School of Computer Science and Engineering (CSE)

COMP9900 Information Technology Project
COMP3900 Computer Science Project

2023 Term 2

Week 1

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UNSW SYDNEY

Outline

- Course Introduction
- Assessment Tasks Overview
- User Stories and Acceptance Criteria
- Jira Software
- Week 1 Lab Tasks
- Q & A

Course Introduction

Course Introduction

- Moodle Course Website

  https://moodle.telt.unsw.edu.au/course/view.php?id=75988

- Lectures: **Tuesday 18:00 - 20:00**

  Location: **Online** using **Blackboard Collaborate**

  Weeks 1-5, 7-10

- Labs : 2 hours per week

  Location: **F2F** or **Online** using **Blackboard Collaborate**

  Weeks 1-5, 7-10 (Week 6 is Flex Week)

Course Summary

- A **capstone** software project-based course

- Students work in teams to **define**, **implement** and **evaluate** a **real-world** software system

- Most of the work in this course is **team-based project work**

- There are some introductory lectures on **software project management techniques** and **teamwork strategies**

Course Summary (cont’d)

- Project teams meet weekly with project mentors to report on the progress of the project

- Assessment is based on a project proposal, progressive demonstrations and retrospectives, a final project demonstration and report, and on the quality of the software system itself

- Students are also required to reflect on their work and to provide peer assessment of their teammates' contributions to the project

COMP9900 – IT Project
COMP3900 – CS Project

- A brief and generic **description** of **projects** to choose from this term with some requirements is provided under **Project Topics** section in Moodle

- Teams can also come up with their **own/custom** project subject to Mentor/Lecturer **approval** (see **Custom/Own Project Request Form (Word Version)**)

Labs (or Mentoring Sessions)

- **Weekly** project progress meeting with **tutor/mentor**
- **Two progressive demos** to mentor in **Weeks 5 and 8** and final demo/presentation in **Week 10**
- **Two retrospectives** right after progressive demos and report due **Saturday Weeks 5 and 8** resp.
- Attendance to labs is then **mandatory**
- Regular group meetings (more than once per week) among team members

Readings

- No textbook
- Slides will be provided in the course website (Moodle)
- Online resources may be provided from time to time (e.g., in the class, or via the tutor/mentor in the lab) and may be uploaded to Moodle
- For Project Management part of the course, the following text is highly recommended:

  Kathy Schwalbe. Information Technology Project Management. 9th Edition. Cengage. 2018

Assumed Knowledge

Before commencing this course, students should be able to:

- produce correct software programs in Python, Java or C/C++, i.e., compilation, running, testing, debugging, etc.
- produce readable code with clear documentation
- have basic knowledge of database programming, Web programming and/or script programming (such as Python, PHP, and JavaScript)

Assumed Knowledge (cont’d)

For **COMP9900**, students must:

- Be in their **final** term of study, and
- Have completed at least **66** UOC towards MIT program **8543**

Assumed Knowledge (cont’d)

For **COMP3900**, students must:

- Have successfully completed **COMP1531** and (**COMP2521** or COMP1927)
- Be enrolled in a **BSc Computer Science** major
- Have completed at least **102** UOC

