

Homework 4

Before attempting this project, be sure you have completed all of the reading assignments, hands-on labs, discussions, and assignments to date.

(25 points) Write a Java program that displays the State bird and flower. You should use your IDE for this exercise. You should also use Java classes to their full extent to include multiple methods and at least two classes. The program should prompt the user to enter a State and print both the State bird and flower. The user should be able to enter a State without worrying about case. (e.g. Users could enter Maryland, maryland, MARYLAND or any other possible combination of lower and upper case characters. States may also contain leading and trailing white spaces. Hint: Store the State information in a multi-dimensional array. The program should continue to prompt the user to enter a state until "None" is entered. You will need to do some research to find the State birds and flowers. Here is a sample run:

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Enter a State or None to exit:
Maryland
Bird: Baltimore Oriole
Flower: Black-eyed Susan
Enter a State or None to exit:
Delaware
Bird: Blue Hen Chicken
Flower: Peach Blossom
Enter a State or None to exit:
None
    
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Grading Rubric:

The following grading rubric will be used to determine your grade:

Attribute	Exceeds	Meets	Does not meet
Design (5 points)	(5 points) Exhibits proper use of parameters, and selection of data types all of the time. Employs correct and appropriate use of programming structures (loops, conditionals, classes etc.) all of the time. Efficient algorithms used all of the time.	(3-4 points) Exhibits proper use of parameters, and selection of data types most of the time. Employs correct and appropriate use of programming structures (loops, conditionals, classes etc.) most of the time. Efficient algorithms used most of the time.	(0-2 points) Rarely exhibits proper use of parameters, and selection of data types. Rarely employs correct and appropriate use of programming structures (loops, conditionals, classes etc.) Poorly structured and inefficient algorithms.
Functionality (10 points)	(9-10 points)	(7-8 points)	(0-6 points)

	<p>Extra effort was apparent through the addition of significant and additional functionality beyond the scope of the assignment.</p>	<p>Program fulfills most functionality.</p> <p>Most requirements were fulfilled.</p> <p>Screen captures provided demonstrating the successful compiling and running of the program.</p>	<p>Program does not fulfill functionality.</p> <p>Few requirements were fulfilled.</p>
Test cases (5 points)	<p>(5 points)</p> <p>Test cases provide comprehensive coverage of all code paths.</p> <p>Discussion of run-time errors included.</p>	<p>(3-4 points)</p> <p>Test cases provide coverage of most code paths.</p> <p>Test cases results well documented providing pass/fail results for each test case.</p>	<p>(0-2 points)</p> <p>No or insufficient test cases</p> <p>Minimal supporting evidence provided to verify testing actually took place.</p>
Java Style Guide (5 points)	<p>(5 points)</p> <p>Code impeccably neat and well-organized.</p> <p>Extensive In-line comments providing additional insight into code design and functionality</p>	<p>(3-4 points)</p> <p>Header comments include filename, author, date and brief purpose of the program.</p> <p>In-line comments used to describe major functionality of the code.</p> <p>Meaningful variable names and prompts applied.</p> <p>Class names are written in UpperCamelCase.</p> <p>Variable names are written in lowerCamelCase.</p>	<p>(0-2 points)</p> <p>Code rarely follows recommended Java style guide</p>

		Constant names are in written in All Capitals. Braces use K&R style.	
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Submission requirements:

Your deliverables include all Java files (.java) and a single word (or PDF) document. The Java files should be named appropriately for your applications. Your word document should include screen captures showing the successful compiling and running of each application, and a detailed description of the test plan for each application. The screen captures should document your use of the IDE. The test plan should include the input, expected output, actual output and if the test case passed or failed. Submit your files to the Homework 4 assignment area no later than the due date listed in the calendar.