SMU SINGAPORE MANAGEMENT UNIVERSITY | School of Computing and Information Systems

Software Project Management – IS212

Introduction

Teaching Team – Co-Instructors

LEE Kok Khing (KK)
(G1, G2)
kklee@smu.edu.sg
Room: SCIS1 Learning Way 2

CHOW Kong Ming
(G7, G8)
kmchow@smu.edu.sg
Room: SCIS2 Lab 4011

Joseph SUNG
(G3, G4, G9)
josephsung@smu.edu.sg
Room: SCIS1 Learning Way 2

ONG Yong Zheng
yzong@smu.edu.sg
(G5, G6)

Teaching Team – TAs

Kaniel Koh
G1

Amanda Lim
G2

Isha Manikandan
G2

Randall Yeo
G4

Ong Zen Yu
G5

Lance Lim
G6

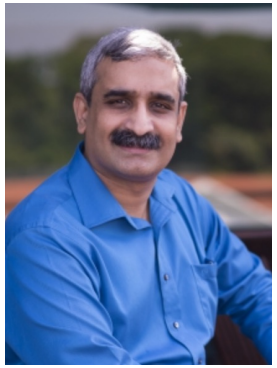
Joel Lim
G7

Benneth Low
G8

HoZhi Ying
G9

Teaching Team – Faculty

Assoc Prof Chris POSKITT
(G1, G2)
cposkitt@smu.edu.sg
Room: SCIS2 4098
Course Coordinator



Assoc Prof Rajesh BALAN
(G3, G4)
rajesh@smu.edu.sg
Room: SCIS1 5029

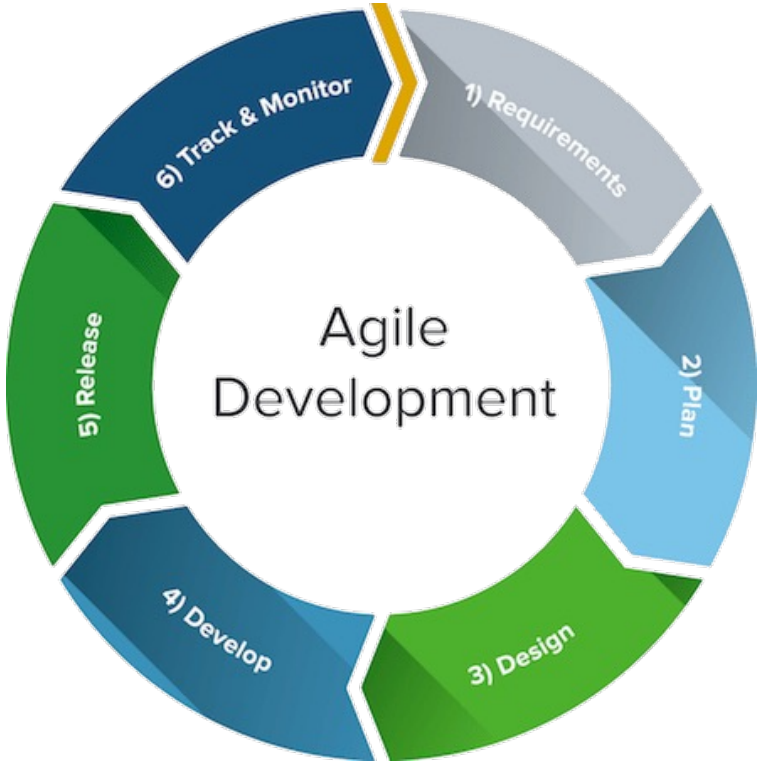
LAU Yi Meng
(G5, G6)
ymlau@smu.edu.sg
Room: SCIS2 4067

Nicholas TAN
(G7, G8, G9)
nicholastch@smu.edu.sg
Room: SCIS2 4063

Learning Objectives

- SPM in a nutshell: *hands-on agile software project management*

- Learning objectives:
  - Apply a range of agile methods to develop and manage a software project
  - Manage complexity and uncertainty in projects using the scrum framework
  - Design and document software systems using appropriate notations and abstractions
  - Ensure software quality through tests, continuous integration, and (AI-based) pair programming
  - Collaborate with product owners, scrum masters, and other developers to deliver value



https://www.smartsheet.com/agile-vs-scrum-vs-waterfall-vs-kanban

Core Competencies

traditional vs. agile methods

managing "WIP"