Learning outcomes

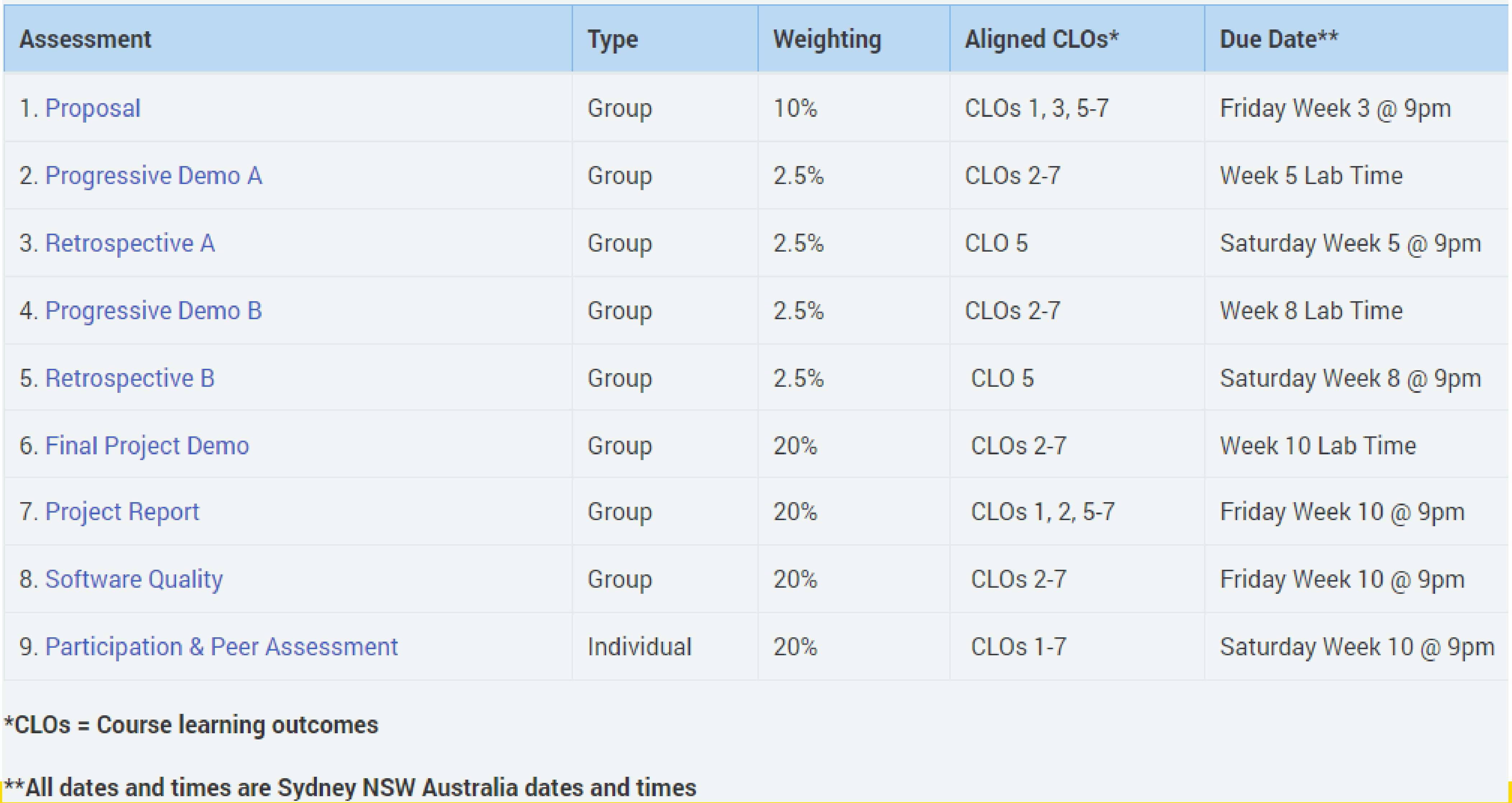
1. work from a set of **requirements**, elaborate them, and produce a **specification**
2. design and build a **correct**, **efficient** and **robust** software system from **specification**
3. use software **development** and software project **management tools**
4. validate the **correctness** and **robustness** of **software**
5. work **effectively** in a project **team**, and **lead** when required
6. **manage** their **time** effectively, and make reasoned **trade-offs** over competing demands
7. **communicate** technical information clearly, both **verbally** and in **writing**

Assessment Tasks Overview

Assessment Tasks Overview

- No final exam
- A team-based project
- Each team has **ideally five (5) members**

Assessment Tasks Overview (cont’d)



