

Bachelor's Thesis

New Exam Question Types for the Online Exam System Xaminer

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The exam system Xaminer is used by the Institute for System Software and other institutes to provide online exams for students. To improve the experience for both, lecturers and students, the system is constantly being improved and extended. Especially (1) fill-in-the-blanks questions and (2) drag-and-drop questions are currently missing.

The goal of this thesis is to introduce these question types to the system. The student has to develop convenient editing features to allow lecturers to easily define fill-in-the-blanks and drag-and-drop questions. Fill-in-the-blank questions should be defined by the lecturer by providing a reference solution to a question and marking certain parts as this answer as "blank parts" which then have to be filled in by the exam taker.

Example:

```
class Student {  
    // TODO define suitable fields  
    ##BLANK_START##  
    private final int age;  
    private final String name;  
    ##BLANK_END##  
    ...  
}
```

Such a question should then be presented the exam taker with a text field that has to be filled out.

For drag-and-drop questions, the lecturer should be able to select a source image on which certain areas can be marked as "answer areas" with a respective reference solution. All available answers are then presented to the exam taker, who is then responsible for dragging all answer to their correct answer area.

Modalities:

The progress of the project should be discussed at least every two weeks with the Dynatrace supervisors and at least once per month with the advisor. A time schedule and a milestone plan must be set up within the first 3 weeks and discussed with the advisor and the supervisors. It should be continuously refined and monitored to make sure that the thesis will be completed in time. The final version of the thesis must be submitted not later than 31.09.2022.