VaderHelmet.java   **VaderHelmet.txt**

When I was a kid back in the Ancient Seventies, a movie came out that changed my world. That movie was Star Wars. Along with the movie, the Kenner Corporation created Star Wars miniatures dolls based on the movie called Action Figures so that young boys would play with them (ingenious marketing really). That same corporation, seeing what a wonderful money cow they had created, then when on to offer a carrying case shaped like Darth Vader's head. It was awesome and I begged Santa Claus to get me that, a bunch of Star Wars Action Figures, the Death Star, and a light saber for Christmas. Well, I didn't get the lightsaber, but I did get rest. What I didn't know at the time, but developed over the next year, was my fanatical desire to sort all my action figures into my Darth Vader Helmet. True story, I used to star them by name, then I would sort them by favorite to least favorite (R2-D2 was always my favorite), then I would sort them by alignment and rank. How was I to know then, that I would develop this love of Star Wars into a programming assignment to teach you how to populate a 2D array!

You will receive from a textfile called VaderHelmet.txt two integers that will be the row size and the column size of the 2D array, which represents the Vader Helmet storage container. You will then receive an unknown number of Strings that are the names of Star Wars toys, it is possible to have duplicate names (after all, there can't be just one Stormtrooper). You will place each String into the 2D array by the following rules:

If the String is between "A" and "F", then place the String in the first available empty element in the 2D array as you go through the 2D array from left to right, top to bottom, in row major order.

If the String is between "Q" and "Z", then place the String in the first available empty element in the 2D array as you go through the 2D array from right to left, bottom to top, in row major order.

If the String is between "G" and "K", then place the String in the first available empty element in the 2D array as you go through the 2D array from bottom to top, left to right, in column major order.

If the String is between "L" and "P", then place the String in the first available empty element in the 2D array as you go through the 2D array from top to bottom, right to left, in column major order.

In all cases, if the 2D array is full, do not attempt to place anymore action figures.

When you print out your 2D array, make sure you put a period after the String rather than a space.

I highly suggest you write methods for each different ways you can place the String and that you write a method for seeing if the 2D array is full and a method to print the 2D array.

Sample text file

```
8 4
R2-D2
Ben Kenobi
Stormtrooper
Chewbacca
Luke Skywalker
Jawa
```

```
Sand People
C-3PO
Han Solo
Darth Vader
Death Squad Commander
Princess Leia Organa
Stormtrooper
Sand People
Jawa
Death Squad Commander
Luke Skywalker
```

Sample output

```
Ben Kenobi.Chewbacca.C-3PO.Luke Skywalker.
Darth Vader.Death Squad Commander.Death Squad Commander.Princess Leia Organa.
null.null.null.Luke Skywalker.
null.null.null.null.
null.null.null.null.
Jawa.null.null.null.
Han Solo.null.Sand People.Stormtrooper.
Jawa.Sand People.Stormtrooper.R2-D2.
```