Assessment	Type	Weighting	Aligned CLOs*	Due Date**
1. Proposal	Group	10%	CLOs 1, 3, 5-7	Friday Week 3 @ 9pm
2. Progressive Demo A	Group	2.5%	CLOs 2-7	Week 5 Lab Time
3. Retrospective A	Group	2.5%	CLO 5	Saturday Week 5 @ 9pm
4. Progressive Demo B	Group	2.5%	CLOs 2-7	Week 8 Lab Time
5. Retrospective B	Group	2.5%	CLO 5	Saturday Week 8 @ 9pm
6. Final Project Demo	Group	20%	CLOs 2-7	Week 10 Lab Time
7. Project Report	Group	20%	CLOs 1, 2, 5-7	Friday Week 10 @ 9pm
8. Software Quality	Group	20%	CLOs 2-7	Friday Week 10 @ 9pm
9. Participation & Peer Assessment	Individual	20%	CLOs 1-7	Saturday Week 10 @ 9pm

***CLOs = Course learning outcomes**

****All dates and times are Sydney NSW Australia dates and times**

User Stories and Acceptance Criteria

User Stories

- A **user story** helps **agile software development teams** capture a **simplified** and **high-level** description of a **requirement** from an **end user** perspective

- A user story often follows the following **Connextra** format/template:

As a [who] I want to [what] so that [why]

- Example:

As an **online shopper**, I want to **add an item to my cart**, so that **I can purchase it**

User Stories (cont’d)

- As a **<type of user>** – this is the **WHO**
  - Who are we building this for? Who is the user?

- I want **<some feature>** – this is the **WHAT**
  - What are we building? What is the intention?

- So that **<some reason>** – this is the **WHY**
  - Why are we building this? What is the value for the customer?

User Stories (cont’d)

User Stories Checklist

- Keep them short
- Keep them simple
- Write them from the user perspective
- Make the reason/value/benefit of the story clear
- Describe only one piece of functionality
- Write stories as a team
- Use **acceptance criteria** to show a **Minimum Viable Product** (**MVP**), that is, is a **working** and **usable** product

Acceptance Criteria

- **Acceptance criteria**, also called ***satisfaction conditions***, provide a detailed scope of end users requirements

- Help the development team understand the **value of the user story** and **set expectations** as to when a team should consider something **done**

- Acceptance Criteria Goals
  - clarify what the team should build before they start
  - ensure everyone has a common understanding of the problem
  - help the team members know when the story is complete
  - help verify the story via automated tests

Acceptance Criteria (cont’d)

Example:

- As an online banking customer, I want a strong password, so that my credit card information is secure

Acceptance Criteria:

- The password must be at least eight (8) characters
- The password must contain at least one character from each of the following groups:
    - lower case alphabet
    - upper case alphabet
    - digit
    - special characters (!, @, #, $, %, ^, &, *)

Acceptance Criteria (cont'd)

Acceptance criteria should include:

- **Negative** scenarios of the functionality
- **Functional** and **non-functional** use cases
- **Performance** concerns and guidelines
- What the system/feature intends to do
- The **impact** of a user story to other features
- **User experience** concerns

