

Model View Controller (MVC) Design Pattern

CSCI 2300

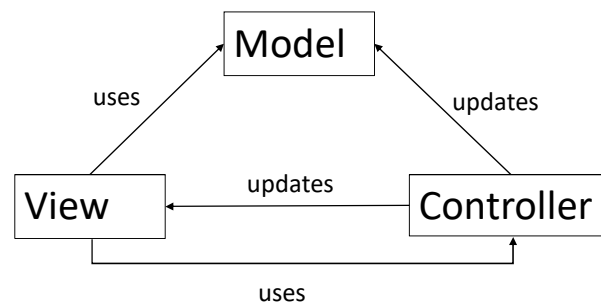
Recall ...

- What is a design pattern?
- What design pattern did we talk about on Friday before spring break?

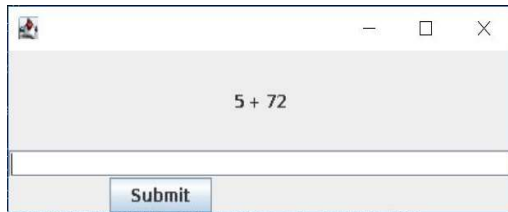
Model View Controller (MVC) pattern

- Used in GUI applications
- Purpose: keep the user-interface separate from the rest of the application
 - (What is the difference between class interface and user interface?)
- Approach: divide the program into three parts
 - Model – provides core functionality and computation, keeps track of the state
 - View – displays the Model to the user
 - Controller – handles interactions between the user and the view

Model View Controller UML 1



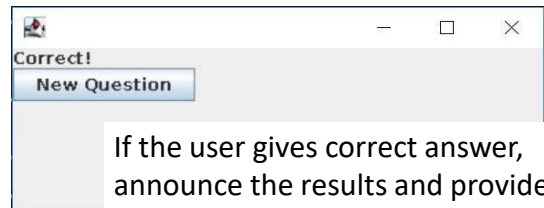
Recall homework 3



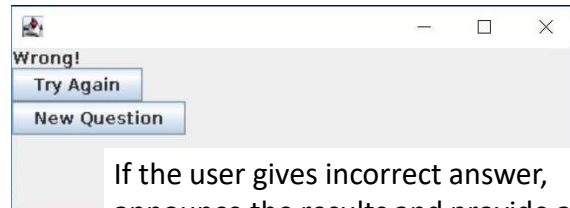
Generate random arithmetic problems

Which component should keep track of the current arithmetic problem and correct answer?

