

AndersonLima0



fix DataClass code smell using the move mehod refatoring technique

Card.java:1-21



GitHub Copilot

> Used 1 reference

Let's fix the DataClass code smell in `Card.java` by adding behavior to make it more than just a data holder.

Steps:

1. Identify that Card is currently just holding data (question/answer)
2. Add meaningful methods that provide behavior
3. Move validation and formatting logic into the Card class
4. Add methods to check answer correctness and manage card state

Implementation:

```
package org.example.studycards;

public class Card {
    private String question;
    private String answer;
    private int attempts;
    private int correctAnswers;

    public Card(String question, String answer) {
        validateInputs(question, answer);
        this.question = question.trim();
        this.answer = answer.trim();
        this.attempts = 0;
        this.correctAnswers = 0;
    }

    private void validateInputs(String question, String answer) {
        if (question == null || question.trim().isEmpty()) {
            throw new IllegalArgumentException("Question cannot be empty");
        }
        if (answer == null || answer.trim().isEmpty()) {
            throw new IllegalArgumentException("Answer cannot be empty");
        }
    }
}
```

```
public boolean checkAnswer(String providedAnswer) {
    attempts++;
    boolean isCorrect = answer.equalsIgnoreCase(providedAnswer.trim());
    if (isCorrect) {
        correctAnswers++;
    }
    return isCorrect;
}

public double getSuccessRate() {
    return attempts == 0 ? 0 : (double) correctAnswers / attempts * 100;
}

public boolean needsReview() {
    return getSuccessRate() < 75;
}

public String getQuestion() {
    return question;
}

public String getAnswer() {
    return answer;
}

public int getAttempts() {
    return attempts;
}

public int getCorrectAnswers() {
    return correctAnswers;
}
}
```