Jira Software

Jira Software

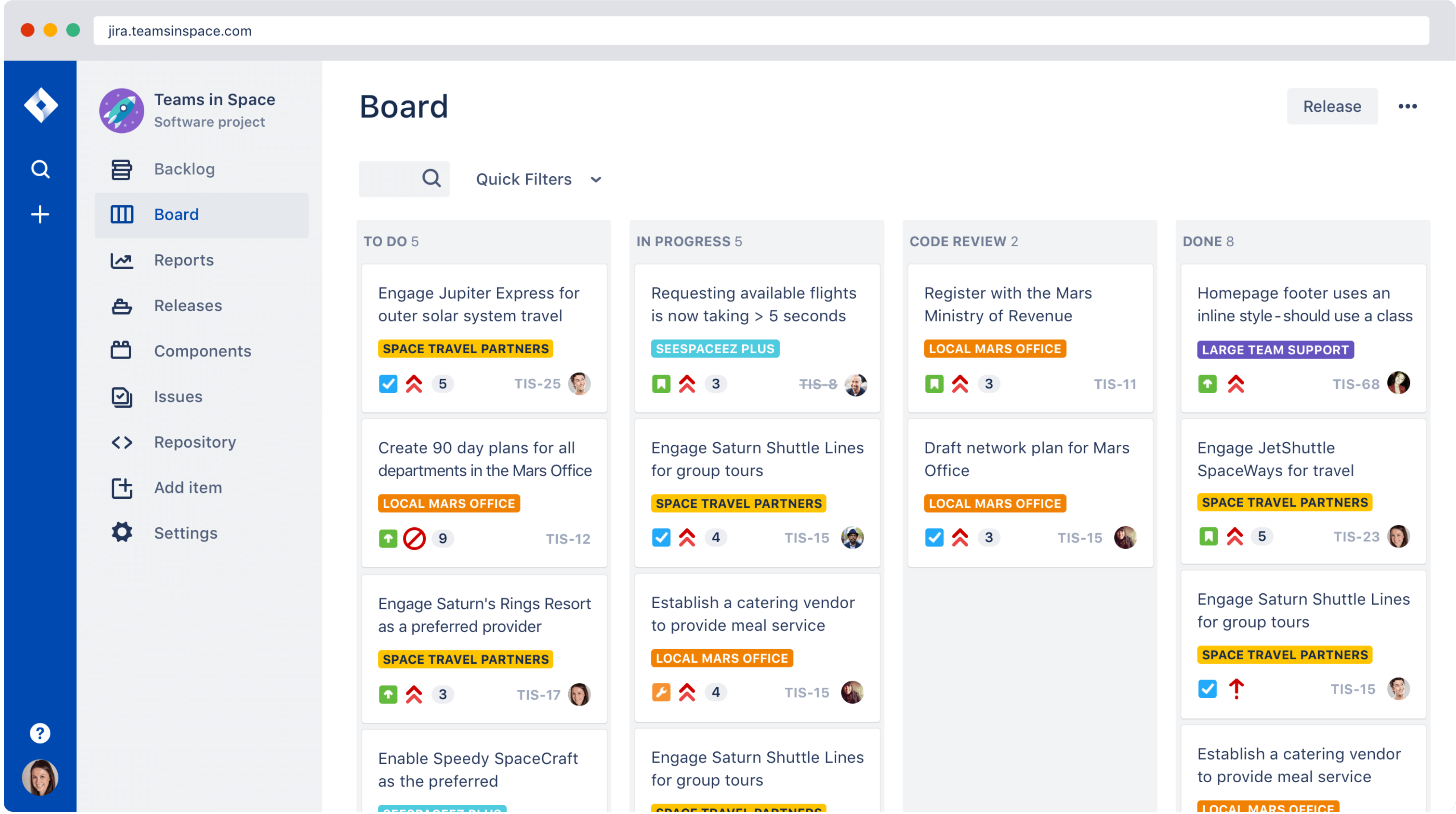
- Jira Software is an **agile** project management tool

- Jira Software supports any agile methodology such as **Scrum** and **Kanban**

- From agile boards to reports, you can plan, track, and manage all your agile software development projects from a single tool

- See https://www.atlassian.com/software/jira/agile for more details

Jira Software (cont'd)



jira.teamsinspace.com

Teams in Space
Software project

- Backlog
- Board
- Reports
- Releases
- Components
- Issues
- Repository
- Add item
- Settings

Board

Release ···

Quick Filters

TO DO 5

- Engage Jupiter Express for outer solar system travel — SPACE TRAVEL PARTNERS — 5 — TIS-25
- Create 90 day plans for all departments in the Mars Office — LOCAL MARS OFFICE — 9 — TIS-12
- Engage Saturn's Rings Resort as a preferred provider — SPACE TRAVEL PARTNERS — 3 — TIS-17
- Enable Speedy SpaceCraft as the preferred — SEESPACEEZ PLUS

