Project Overview

Week 2

Success is not final. Failure is not fatal. It is the courage to continue that counts.

— Winston Churchill

Project Goal

- Experience the end-to-end process of developing a software product as a team

- Build a useful and innovative mobile application system

Project Teams

- Teams will be self-formed, with 5 members per team.
- One TA will be assigned to each team
  - You will be soon added to a channel that includes all the teams assigned to your TA.

Project Scope: Topic

- The project topic and scope are free of choice as long as you build a mobile app
- Remember a few things:
    - (Usefulness) The app should be useful to a specific user group
    - (Innovation) The app should be different from existing solutions
    - (Technical Strength) The app should have at least one strong technical component
    - (Feasibility) The implementation should be feasible within the semester by the term

Project Scope: Frontend

- Android-based mobile app is highly recommended
    - We provide up to 2 android mobile devices per team
    - We have Android tutorial sessions
    - You can try other platforms if all your team members agree and are confident to self-learn
- Some teams can build applications for wearables
    - We can provide 1~2 Samsung Galaxy Watch 5 for some teams

Project Scope: Backend and Libraries

- A server component (backend) of your project should be deployed on a cloud (e.g., Amazon EC2, Microsoft Azure)
  - Free tiers should be sufficient for the course project
  - Contact the TAs otherwise

- Feel free to use frameworks or external libraries. Make sure to discuss with your team members

Project Milestones (1/3)

- Initial Project Proposal
  - Submission: 2-page proposal of your project
  - Deadline: **Sun. 09/14 23:59**
- Refined Project Proposal
  - Submission: refined version of your project proposal
  - Deadline: **Sun. 09/21 23:59**
- Midterm Presentation (Oral)
  - Submission: midterm presentation slides
  - Deadline: **Sun. 10/26 23:59**
  - Presentations: 10/28, 10/30 classes

Project Milestones (2/3)

- Heuristic Evaluation (HE)
  - Submission: the app apk (with major features and UI elements)
  - Deadline: **Sun. 11/02 23:59**
  - Heuristic Evaluation: 11/06
- User Acceptance Test (UAT)
  - Submission: the final app apk (with all promised features)
  - Deadline: **Sun. 11/30 23:59**
  - UAT: 12/02, 12/04 classes

Project Milestones (3/3)

- Project Deadline
  - Submission: everything
  - Deadline: **Sun. 12/07 23:59**. Freeze git repo after this
  - Final Presentations: 12/09 class

Iteration-Wise Checkup

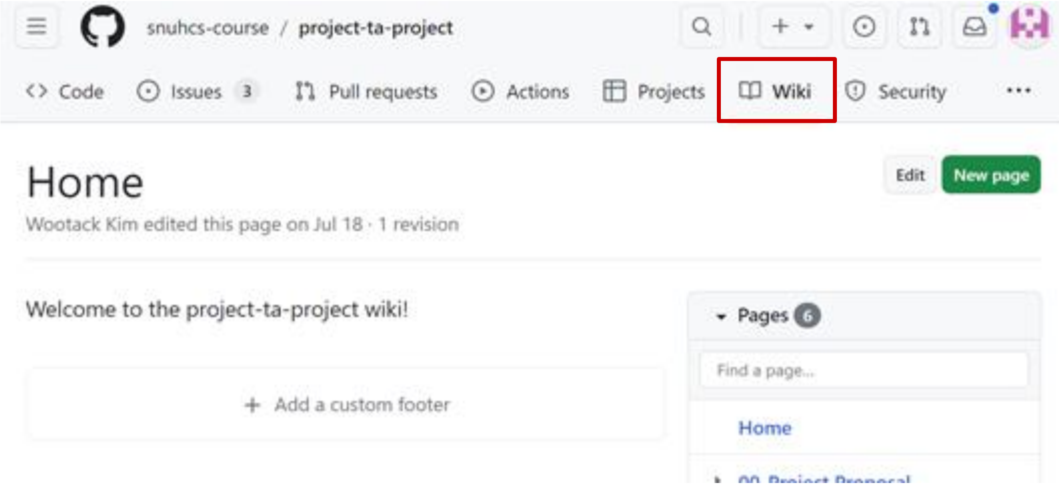
- Discuss the following with TA every Thursday
  - Working demo
  - Design documents
  - Schedule
  - Git usage
  - Metrics
  - Plus anything your team/TA wants to discuss
- Submit everything at the end of each iteration on eTL

