

# Software Testing

## 1DL610

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# Some Questions

- ▶ Does my software work?
- ▶ I've fixed a bug, does my software still work?
- ▶ I'm not really sure what this piece of code should do, I need a quick and easy way of expressing it.

One answer to all these questions is to use software testing.

# Software Testing

- ▶ 5 Credit advanced level course
- ▶ Period 2
- ▶ Examined by a mixture of exams; oral and written assignments; and a small project.
- ▶ Entry requirements: Imperative and Object oriented programming, algorithms and data structures.

# Course Goals

- ▶ Learn key techniques software testing, such as unit testing, test driven development, test coverage, and test design.
- ▶ Understanding APIs, devising test cases

# Highlights

- ▶ Test Driven Development
- ▶ Code Coverage
- ▶ Interface based testing
- ▶ Logical expression coverage
- ▶ Property Based Testing

In the project you write test cases for a Python library of your choice.

## At the end of the course

Software testing is a large subject. There is a limit to what you can cover in a 5hp course, but

- ▶ You will discover that software testing is a easy to implement techniques that improves software quality and should be in any programmers toolbox.
- ▶ I will give you the theoretical foundations so you can ask and investigate such questions as:
  - ▶ Are all my requirements covered by my test cases?
  - ▶ Have I tested all my code?

# Any Questions

- ▶ All slides and project material for the 2019 instance of the course can be found at: <http://user.it.uu.se/~justin/Archive/Teaching/Testing/index.html>.
- ▶ A new web-page is in development.
- ▶ If you have any questions then send me an email.

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