IN PROGRESS 5

- Requesting available flights is now taking > 5 seconds — SEESPACEEZ PLUS — 3 — ~~TIS-8~~
- Engage Saturn Shuttle Lines for group tours — SPACE TRAVEL PARTNERS — 4 — TIS-15
- Establish a catering vendor to provide meal service — LOCAL MARS OFFICE — 4 — TIS-15
- Engage Saturn Shuttle Lines for group tours — SPACE TRAVEL PARTNERS

CODE REVIEW 2

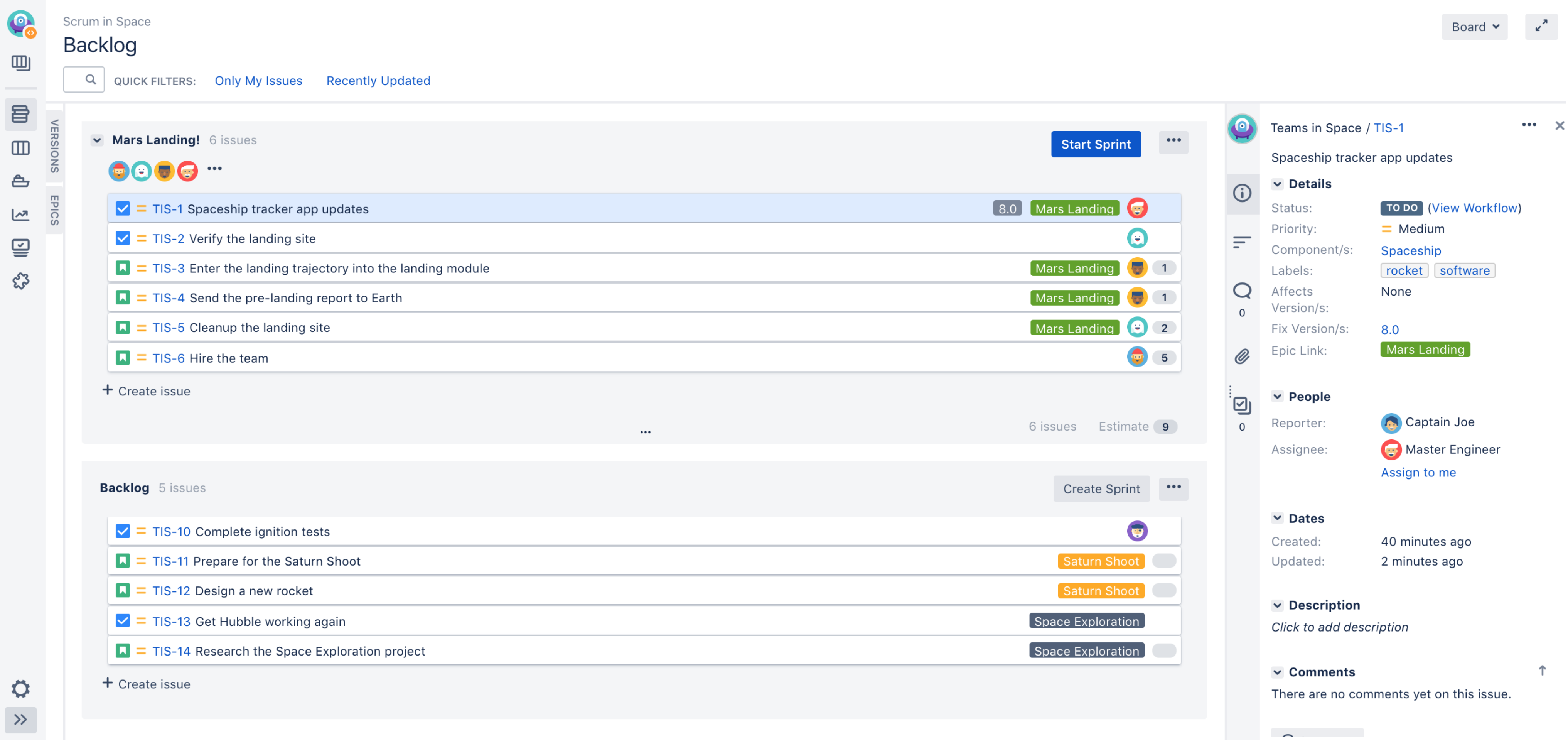
- Register with the Mars Ministry of Revenue — LOCAL MARS OFFICE — 3 — TIS-11
- Draft network plan for Mars Office — LOCAL MARS OFFICE — 3 — TIS-15

