# Using A Large Opensource Codebase In A Teamwork Assessment

Dr Tom Carroll
Department of Computer Science
University of Manchester, UK

Workshop on Modern Software Engineering Education 2024, Cambridge, UK

# Context

- COMP23311: Software Engineering 1
- 2nd Year, 1st Semester UG, 5ECTS
- Compulsory for all pure-CS students, optional for CS with Maths
- Cohort size:
  - 2021: c.350
  - 2022: c.500 (Covid "Bulge")
  - 2023: c. 350
- Jointly taught with Suzanne Embury, Duncan Hull, Liping Zhao, Anas Elhag

# Assessment Weighting

- Individual Coursework: 14%
- Team Coursework 1: 28%
- Team Coursework 2: 28%
- Exam: 30%



**Stendhal**

https://github.com/arianne/stendhal

# Task

- Students divided into teams of upto 8
- Work on a "UoM" version of Stendhal
- Bugs are given in the issue tracker
- Students must fix one bug per team member:
  - Assign bug in issue tracker, use time tracking tools
  - Create new feature branch
  - Expose bug in test suite
  - Fix bug
  - Merge into main development branch
  - Create a new release of the software

## 18.3 Deliverables

Deliverables are contained in 3 parts:

*GitLab repository*:

- Selected Bugs
- Correct use of Git (including Branching and Tags)
- Correct use of time estimation and other planning tools
- Tests which make your selected bugs visible
- Source code of your bug fixes

*Blackboard Submission*:

- Video demonstration of work

You *must* familiarise yourself with the submission instructions, in order to submit your work in the proper way.

*Interview*:

- Discussion with marker about your teamwork
- Reflection on process

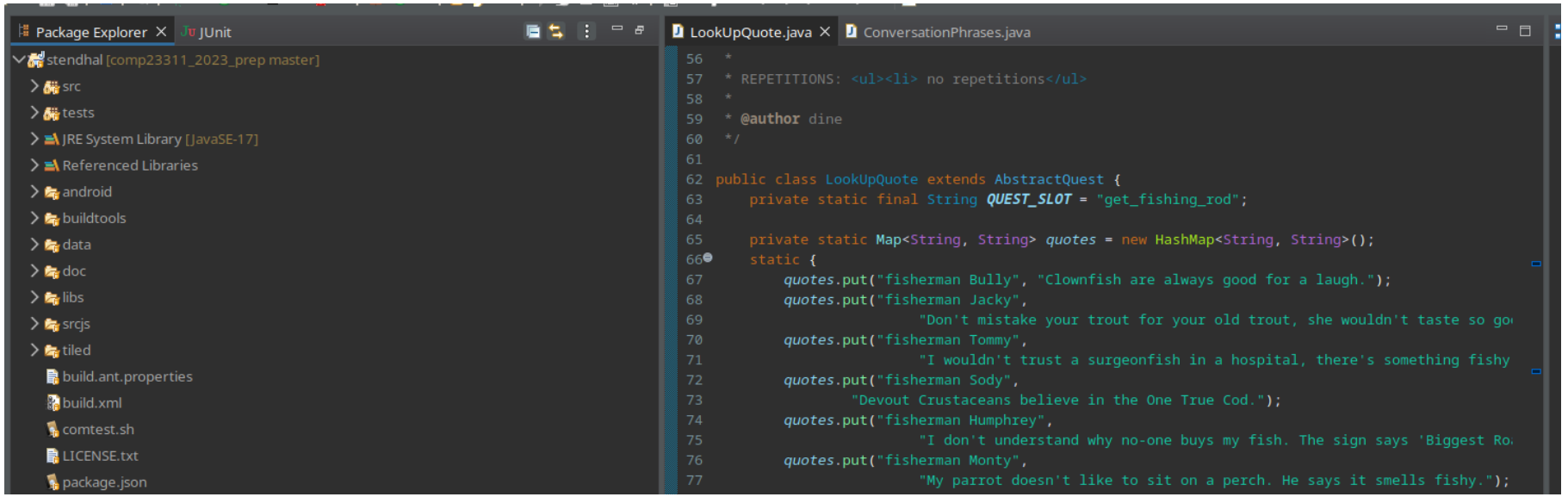
Please see the information about the interview for more information.

