

LEARN-SQL: Automatic Assessment of SQL Based on IMS QTI Specification



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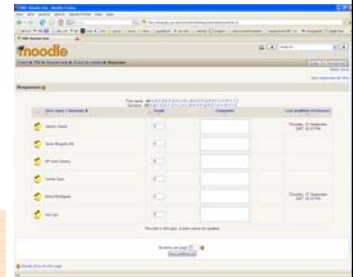
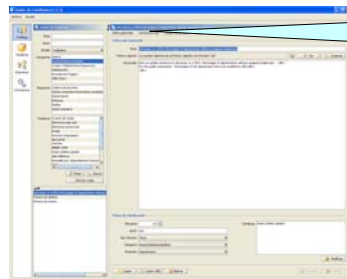
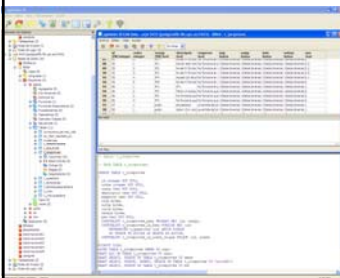


- Goal:** Automatic Assessment of SQL (select, insert, delete, update, procedure, triggers...)
- Difficulty:** SQL sentences can be semantically equivalent although syntactically different
- Challenge:** Provide meaningful feedback to the student when his solution is not correct
- Approach:** Define a battery of experiments designed to check one possible mistake each

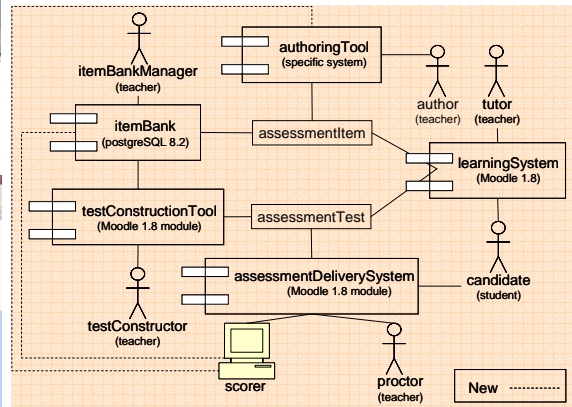
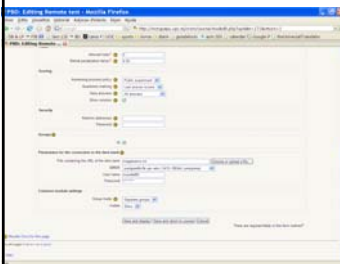
itemBank

authoringTool

```
UPDATE department d
SET budget=budget-budget*0.9
WHERE not exists
(SELECT *
FROM employee e
WHERE e.dept=d.dept)
```



learningSystem



```
UPDATE department
SET budget=0.1*budget
WHERE dept NOT IN
(SELECT dept FROM employee)
```

testConstructionTool



scorer



assessmentDeliverySystem

