfoDemo.java HeadPhone.java
1 import java.util.*;
2 /*
3  * File: StateInfo.java
4  * Author: Ben Brandhorst
5  * Date: December 7th, 2018
6  * Purpose: CMIS 141 Homework 4- Write a Java program the displays the State bird and flower
7  *
8  */
9
10 public class StateInfo {
11     // Array with states, state bird, and state flower. The lower case state names are used during
12     // linear search.
13     String[][] states = {
14         {"alabama", "Alabama", "Yellowhammer", "Camellia"},
15         {"alaska", "Alaska", "Willow Ptarmigan", "Forget-me-not"},
16         {"arizona", "Arizona", "Cactus Wren", "Saguaro Cactus"},
17         {"arkansas", "Arkansas", "Mockingbird", "Apple Blossom"},
18         {"california", "California", "California Valley Quail", "Golden Poppy"},
19         {"colorado", "Colorado", "Lark Bunting", "Rocky Mountain Columbine"},
20         {"connecticut", "Connecticut", "Robin", "Mountain Laurel"},
21         {"delaware", "Delaware", "Blue Hen Chicken", "Peach Blossom"},
22         {"florida", "Florida", "Mockingbird", "Orange Blossom"},
23         {"georgia", "Georgia", "Brown Thrasher", "Cherokee Rose"},
24         {"hawaii", "Hawaii", "Nene", "Hibiscus"},
25         {"idaho", "Idaho", "Mountain Bluebird", "Syringa"},
26         {"illinois", "Illinois", "Cardinal", "Native Violet"},
27         {"indiana", "Indiana", "Cardinal", "Peony"},
28         {"iowa", "Iowa", "Eastern Goldfinch", "Wild Rose"},
29         {"kansas", "Kansas", "Western Meadowlark", "Native Sunflower"},
30         {"kentucky", "Kentucky", "Cardinal", "Goldenrod"},
31         {"louisiana", "Louisiana", "Brown Pelican", "Magnolia"},
32         {"maine", "Maine", "Chickadee", "Pine Cone & Tassle"},
33         {"maryland", "Maryland", "Baltimore Oriole", "Black Eyed Susan"},
34         {"massachusetts", "Massachusetts", "Chickadee", "Mayflower"},
35         {"michigan", "Michigan", "Robin", "Apple Blossom"},
36         {"minnesota", "Minnesota", "Common Loon", "Lady Slipper"},
37         {"mississippi", "Mississippi", "Mockingbird", "Magnolia"},
38         {"missouri", "Missouri", "Bluebird", "Hawthorn"},
39         {"montana", "Montana", "Western Meadowlark", "Bitterroot"},
40         {"nebraska", "Nebraska", "Western Meadowlark", "Goldenrod"},
41         {"nevada", "Nevada", "Mountain Bluebird", "Sagebrush"},
42         {"new hampshire", "New Hampshire", "Purple Finch", "Purple lilac"},
43         {"new jersey", "New Jersey", "Eastern Goldfinch", "Purple Violet"},
44         {"new mexico", "New Mexico", "Roadrunner", "Yucca"},
45         {"new york", "New York", "Bluebird", "Rose"},
46         {"north carolina", "North Carolina", "Cardinal", "Dogwood"},
47         {"north dakota", "North Dakota", "Western Meadowlark", "Wild Prairie Rose"},
48         {"ohio", "Ohio", "Cardinal", "Scarlet Carnation"},
49         {"oklahoma", "Oklahoma", "Scissor-tailed Flycatcher", "Mistletoe"},
50         {"oregon", "Oregon", "Western Meadowlark", "Oregon Grape"}
51     }
```

StateInfo.java EXAMPLE Continued:

