

# Filling Out a Questionnaire IV

---

Improve the questionnaire application with the following features:

1. The questionnaire dialog should show a “percentage complete” figure; it should distinguish between completion including optional questions and without optional questions.
2. The score can be stored in a CSV file with the following structure. Each score is appended to the CSV file, so that in the end the CSV file can be used to analyze scores across users and questionnaires.

Title	Question	Answer quality
Questionnaire 1	Which of these animals is a mammal	1 <sup>1</sup>
Questionnaire 1	What is the sum of 2+3	0
Questionnaire 2	What is the result of 2*3	1
Questionnaire 2	First name of President Obama	1

The CSV file is named *scores.csv* and is located in the application directory. It has this form:

```
Titel;Question;Answer quality
Questionnaire 1;Which of these animals is a mammal;1
Questionnaire 1;What is the sum of 2+3;0
```

---

<sup>1</sup> 1 and 0 are used to denote correct and incorrect answers