Working Demo

- At the end of each iteration, submit a working demo.
- Submission Instructions:
  - Create a separate branch for your demo (iteration-#-demo)
  - Include a README.md in the root of that branch containing:
    - How to run your demo (clear setup and execution instructions, which environment you used)
    - What your demo demonstrates (features implemented, goals achieved, etc…)
  - A short demo video showcasing the key functionalities (the video doesn’t have to be fancy)

Project Code and Documents

- All your code will be managed via GitHub
- All project documents will be managed in the Wiki page
- Code and documentation should be regularly updated



Home

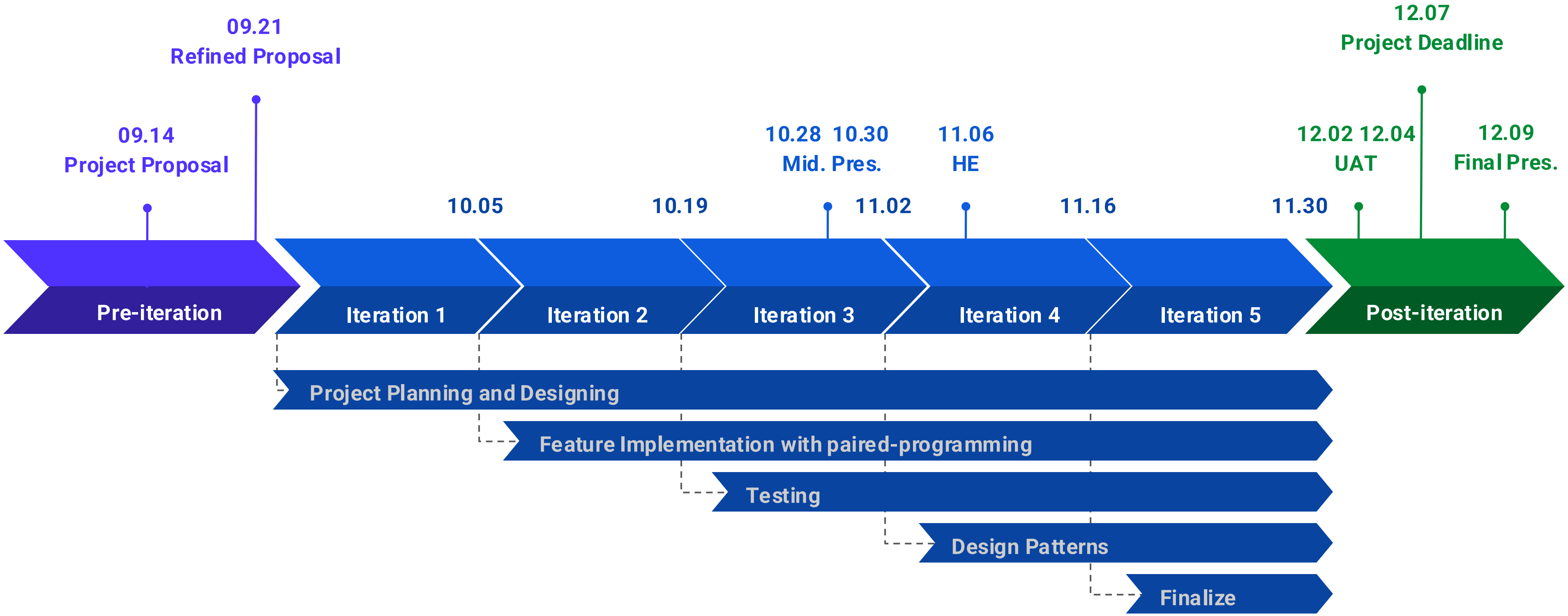
Wootack Kim edited this page on Jul 18 · 1 revision

Welcome to the project-ta-project wiki!