DONE 8

- Homepage footer uses an inline style - should use a class — LARGE TEAM SUPPORT — TIS-68
- Engage JetShuttle SpaceWays for travel — SPACE TRAVEL PARTNERS — 5 — TIS-23
- Engage Saturn Shuttle Lines for group tours — SPACE TRAVEL PARTNERS — TIS-15
- Establish a catering vendor to provide meal service — LOCAL MARS OFFICE

Jira Software (cont'd)

Backlog



Scrum in Space

Backlog

QUICK FILTERS: Only My Issues Recently Updated

Mars Landing! 6 issues

Start Sprint

☑	TIS-1 Spaceship tracker app updates	8.0	Mars Landing
☑	TIS-2 Verify the landing site		
	TIS-3 Enter the landing trajectory into the landing module	Mars Landing	1
	TIS-4 Send the pre-landing report to Earth	Mars Landing	1
	TIS-5 Cleanup the landing site	Mars Landing	2
	TIS-6 Hire the team		5

+ Create issue

6 issues Estimate 9

Backlog 5 issues

Create Sprint

☑	TIS-10 Complete ignition tests	
	TIS-11 Prepare for the Saturn Shoot	Saturn Shoot
	TIS-12 Design a new rocket	Saturn Shoot
☑	TIS-13 Get Hubble working again	Space Exploration
	TIS-14 Research the Space Exploration project	Space Exploration

+ Create issue

Teams in Space / TIS-1

Spaceship tracker app updates

Details

Status:	TO DO (View Workflow)
Priority:	Medium
Component/s:	Spaceship
Labels:	rocket software
Affects Version/s:	None
Fix Version/s:	8.0
Epic Link:	Mars Landing

