



# Software Quality and Testing

## Lab for Teaching Assistants

CSE1110

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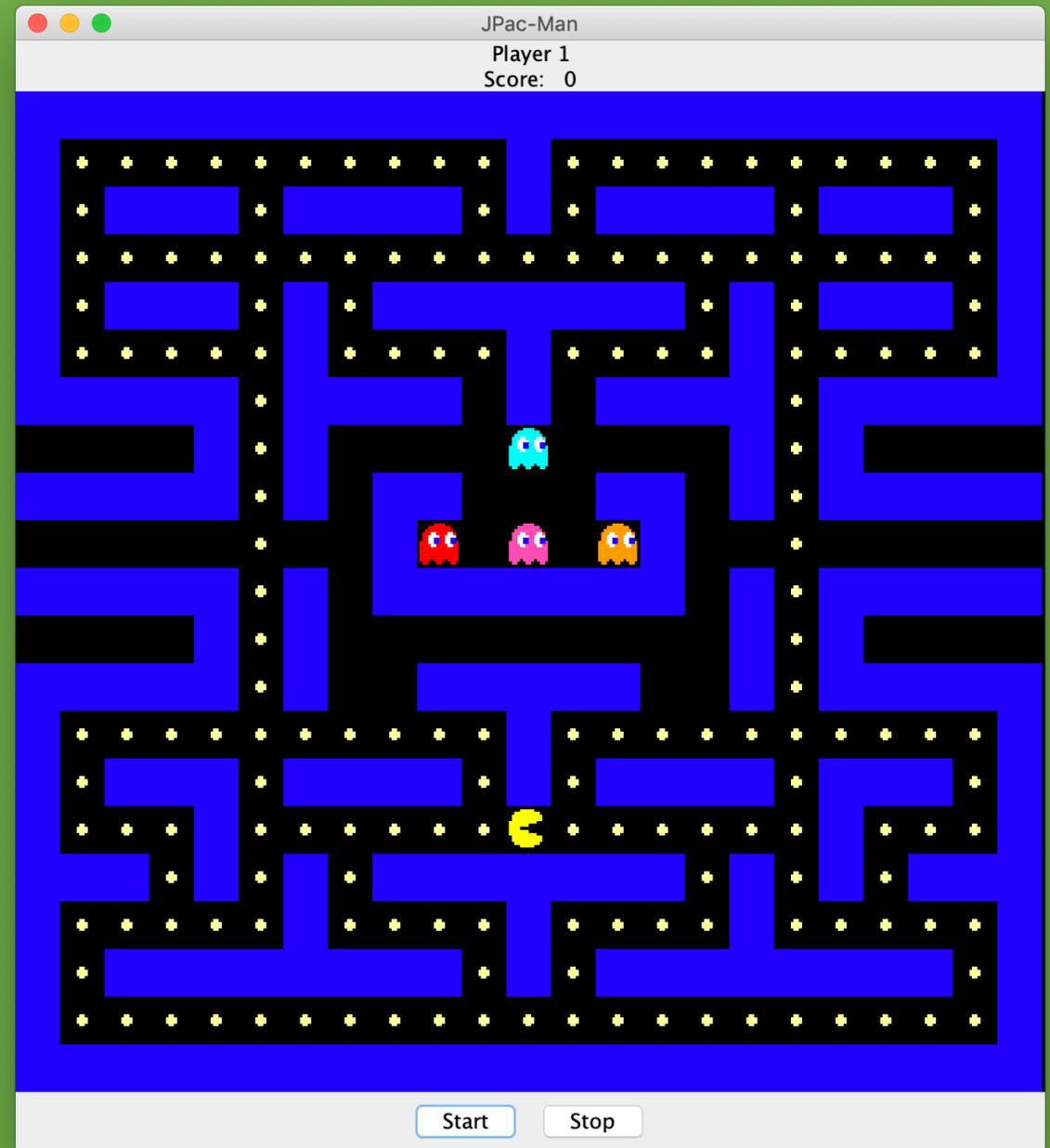
Delft University of Technology

