

CSCI 2300, Spring 2019

Homework 4 [50 points]

Overview

The focus of this homework is on the Model View Controller (MVC) design pattern discussed in class. You will be modifying the Magic 8 Ball application you wrote for the midterm exam by using an MVC design pattern. Additionally, you'll be making a nicer user interface. This homework reinforces the following concepts:

- Model View Controller design pattern
- Icon interface
- Java SWING API
- Reading from file

Description

Recall the Magic 8 Ball application from your midterm exam. You can start with the code you wrote for the midterm exam or start from scratch. Below are the requirements for this application (same as on the midterm exam).

FR1: When a user submits a question, an answer appears on the screen.

FR2: The answers are presented in random order: a user cannot detect a pattern and guess the next answer.

FR3: Any two consecutive (back to back) answers cannot be the same. Example: if I just got an answer "yes" for my question, I should not get a "yes" as an answer to my next question.

FR4: Answers used in the application come from 'answers.txt' file. I should be able to modify 'answers.txt' file to see new answers without recompiling your application.

Use the Model View Controller design pattern to implement this application. Additionally, enhance the user interface by showing the answer inside a black circle, as in the prototype below (consider using Icon interface):



Grading

Your grade will be calculated based on the following criteria:

[12 points] Does your application fulfil requirements FR1-FR4 (3 points per requirement)?

[15 points] Does your solution use Model View Controller design pattern?

[15 points] Is the answer show inside a back circle?

[3 points] Does the answer show up quickly?

[5 points] Does your solution follow CSCI 2300 coding standards?