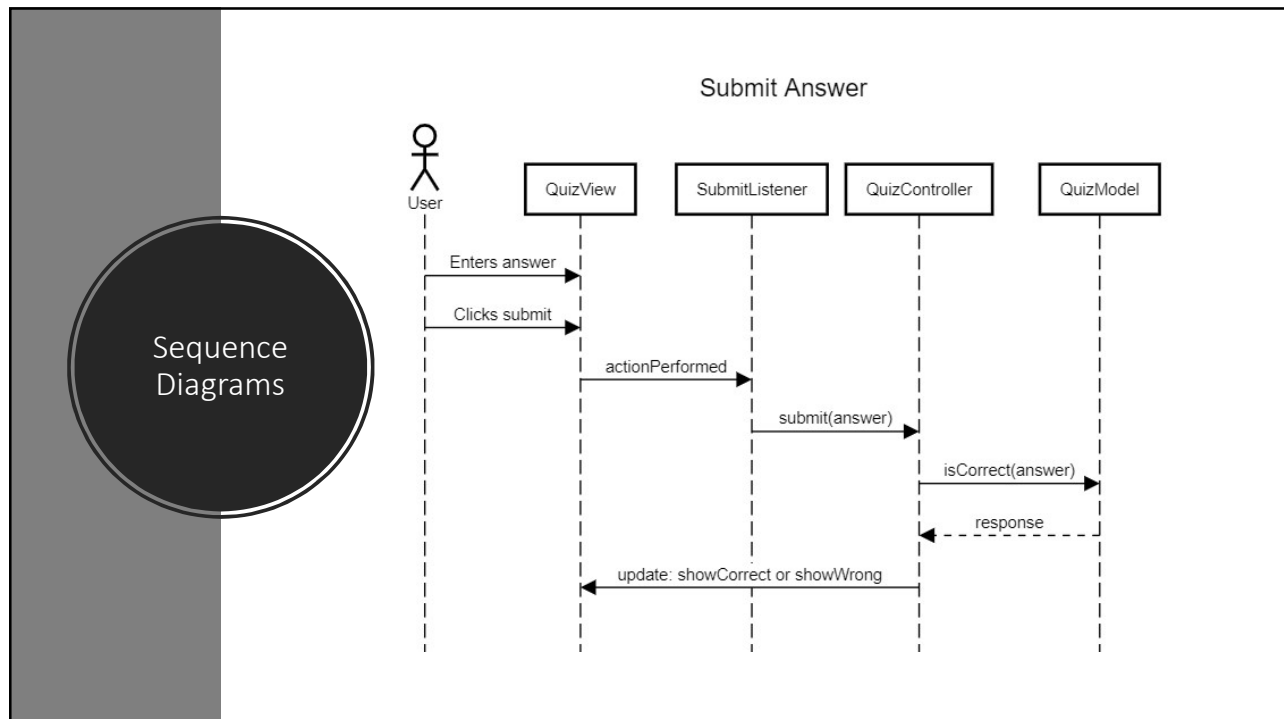
A. Model B. View C. Controller