Project Process Overview

- We will use combination of agile processes
    - XP practices
        - Collective code ownership, coding standards
    - RUP/Scrum-like practices
        - 5 Iterations, use case-driven development
    - Common
        - Consider specified milestones
        - Track metrics
        - Use GitHub and Wiki
        - Role rotations
            - 1 project manager and 4 programmers per iteration

Project Process Overview



Pre-Iteration: Project Proposal

- 2 pages including images
- Refer to the proposal guideline & example for more details
- Timeline:
  - 09/14 23:59:59 - proposal deadline
  - 09/15 23:59:59 - TA feedback
  - 09/21 23:59:59 - refined final proposal deadline
- Upload to GitHub repository (Wiki) & submit to TAs via eTL

Iteration 1: Planning and Designing

- Start project planning and software design
- Your team needs to prepare the following documents
  - Project Schedule (Google Sheet)
  - Requirements & Specifications (GitHub Wiki)
  - Design Documentation (GitHub Wiki)

Iteration 2: Start Implementation

- Start implementing as scheduled! (with YOUR GitHub id)
- Avoid re-creating the git repository so make sure to avoid catastrophic commits/pushes!
- Log commit status so that PM can track progress (PM should update schedule sheet)
- Update design docs
- Make working demo branch

Iteration 3: Start Testing

- Continue implementing features
- Must start unit testing!
  - Log test coverage
  - Fix bugs when testing!
- PM: must start integration testing!
  - Track tested user stories
- Be prepared for the midterm presentation and demo
- Get ready for the heuristic evaluation for usability testing (Iteration 4)

Iteration 4: Apply Design Patterns

- Continue implementing and testing
- Must apply design patterns to your project
  - Specify in Design Documentation which design pattern you apply, why and how
- Most parts of the app should be ready and usable

Iteration 5: Finalize App and Project!

- Finish any implementations left
- Refactor and clean code
- Deploy your app for User Acceptance Testing (UAT)
  - Make UAT test plan and discuss with TA (11/30)
- Be ready for the final presentation

Post-Iteration: User Acceptance Testing (UAT)

- Test plans
    - Delimit success criteria for each feature (connected to a user story)
    - Testing should accept FREE INPUT to avoid hard-coded test paths
    - TA will discuss whether test plans are challenging enough
- Test results
    - Organize test results and analyze them in docs
- UAT is the final test by the customer in practice
    - We will give few more days to fix minor issues and wrap up
    - This is for learning experiences, different from the practice

Post-Iteration: Final Deadline

- Final deadline to submit presentation slides
- If you want (and can), you can fix some minor bugs to meet the feedbacks from UAT
- Any code pushed after deadline will NOT be considered

Project Documents Overview

Project Schedule: Why Use It? (1/2)

- Clear Vision
  - A well-planned project schedule helps team members understand the project's goal and the expected end product, aligning them to a shared vision
- Allocation and Utilization
  - By planning 'who will do what', 'when', and 'how much time it will take', teams can ensure that everyone contributes effectively and efficiently

Project Schedule: Why Use It? (2/2)

- Risk Mitigation
  - By planning in advance, teams can identify potential risks and develop backup plans
- Inspection and Feedback
  - By setting milestones and deadlines, a project schedule offers a measurement tool to track progress and identify deviations early

Project Schedule: Misc.

- Use the google spreadsheet template to track the schedule and share it with your team's TA
- Plan till the end – of course you can revise, but still plan!
- Consider the aforementioned project milestones when you come up with your project schedule
- Project schedule should be regularly updated (e.g., upon task completion and iteration starts)
- We will look at the schedule management for grading

Project Schedule: Template (1/3)

- Team & Project Overview
  - Set your project's goal, motivation, and expected end product
  - Define 'House Rules' and establish work norms
    - Collective goal of the team (actual deploy, just passing the course, etc.)
    - No coding after midnight
    - Don't be late to the meetings

Project Schedule: Template (2/3)

- PM Rotation Schedule
  - 1 project manager and 4 programmers per iteration
    - Project manager: schedule tasks for the iteration, assign members, check their progress, testing, etc.
  - Each team member will experience to be a PM
  - Keep the roles within each iteration

Project Schedule: Template (3/3)

