

# Project Description for Degree Projects

## Department of Computer Science

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### Background

There is often an unnecessary amount of partly overlapping Regression test cases in a test suite of a commercial web solution. A web solution is commonly divided into two logical parts. The GUI/Frontend is running in an ordinary browser which interfaces the business logic implemented in a Backend System accessible via its API.

Regression testing is also ordinarily divided into these two logical components, hence navigation, look and feel (GUI) is tested separately from the business logic. Thus creating a need to upkeep and maintain multiple test cases which (separately) only covers partly the total End to End functionality. As well as the need for a separate set of integration test cases covering the total End to End function.

This causes an overhead in both required amount of test cases as well as a gap in testing of the full end to end functionality. Only because the reasoning is that it is too hard, too slow to test the functionality via the Web browser, test results are too flaky, or test cases breaking when versions of the browser or the GUI software changes.

### Problem formulation

Study which are the 2 major issues (each) causing:

- Long lead times when a browser is used for driving the regression testing of the complete business logic (testing full end to end functionality instead of separate parts)
- Flaky test results
- Breaking test cases when browser version or GUI software is changed.

I.e. study the issues causing a common understanding that it is too difficult to do true end to end regression testing with the browser on a commercial web solution.

### Expected result

Show a proposed solution that addresses the above mentioned issues and pitfalls. Hence reducing the amount of overlapping regression test cases needed to test the full scope of the business requirements.