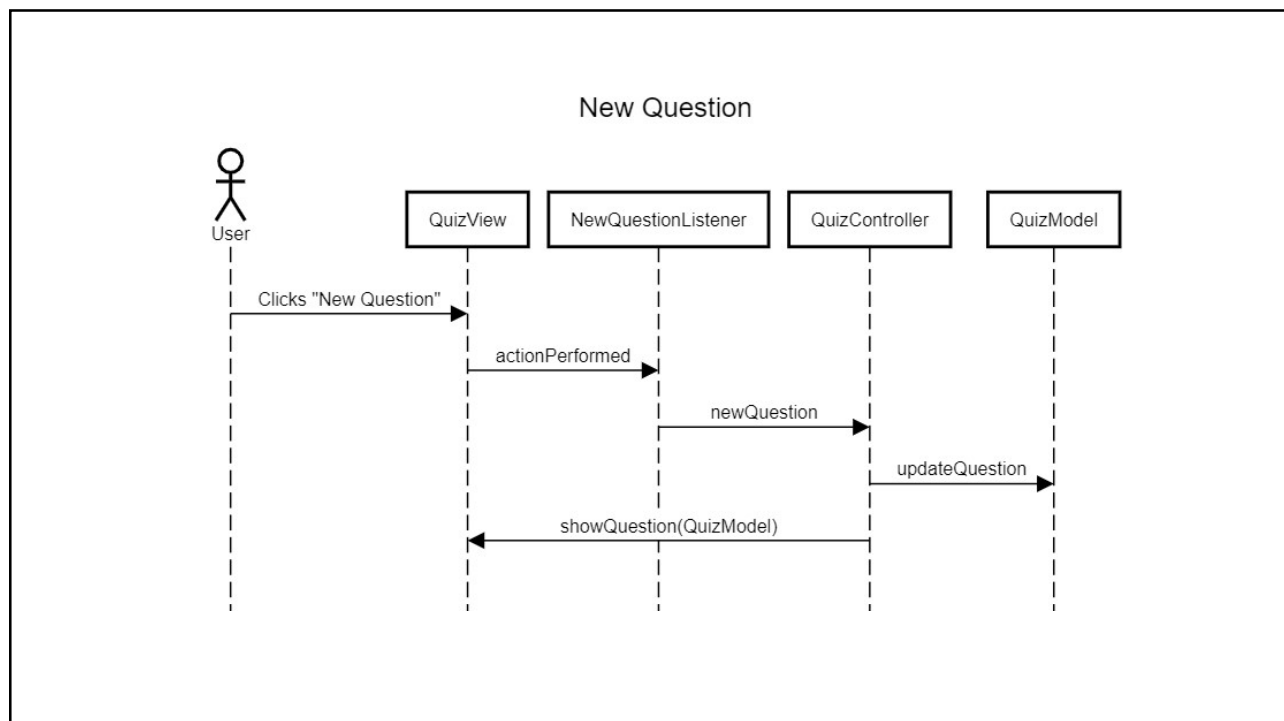
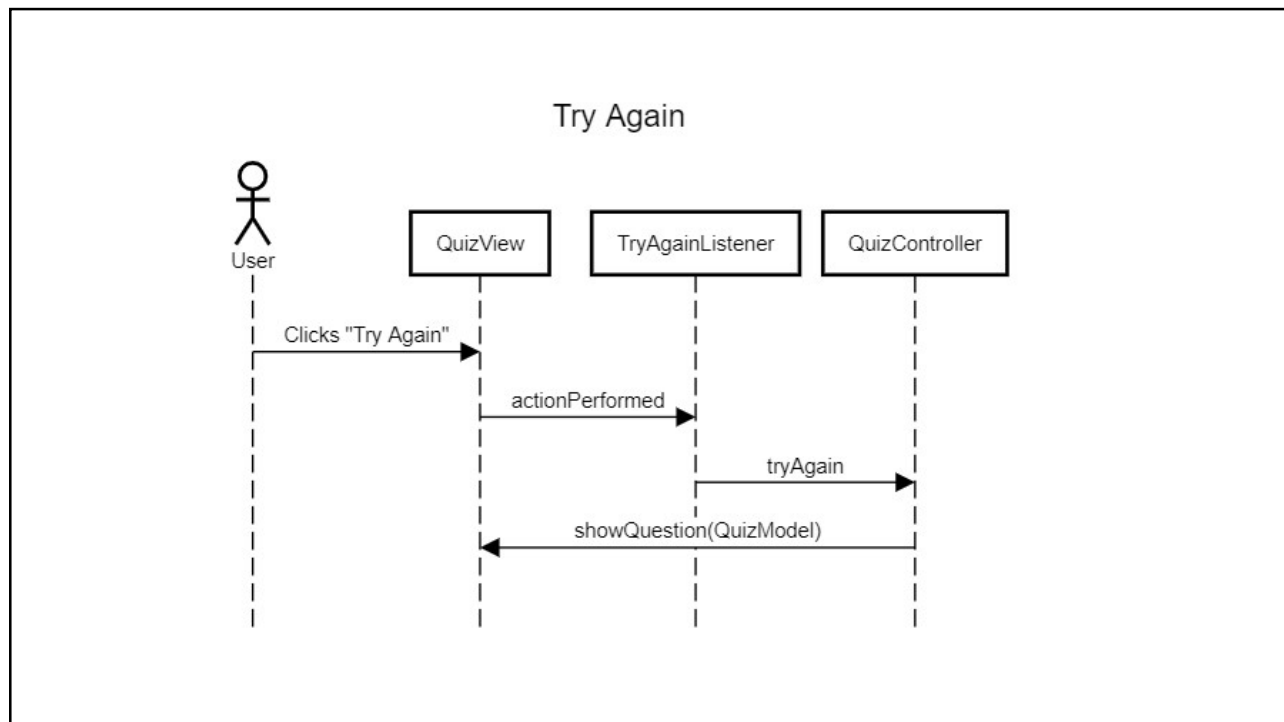