People

Reporter:	Captain Joe
Assignee:	Master Engineer Assign to me

Dates

Created:	40 minutes ago
Updated:	2 minutes ago

Description

Click to add description

Comments

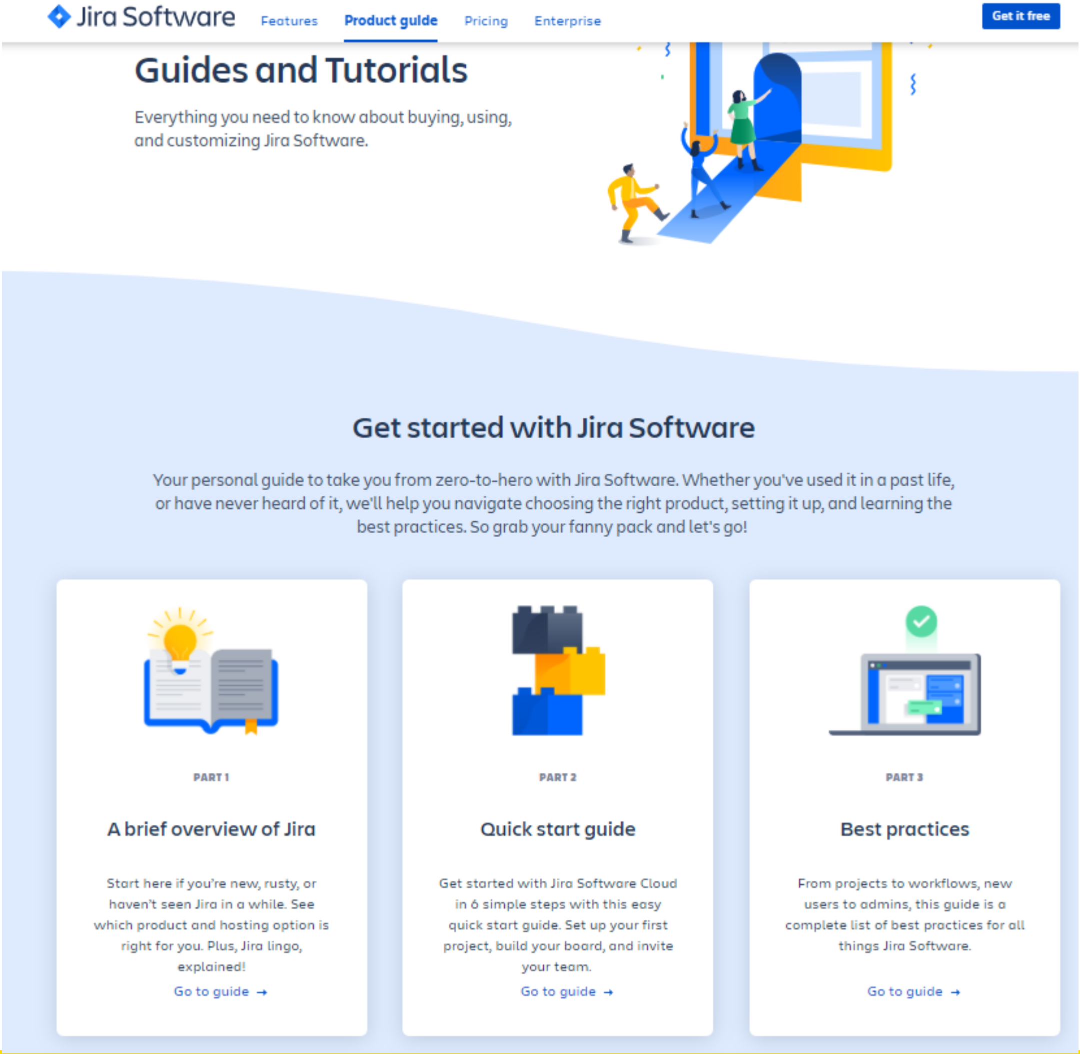
There are no comments yet on this issue.

Jira Software (cont'd)

How to use Jira Software

- Jira Software Guides and Tutorials

  https://www.atlassian.com/software/jira/guides



Guides and Tutorials

Everything you need to know about buying, using, and customizing Jira Software.

Get started with Jira Software

Your personal guide to take you from zero-to-hero with Jira Software. Whether you've used it in a past life, or have never heard of it, we'll help you navigate choosing the right product, setting it up, and learning the best practices. So grab your fanny pack and let's go!

PART 1

A brief overview of Jira

Start here if you're new, rusty, or haven't seen Jira in a while. See which product and hosting option is right for you. Plus, Jira lingo, explained!

Go to guide →

PART 2

Quick start guide

Get started with Jira Software Cloud in 6 simple steps with this easy quick start guide. Set up your first project, build your board, and invite your team.

Go to guide →

PART 3

Best practices

From projects to workflows, new users to admins, this guide is a complete list of best practices for all things Jira Software.

Go to guide →

Week 1 Lab Tasks

Week 1 Lab Tasks

- Join or form a team of ideally **5 members** within your lab
- Decide on who will be the **Scrum Master**
- Decide on a **team name**
- Ensure the team's name is prefixed with the last four digits of the course code and lab code, for instance, **9900H14BMagicode** for a team called **Magicode** enrolled in lab **H14B** for **COMP9900**
- Register your team in Moodle using **group self-selection** activity under "**Teams Formation**" section

Week 1 Lab Tasks (cont’d)

- Register for Jira. Use the exact team’s name for the **Jira site** name. Add all team members and mentor as **site-admin** (see **Jira guide** in **Moodle** under **Jira** section)

- Decide on the **project** you will work on or submit a custom project form if opting for own/custom project by end of Week 1 to your mentor for approval

- Start working on the **Proposal** assessment due **Week 3 Friday 16 June 2023 @ 9pm**

Q & A