# Testing JPacman

Our own Java  
implementation of Pac-Man

It's on GitHub:  
<https://github.com/SERG-Delft/jpacman>

We switched to a single  
repository and to Gradle



# Lab

## **4 assignments**

Similar to last year, new: security exercises

## **In pairs**

# Structure and Deadlines

**Part 0:** Get acquainted with the environment and tools.

Deadline: 03-05-2019, 5.00 pm - Review Deadline: 10-05-2019, 5.00 pm

UNGRADED

**Part 1:** Unit tests and boundary tests.

Deadline: 17-05-2019, 5.00 pm - Review Deadline: 28-05-2019, 5.00 pm

**Part 2:** Structural testing and mock objects.

Deadline: 03-06-2019, 5.00 pm - Review Deadline: 10-06-2019, 5.00 pm

**Part 3:** System tests, state-based testing, and mocking.

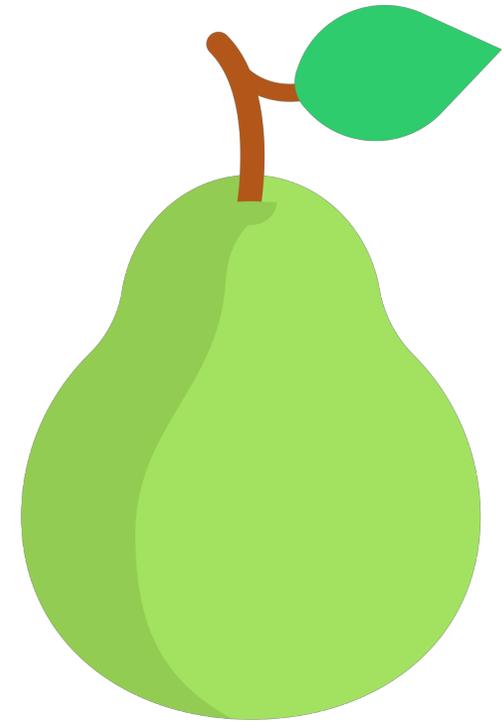
Deadline: 21-06-2019, 5.00 pm - Review Deadline: 27-06-2019, 5.00 pm

<https://se.ewi.tudelft.nl/cse1110-2019/>

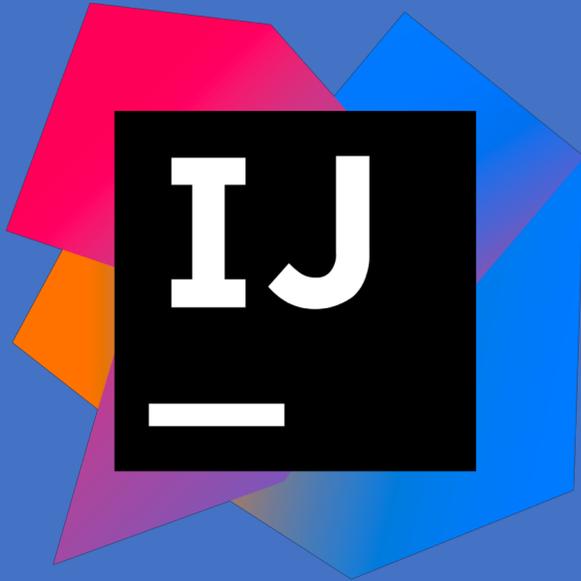
# Peer reviewing

**After submitting,  
review your own solution + someone else's**  
Learn about things you can improve and see  
different approaches to solving the problem

**Grades are based on reviews and manual  
checks**



**DEVELOP IN**

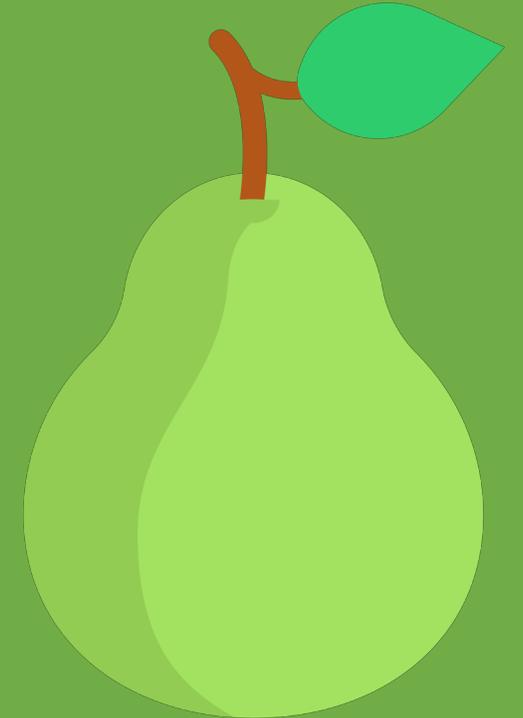


**MANAGE CHANGES ON**



[gitlab.ewi.tudelft.nl](https://gitlab.ewi.tudelft.nl)