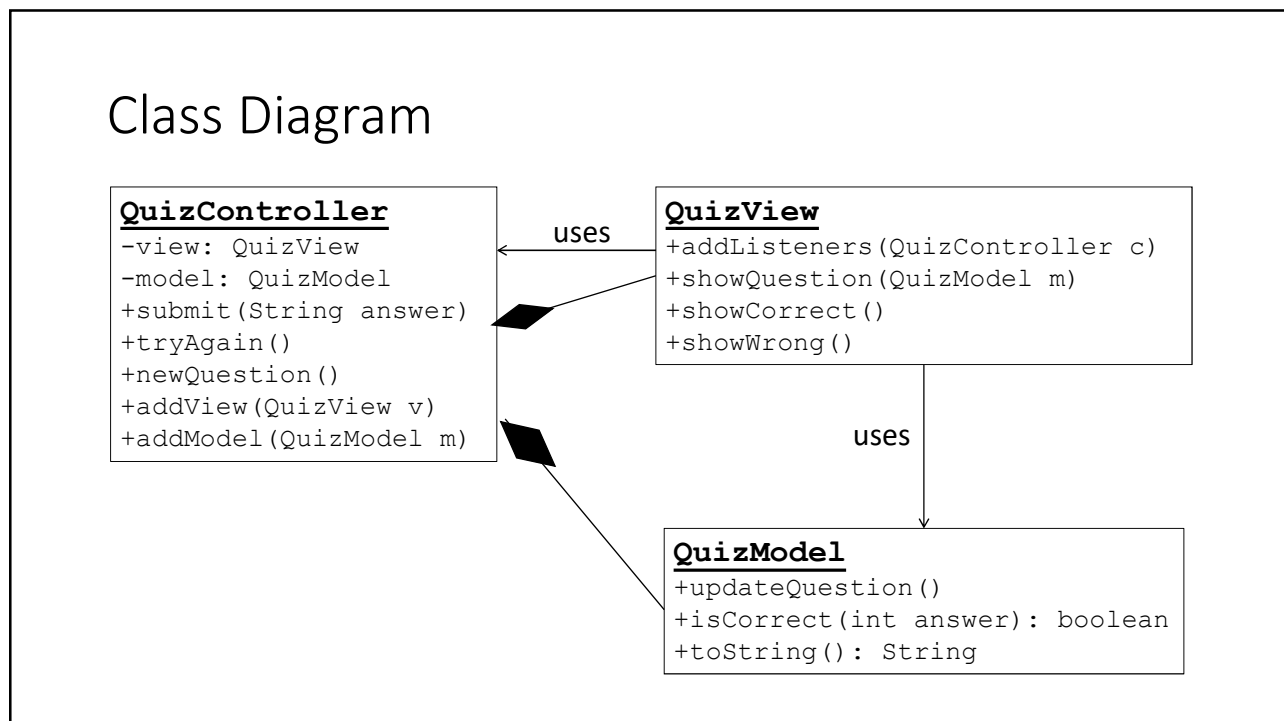
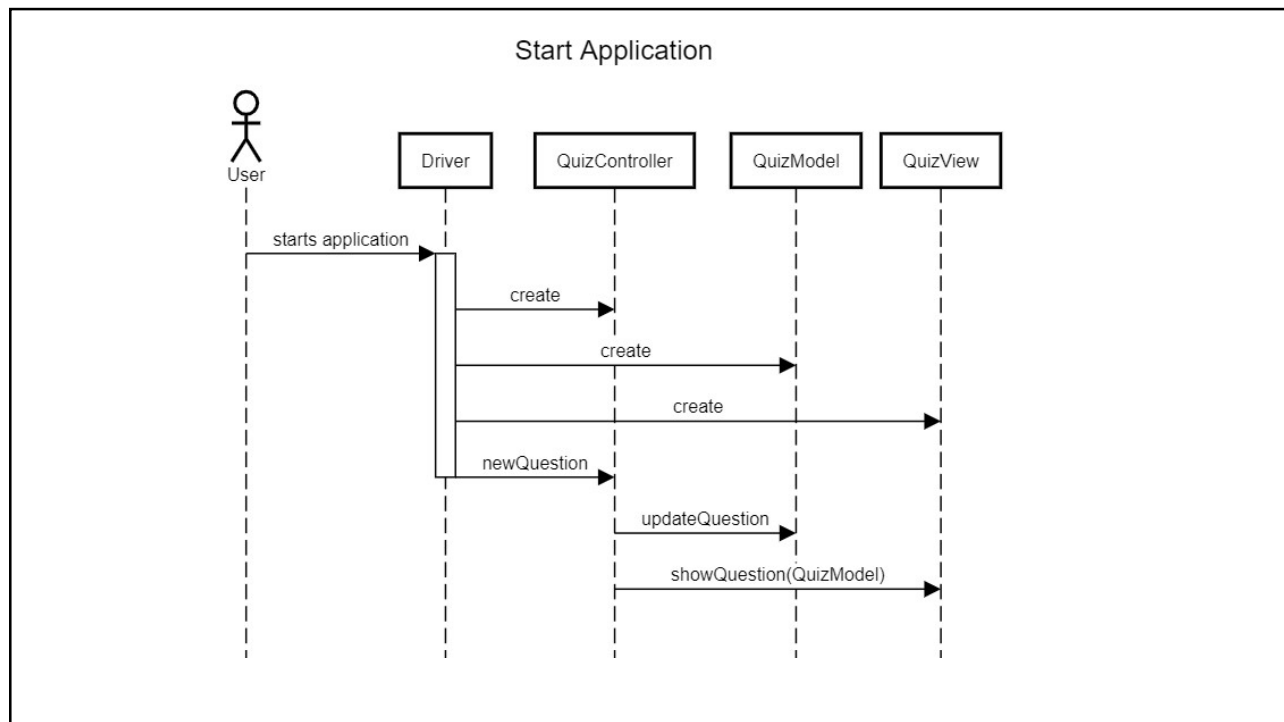
If the user gives correct answer, announce the results and provide an option for a new question