AI-based pair programming

user stories

modelling with C4 and UML

estimation & planning poker

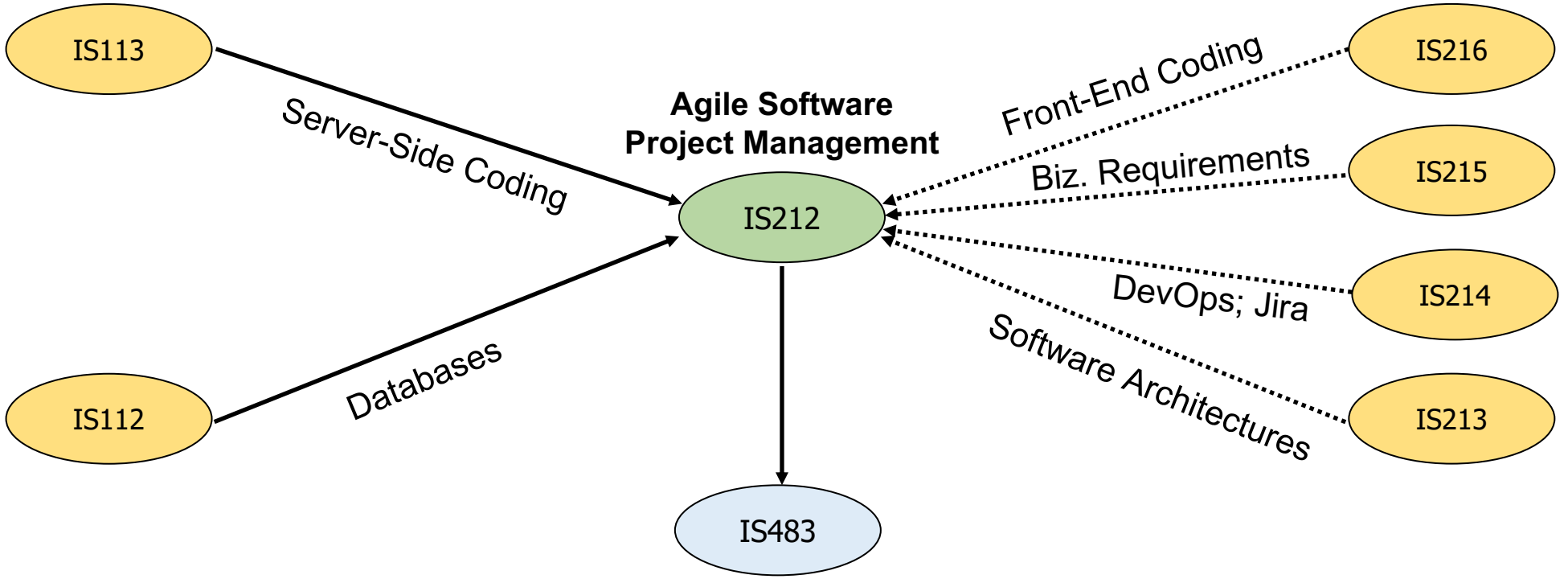
Git & GitHub Actions

test-driven development

continuous integration

code smells & refactoring

Big Picture


IS113
Server-Side Coding
Agile Software
Project Management
IS212
Front-End Coding
IS216
Biz. Requirements
IS215
DevOps; Jira
IS214
Software Architectures
IS213
IS112
Databases
IS483

Schedule

Week	Topic	Project Deadlines
1	Software Development Process	*Customer briefing released (Fri 6pm)*
2	User Stories #1	*User story assignment #1*
3	User Stories #2; Test Case Design	*Form groups (5–6 pax)*
4	Agile Estimation; Software Design #1	*Project instructions released*
5	Git	*User story assignment #2*
6	Software Design #2	
7	AI-Assisted Software Development	

Schedule

Week	Topic	Project Deadlines
9	*– project consultations –*	*Scrum Consultations*
10	Test-Driven Development	
11	Continuous Integration (CI) & Refactoring Basics	*Start Final Sprint(s)*
12	*– no class –*	
13	Final Sprint Review & Retrospective	*Project Deliverables Due*
14	*– study week –*	
15	Exam (30th Nov 2023, 8:30-10:30)	*Final Exam*

Labs – Software and Tools

- The course concepts will be demonstrated through a mix of practical examples and labs
- We will use the Python language and Flask library for our examples
- You are welcome to explore different software stacks tools in the project

unittest

GitHub Actions

Assessments – Scrum Project

- Significant group project (35%)
  - Form own teams (5–6 pax); maximum 8 groups per section
  - Designed to simulate a real-world scrum project – the good, the bad, the ugly

- **Week 1 –** customer briefing released (Friday 6pm)
  - Warning! This will initially be **deliberately ambiguous**
  - Consultation sessions with the 'customer' (one of your instructors) to answer your questions
  - Refine your understanding of the requirements but do not start coding yet!