**REVIEW ON**



[peer.ewi.tudelft.nl](https://peer.ewi.tudelft.nl)

# Tools

## Build using gradle



## Test using

- JUnit 5
- AssertJ assertions
- Mockito



# Static Analysis

The logo for Checkstyle, featuring the word "checkstyle" in a lowercase, sans-serif font. The letter "e" is replaced by a yellow pencil tip. A red wavy line is positioned below the text.The logo for PMD, featuring the letters "PMD" in a bold, red, sans-serif font. The letter "P" is black. Below the letters is the tagline "DON'T SHOOT THE MESSENGER" in a small, black, uppercase font.The logo for SpotBugs, featuring the word "SpotBugs" in a bold, black, sans-serif font. The letter "o" is replaced by a magnifying glass with a red bug inside its lens.

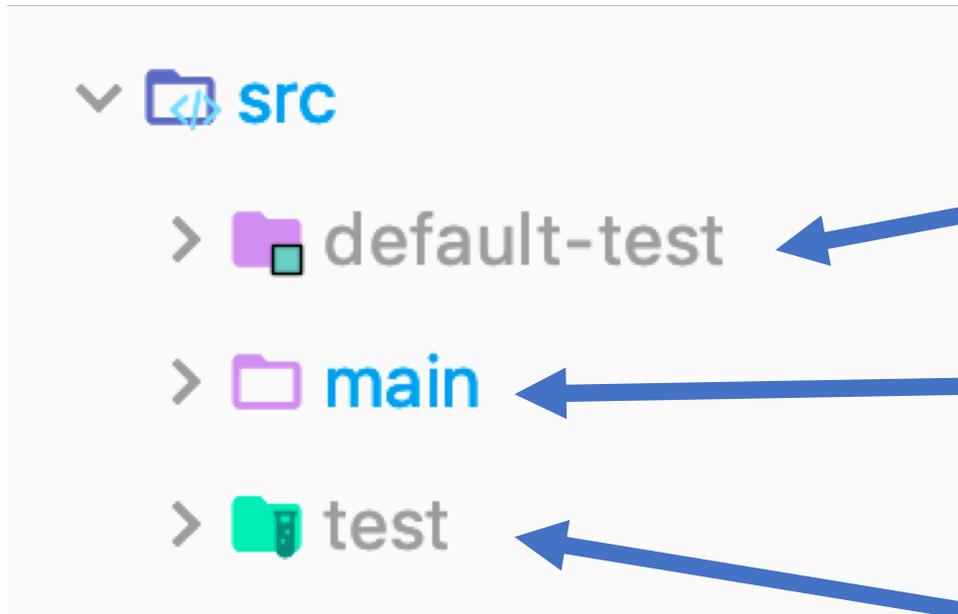
**Make sure everything works, run `gradle check`**

# Continuous Integration

Pipeline		Jobs 2			
Status	Job ID	Name	Coverage		
<b>Test</b>					
 passed	#417536	test	 00:00:44  35 seconds ago	79.4077%	
<b>Static Analysis</b>					
 running	#417537	warnings	 00:00:13		

# Project Structure

Simple Java project, mostly default setup



Pre-written tests, can serve as example

Application code

Student tests

# Assignment

**Will be released after the lecture**

Software Testing and Quality Engineering

STQE Labwork, CSE1110

Edition 2018/2019

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*Delft University of Technology*

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## **1 Introduction**

In this document, you will find everything about your JPACMAN labwork.

The objective of this lab work is to help you learn how you can apply the various tools and test strategies discussed during the lectures in practice.

You will apply these techniques to a simple game called JPACMAN, inspired by Pacman and written in Java. The amount of coding that needs to be done is relatively

# Your Job

**Help students!**

**Work through the assignments**

Helps in helping students and early detection of errors

**(Manual) Grading**