UNIVERSITY OF MALTA

L-Università ta' Malta

Faculty of Information and Communication Technology

Request for Collaborating ICT Industry Partner

"Extending Cucumber to handle Cross-Cutting Criteria"

The *Process Engineering, Security and Testing Research Lab* (PEST) focuses on innovative research both in the academic and industrial arenas. One of our main aims is the investigation of ways in which cutting edge academic techniques can be applied to industry settings. To this end, we are constantly on the lookout for industrial partners who are willing to participate in collaborations on software process engineering, systems security and software testing.

Scope of study

Cucumber is a widely adopted technology which enables the automation of test scenarios specified using the Given-When-Then notation. Advantages of this approach include the direct involvement of business stakeholders in test scenarios specification and wider visibility into the test process. Whilst Cucumber's feature-centred specification is very useful, we think it could deal better with the cross-cutting criteria. In essence, there are certain behaviours which need to be consistent across features and contexts. This is evident in duplication that can be observed when one studies Cucumber scripts. Consider a trivial example whereby once a user logs in, then the "Log-In" functionality needs to be disabled. As things stand, one can either specify this check as a step in all scenarios in which a user is logged in, or live with the assumption that if it works in a small subset of scenarios it is probably functioning properly. In this research project we would like to extend the Cucumber language to enable users to specify cross-cutting criteria and also implement the checking of such criteria into the Cucumber lifecycle.

Industry Partner Profile

The ideal industry partner would be a company that (1) makes extensive use of Cucumber within is development process, (2) can appreciate the potential that specifying cross-cutting criteria can bring to its product and process, and finally (3) is willing to try to provide a case study related to the project.

Benefits to the Industry Partner

Whilst the collaboration would provide an interesting case study to researchers, as an industry partner, you would also enjoy a number of benefits. In this particular project, the partner will gain an increased visibility into cross-cutting criteria involved in their product. If the case study is successful, the partner should also benefit from improvements in both efficiency and effectiveness in their development and testing process.

Interested?

Further information can be obtained by contacting us on pest.ict@um.edu.mt.

Process Engineering
Software Testing
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