



AARHUS UNIVERSITET

# Software Engineering and Architecture

What is Integration Testing?



# Observations

- Had a student passing my office with a question
  - Wanted to test EpsilonCiv attacking
  - Had a 'game.setUnitAtPosition()' call to make the test case convenient by having a specific unit at a specific place
    - ☹ Problematic as it 'breaks the Facade' pattern
- My suggestion
  - Use a stub 'WorldLayoutStrategy' to set the unit there for that test case
- Question then: *Then it is not integration testing ???*



# Integration and System Testing

- I have perhaps not been clear enough
  - Led astray by PlayStation example being too simple...

## Definition: Unit Testing

Unit testing is the process of executing a software unit in isolation in order to find defects in the unit itself.

## Definition: Integration Test

Integration testing is the process of executing a software unit in collaboration with **other units** in order to find defects in their interactions.

## Definition: System Test

System testing is the process of executing the whole software system in order to find deviations from the specified requirements.



# Integration Testing PayStation

- In my book and in the slides I did integration testing by
- Configuring PayStation with the LinearRateStrategy
  - = Integration testing integration between PayStationImpl and LinearRateStrategy      yes
  - *But it was also the complete system, thus **system testing***
- **Integration testing typically tests the interaction pattern between 2+ units, not all N units of the system**

- WorldLayoutStrategy would be ideal to stub out, in order to integration test that the *interaction* between Game and Epsilon strategies are working correctly...