- **Week 4 –** project instructions released
  - Specifies the scope of the system expected for the first release (i.e., Week 13)…
  - …and the scrum artefacts expected in your final submission
  - ***IS212 emphasises process:*** a great system built with an ad hoc process will not score well

- **Week 9 –** informal consultations on your scrum process

- **Week 13 –** all deliverables due; observations of your final sprint review & sprint retrospective

Assessments – Individual Assessments

- User Story Assignments (10%)
  - Important artefacts for capturing software requirements
  - Short graded submissions in **Week 2** and **Week 5**

- Quizzes (15%)
  - Four short quizzes conducted over the term (Weeks 3, 5, 7, 11)
  - Conducted at the start of lessons using eLearn and Respondus LockDown Browser
  - Only your top three quiz results will count
  - Quizzes can only be taken physically in your section's class; remote quizzes only allowed for documented valid reasons (e.g., Covid) agreed with us >1hr before the class
  - Important: sharing the quiz password to students outside the class gets a score of 0 for both students
  - No make-ups

Assessments – Exam

- Final exam (30%)
  - Closed book
  - Covers all materials and labs
  - We will provide sample questions for practice

- Tentative date: 30th Nov 2023, 8:30-10:30
  - Refer to OASIS for actual date and venue

Assessments – Class Participation

- Class participation (10%)
  - Attendance (compulsory in all weeks, except for valid reasons)
  - Active participation during classes and labs; peer learning (e.g. Slack)
  - Please remember your name tents!
  - We value **quality of contributions over quantity**

Level	Level 3	Level 2	Level 1
Overall Impression	Significantly advances learning of the class.	Somewhat advances learning of the class.	Little contribution to learning of the class.
Quality of Interactions	Creative, insightful, stimulating, novel.	Relevant, interesting, thoughtful.	Irrelevant.

Our Policy on AI Tools

- You are welcome to use generative AI tools in this course
  - In fact, we will have an entire class **(Week 7)** exploring how far they can go in supporting software project management tasks

- BUT – if used in any assessments, you must acknowledge this in your submission and explain how they have been used

- It's still important to learn the fundamentals so that you can 'verify' that ChatGPT, Copilot, etc. are actually generating the right thing ☺

“I” grades

- No make-ups are possible for any assessments
- If you are unable to take the final exam for a valid, documented reason, you can apply for an “I” grade
- This is subject to the examination policies / approval of SCIS

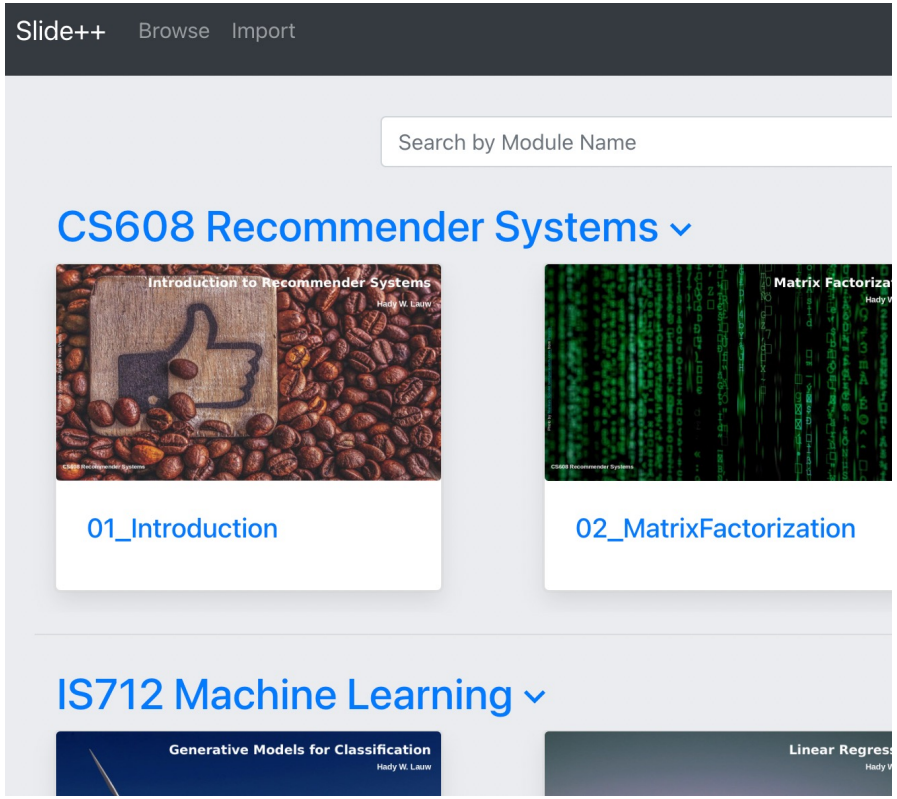
Support – Slack

- All nine sections will use Slack
- Fastest way to get support
  - *Message your instructors or TA*
  - *Post in **#help-is212***
- Learn by answering questions and reading discussions
- Share interesting articles, news, tweets (x's??) etc. in the **#content-sharing** channel
- **TO DO:** please upload a photo and add your section number (e.g. "(G2)") after your name

https://is212-2023.slack.com/

Support – Slide++ *[Trial!]*

- Slide++ is a research prototype developed by Prof Hady Lauw
- It uses AI-based techniques to automatically generate relevant links (e.g. articles, videos, Q&A) for every slide in a presentation
- We are trialing the system for IS212 this term – take a look and see if the additional resources are useful for your learning



https://slideplusplus.preferred.ai/