```
*StateInfo.java x StateInfoDemo.java HeadPhone.java
49     {"oklahoma", "Oklahoma", "Scissor-tailed Flycatcher", "Mistletoe"},
50     {"oregon", "Oregon", "Western Meadowlark", "Oregon Grape"},
51     {"pennsylvania", "Pennsylvania", "Ruffed Grouse", "Mountain Laurel"},
52     {"rhode island", "Rhode Island", "Rhode Island Red", "Violet"},
53     {"south carolina", "South Carolina", "Great Carolina Wren", "Yellow Jessamine"},
54     {"south dakota", "South Dakota", "Ring-necked Pheasant", "Pasque Flower"},
55     {"tennessee", "Tennessee", "Mockingbird", "Purple Iris"},
56     {"texas", "Texas", "Mockingbird", "Texas Blue Bonnet"},
57     {"utah", "Utah", "American Seagull", "Sego Lily"},
58     {"vermont", "Vermont", "Hermit Thrush", "Red Clover"},
59     {"virginia", "Virginia", "Cardinal", "Dogwood"},
60     {"washington", "Washington", "Willow Goldfinch", "Western Rhododendron"},
61     {"west virginia", "West Virginia", "Cardinal", "Rhododendron"},
62     {"wisconsin", "Wisconsin", "Robin", "Wood Violet"},
63     {"wyoming", "Wyoming", "Western Meadowlark", "Indian Paint Brush"},
64     {"BLANK", "INPUT", "USED", "FOR COUNTER"}}};
65
66 // holds a running String of program outputs which are displayed when queries are complete
67 StringBuilder wrapUp =
68     new StringBuilder("A summary report for each State, Bird, and Flower is: ");
69
70 // default constructor. Not sure this even needs to be used but I put it here just in case
71 public StateInfo() {}
72
73 /*
74  * Method that prompts scanner input, converts input to lower case, compares that input against
75  * array and returns state flowers and birds if the input matches a state. It also collects output
76  * and stores it in a Stringbuilder for use later
77  */
78 public void findState() {
79
80     String lowerCaseInput;
81
82     System.out.println("Enter a State or None to Exit");
83     Scanner keyboard = new Scanner(System.in);
84     // converts all string input to lower case and trims blank spaces before and after
85     lowerCaseInput = keyboard.nextLine().toLowerCase().trim();
86     // i is used to hold counter values
87     int i;
88     for (i = 0; i < 51; i++) {
89         // compares scanner input to column[0] (lowercase state names) in every row of the array.
90         if (lowerCaseInput.equals(states[i][0])) {
91             // appends stringbuilder with contents of columns [1], [2], and [3] of whatever row is
92             // matched
93             wrapUp.append(states[i][1] + ", ");
94             wrapUp.append(states[i][2] + ", ");
95             wrapUp.append(states[i][3] + ", ");
96             // prints state bird and flower of whatever state was matched
97             System.out.println("Bird: " + states[i][2]);
98             System.out.println("Flower: " + states[i][3]);
99         }
100     }
101     System.out.println(wrapUp);
102 }
```

StateInfo.java EXAMPLE Continued:

```
*StateInfo.java x StateInfoDemo.java HeadPhone.java
95 wrapUp.append(states[i][0] + " , ");
96 // prints state bird and flower of whatever state was matched
97 System.out.println("Bird: " + states[i][2]);
98 System.out.println("Flower: " + states[i][3]);
99 // prompts user for more input and resets counter to zero
100 System.out.println("Enter a State or None to Exit");
101 lowerCaseInput = keyboard.nextLine().toLowerCase().trim();
102 // resets counter to zero
103 i = 0;
104 }
105 // executes if user inputs any upper or lowercase version of "NONE"
106 if (lowerCaseInput.equals("none")) {
107     break;
108 }
109 // Array contains 50 rows of data with a 51st containing filler. Linear search is used to
110 // compare values of scanner input against state names. If no matches are found, counter goes
111 // to 51st row
112 while (i == 50) {
113     // informs user that their input is not in the array and prompts them for new input
114     System.out.println(lowerCaseInput + " doesn't exist in array.");
115     System.out.println("Enter a State or None to Exit");
116
117     lowerCaseInput = keyboard.nextLine().toLowerCase().trim();
118     // resets counter to zero
119     i = 0;
120 }
121 }
122 }
123 }
124
125 // method which generates summary of program output
126 public void summary() {
127     // Removes final comma of wrapUp if it's appended with any additional inputs
128     if (wrapUp.length() > 54) {
129         wrapUp.setLength(wrapUp.length() - 2);
130         // adds period to String after removing final comma
131         wrapUp.append(".");
132     }
133     // prints wrapUp of all outputs displayed previously and stops program
134     System.out.println("");
135     System.out.println("**** Thank you ****");
136     System.out.println(wrapUp);
137     System.out.println("Please visit our site again!");
138     System.out.println("");
139 }
140 }
141 }
142 }
```

StateInfoTest.java EXAMPLE:

```
StateInfo.java StateInfoTest.java x
1  /*
2  * File: StateInfoTest.java
3  * Author: Ben Brandhorst
4  * Date: December 7th, 2018
5  * Purpose: CMIS 141 Homework 4- Call on methods contained in StateInfo
6  *
7  */
8
9  public class StateInfoTest {
10     public static void main(String[] args) {
11
12         // Create 3 StateInfo objects
13         StateInfo stateInfo1 = new StateInfo();
14         StateInfo stateInfo2 = new StateInfo();
15         StateInfo stateInfo3 = new StateInfo();
16         // Call on findState and summary methods contained in StateInfo for all three objects
17         stateInfo1.findState();
18         stateInfo1.summary();
19         stateInfo2.findState();
20         stateInfo2.summary();
21         stateInfo3.findState();
22         stateInfo3.summary();
23
24     }
25 }
26
```