- Project Task Breakdown
  - A detailed task breakdown helps understanding the project's scope and dependencies
- Iterations & Task Assignments
  - Treat each iteration as a self-contained project with a goal and assignments
  - Estimate how much resources each task will take and plan effectively

Requirements & Specifications (1/3)

- Overview of how the app **should** interact with the outside world (must be understandable by all involved parties)
- Focuses on what **users** need and NOT on implementation
- Contains:
    - Project Abstract (summary of the software, < 200 words)
    - Customer (brief description of the target customer)
    - Competitive Landscape (identify the competitors of the market, and list the main ways in which your project will be different)

Requirements & Specifications (2/3)

- Contains (cont'd):
  - Functional Requirements
    - User Stories & User Acceptance Criteria
    - Short description of a user's interaction with the system
    - Example behavior of the system written from a user's POV
    - Must include Acceptance Tests
    - Minimum 5, which cannot be changed after Iteration 3
  - Non-Functional Requirements
    - Not mandatory logic but essential for high usuability
    - E.g., response latency, scalability, security

Requirements & Specifications (3/3)

- Contains (cont'd):
  - UI Requirements
    - Show how screens will look like and how they will interact with each other
    - Sketches or mockups for main parts of the user interface
    - You can use online tools: figma

Design Documents (1/2)

- All the technical documents to guide implementation
- Should serve as the blueprints for all developers
- Contains:
    - System Architecture
        - Major pieces of your system and how they interact
        - Use graphical notations (UML, schema, …)
        - MUST include major interfaces between components
        - Try to use standard architectural elements (e.g., model-view-controller, client-server, …) - some more here

Design Documents (2/2)

- Contains (cont'd):
  - Design Details
    - Class diagram for your system
    - The database schema (if applicable)
    - App-specific details (algorithms, business logic, DNN models)
  - Testing Plan (from Iteration 3 onwards)
    - For unit testing, UI testing, and integration testing
    - Specify which tools you plan on using for testing

Meeting Log

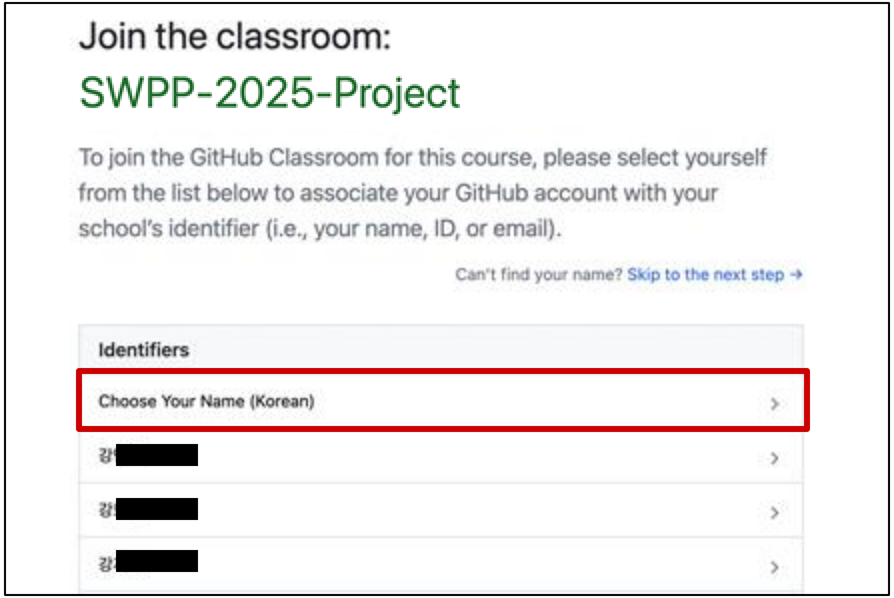
- Leave the daily standup meeting log **(add in Git Wiki)**
- Communicate with your team daily when possible
- Free format
- Contains:
  - Start-End time
  - Discussion points

Team Exercises

5 mins

Team Exercise 1: Join GitHub Classroom

- Follow the link and select your name
  - GitHub Classroom : https://classroom.github.com/a/5AOQKrq4



Join the classroom:

SWPP-2025-Project

To join the GitHub Classroom for this course, please select yourself from the list below to associate your GitHub account with your school's identifier (i.e., your name, ID, or email).

