



Software Testing

Course week 6

by J. Janvier (Jay/文字)

Case study

Testing: E-Learning Web Application

Business Challenges

- ❖ An e-learning application developed by a customer was scheduled to be released before school re-opening. With less than three weeks before the code was planned to be pushed to production, finding important problems quickly was identified as the most important goal.
- ❖ With the developers at different locations and busy with the next version, an independent test team was required to help achieve the goal.
- ❖ Introducing the test team into the project shouldn't create overhead to existing work schedules, other than bug fixing.

Case study

Technical Challenges

- ❖ No time for the customer to collate requirements documentation that can be shared with the test team because they are all scattered over emails and notes, and they constantly changed. (Classic mistake)
Collecting them would already take up 3 weeks alone, and would leave no time for testing.
- ❖ Feedback from testing needs to be rapid and supportive to the dev team.
- ❖ Application contains 3 types of users: student, teacher and admin
- ❖ Reports should be easily understood by several stakeholders of the project.
- ❖ Tests should cover all functions.
- ❖ No access to code, backend or database.

Case study

Make groups of 3 to 4 people and make a plan!

❖ Plan:

- ❖ What Test Strategy/Levels? (static, dynamic)
- ❖ What Test techniques?
- ❖ What Non-Functional Tests?
- ❖ What strategy(/ies) of Test Prioritization?
- ❖ How to do Reporting? (test reports, bug reporting)
- ❖ Test Automation?

Case study

Chosen Solution:

- ❖ Reporting: Daily Reports
- ❖ Reporting: Daily meetings with client / Change approach if needed
- ❖ Reporting: Bug reporting in excell, with 3 columns: problem description, Risk for user or business, Severity + Screenshot
- ❖ Agreement: Top priority requested for bugs preventing further testing.
- ❖ Black Box Testing techniques (functional testing, no white box)
- ❖ Test Scenarios would focus on the student role
- ❖ No documentation of tests; checklists only.
- ❖ Non-Functional Testing: Security Testing & Compatibility Testing
- ❖ Test Environment: Testing was done on copy of the production environment immediately.
- ❖ Test Prioritization: Coverage-based (statement coverage on UI functions)

Case study

Results after 2 weeks:

- ❖ 25 High Severity bugs found
- ❖ 51 Medium Severity bugs found
- ❖ 81 Low Severity bugs found
- ❖ All bugs solved and re-tested
- ❖ Coverage achieved for all roles: Student, Tutor and admin

Questions?