

Final Exam 25%

Question 1) 10 Marks

Today you are to write a Java program that that will accept a single word from a user, which you store in a String variable. With the use of loops and nested loops you are to produce a specific pattern with the characters of the word as illustrated in the figures below.

So after initializing your variables, you are to retrieve a single word String input from the user and then find the appropriate combination of for loops to display each character exactly as displayed in the two samples below.

Your code must work no matter what word the user enters.

The box below illustrates how your program should behave and appear.

REMEMBER in the output: ° is a space, → is a tab and ↵ is a new line. Text in **green** is user input

| | |
|--|--|
| Enter°a°string:°Julien↵ ↵ J→ u→ l→ i→ e→ n→ ↵ J→ u→ l→ i→ e→ ↵ J→ u→ l→ i→ ↵ J→ u→ l→ ↵ J→ u→ ↵ J→ ↵ J→ u→ ↵ J→ u→ l→ ↵ J→ u→ l→ i→ ↵ J→ u→ l→ i→ e→ ↵ J→ u→ l→ i→ e→ n→ | Enter°a°string:°Maya↵ ↵ M→ a→ y→ a→ ↵ M→ a→ y→ ↵ M→ a→ ↵ M→ ↵ M→ a→ ↵ M→ a→ y→ ↵ M→ a→ y→ a→ |
|--|--|

Note 1: You are to expect a perfect user who will always enter 1 word; that is, do not verify the validity of user input.

Note 2: The use of libraries other than java.util.Scanner is prohibited. Your program must work for any strings entered, not just the ones in the samples above.

Note 3: You may need more than one nested loop to solve the problem.

Note 4: Final thought, remember that your solution is case-sensitive and space-sensitive and fulfill the above instructions carefully and precisely.

Question 2) 15 Marks

Write the java program which is getting the integer from user and name it N. Creating the two by two array with the size of N*N.

Getting the values from user and filled the array.

Write the **method** to take the array as a parameter and **reverse the columns**.

The box below illustrates how your program should behave and appear. Text in green is user input.

| | |
|---|---|
| <pre> Please put your N value ? 4 1 3 5 6 3 5 7 8 2 4 5 2 9 5 2 1 9 5 2 1 2 4 5 2 3 5 7 8 1 3 5 6 </pre> | <pre> Please put your N value ? 5 1 7 4 9 3 0 2 6 1 7 1 2 3 4 5 9 5 2 3 4 1 0 4 2 3 1 0 4 2 3 9 5 2 3 4 1 2 3 4 5 0 2 6 1 7 1 7 4 9 3 </pre> |
|---|---|

Criteria :

- Comments/description of variables/description of the steps in code/purpose of program
- Choice of variable names
- Indentation and readability of program
- Format/clarity/completeness/accuracy of output
- Proper use of required Java concepts/correctness of program