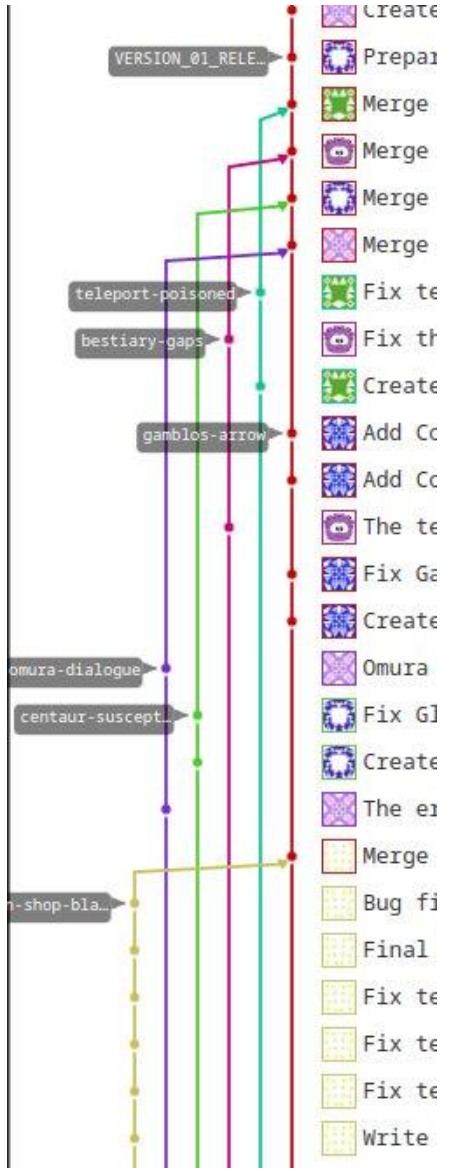
**Work which is not submitted in the correct way will receive a mark of 0.**

## 18.4 Step 0: Set up Git Config

It is important that you ensure your work is attributed to you in the proper manner; if you were a company employee, your boss would want to see that you are indeed completing your tasks. You would normally assert your authorship over commits with a company email address.

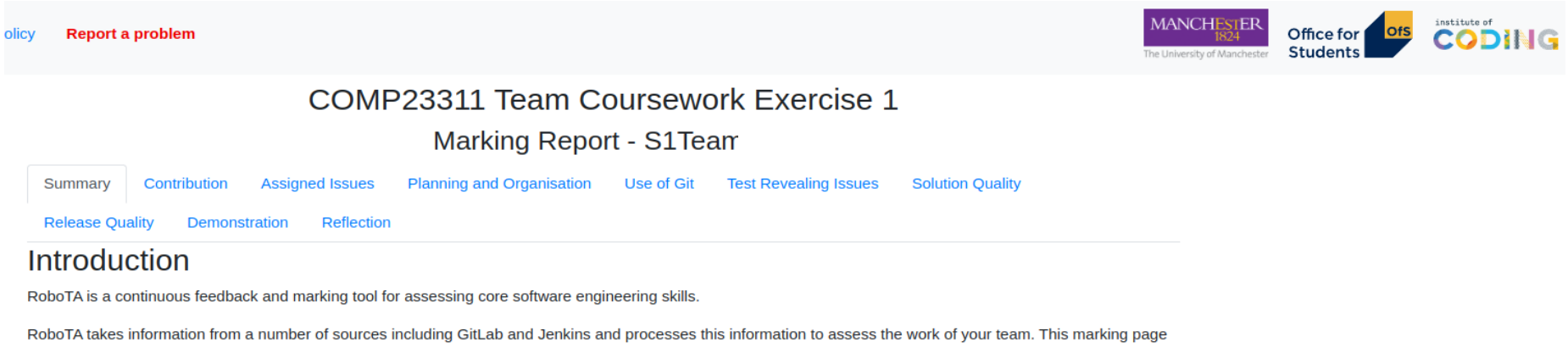
On this page


Package Explorer
JUnit
stendhal [comp23311_2023_prep master]
src
tests
JRE System Library [JavaSE-17]
Referenced Libraries
android
buildtools
data
doc
libs
srcjs
tiled
build.ant.properties
build.xml
comtest.sh
LICENSE.txt
package.json
LookUpQuote.java
ConversationPhrases.java
56 *
57 * REPETITIONS: <ul><li> no repetitions</ul>
58 *
59 * @author dine
60 */
61
62 public class LookUpQuote extends AbstractQuest {
63 private static final String QUEST_SLOT = "get_fishing_rod";
64
65 private static Map<String, String> quotes = new HashMap<String, String>();
66 static {
67 quotes.put("fisherman Bully", "Clownfish are always good for a laugh.");
68 quotes.put("fisherman Jacky",
69 "Don't mistake your trout for your old trout, she wouldn't taste so go
70 quotes.put("fisherman Tommy",
71 "I wouldn't trust a surgeonfish in a hospital, there's something fishy
72 quotes.put("fisherman Sody",
73 "Devout Crustaceans believe in the One True Cod.");
74 quotes.put("fisherman Humphrey",
75 "I don't understand why no-one buys my fish. The sign says 'Biggest Ro
76 quotes.put("fisherman Monty",
77 "My parrot doesn't like to sit on a perch. He says it smells fishy.");


VERSION_01_RELE…
Merge
Merge
Merge
Merge
teleport-poisoned
bestiary-gaps
gamblos-arrow
Add Cc
Add Cc
The te
Fix Ga
Create
Omura
Fix Gl
Create
The er
Merge
Bug fi
Final
Fix te
Fix te
Fix te
Write

# Assessment

- Automated assessment using "RoboTA" and Jenkins
- Video to demonstrate bugs and fixes
- Marking interview with GTA to assess teamwork



# Reflection

**Positives**

- Students enjoy the work
- Student find it useful when on industrial placement
- Give good preparation for future group projects

**Needs for improvement**

- Difficult to resource
- Inconsistent marking with GTAs
- Student user error
- Uneven work distribution in teams

- https://software-eng.netlify.app/