If the user gives incorrect answer, announce the results and provide an option to try again







Requirements update

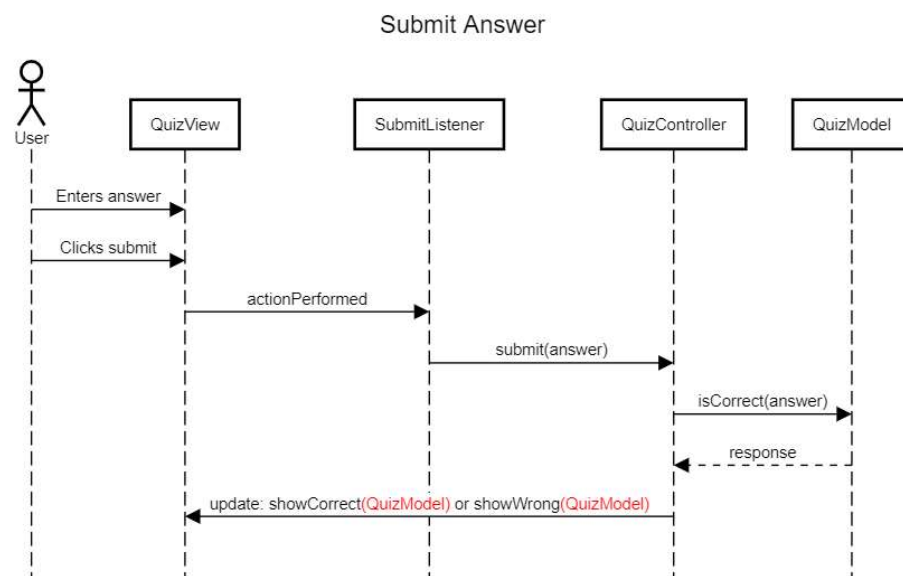
- Keep track of the number of attempts per question

What class should keep track of the number of attempts?

A. QuizModel

B. QuizView

C. QuizController



Lab 14

- Modify the code in mathQuizMVC directory to show the number of attempts per question (both on correct and on incorrect answers)