Can't find your name? Skip to the next step →

Identifiers

Choose Your Name (Korean) ›

[redacted] ›

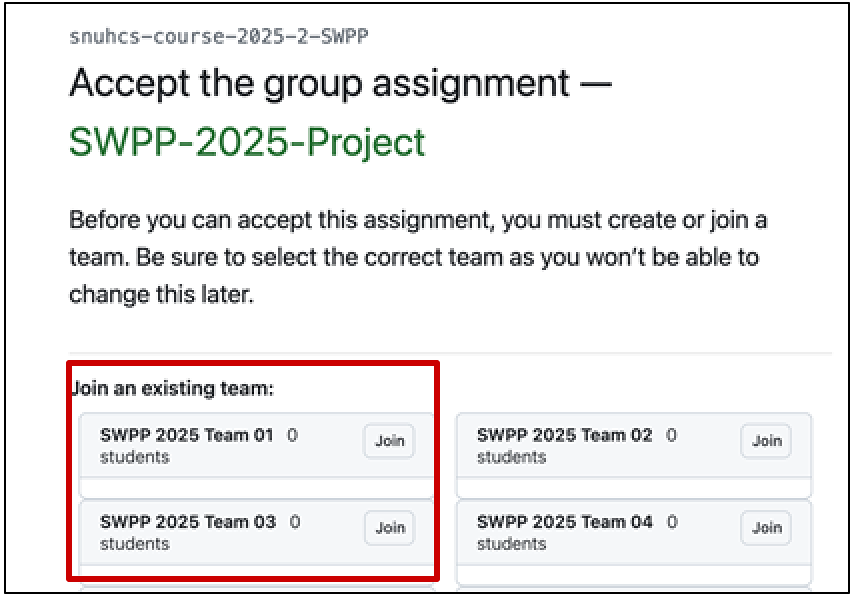
[redacted] ›

[redacted] ›

5 mins

Team Exercise 1: Join GitHub Classroom

- Join to your assigned team



snuhcs-course-2025-2-SWPP

Accept the group assignment — SWPP-2025-Project

Before you can accept this assignment, you must create or join a team. Be sure to select the correct team as you won't be able to change this later.

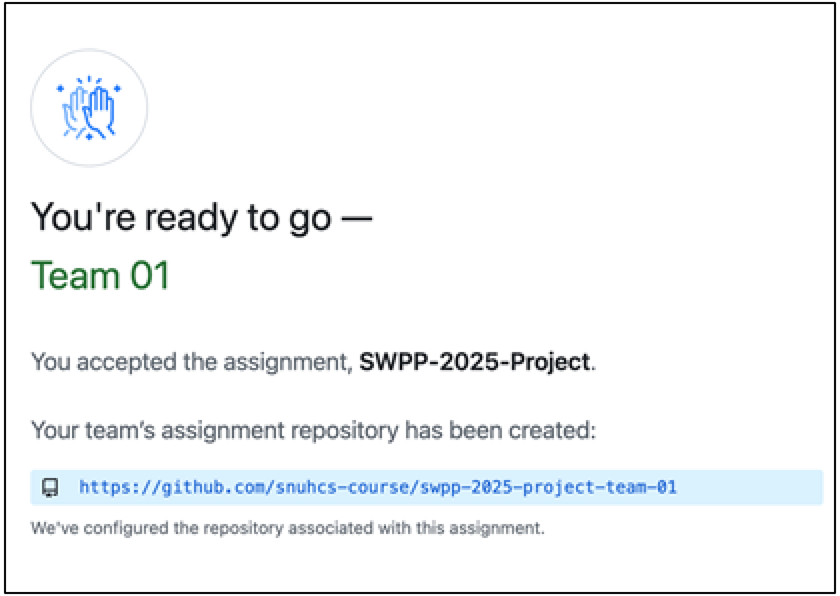
Join an existing team:

SWPP 2025 Team 01 0 students

SWPP 2025 Team 02 0 students

SWPP 2025 Team 03 0 students

SWPP 2025 Team 04 0 students



You're ready to go — Team 01

You accepted the assignment, **SWPP-2025-Project**.

Your team's assignment repository has been created:

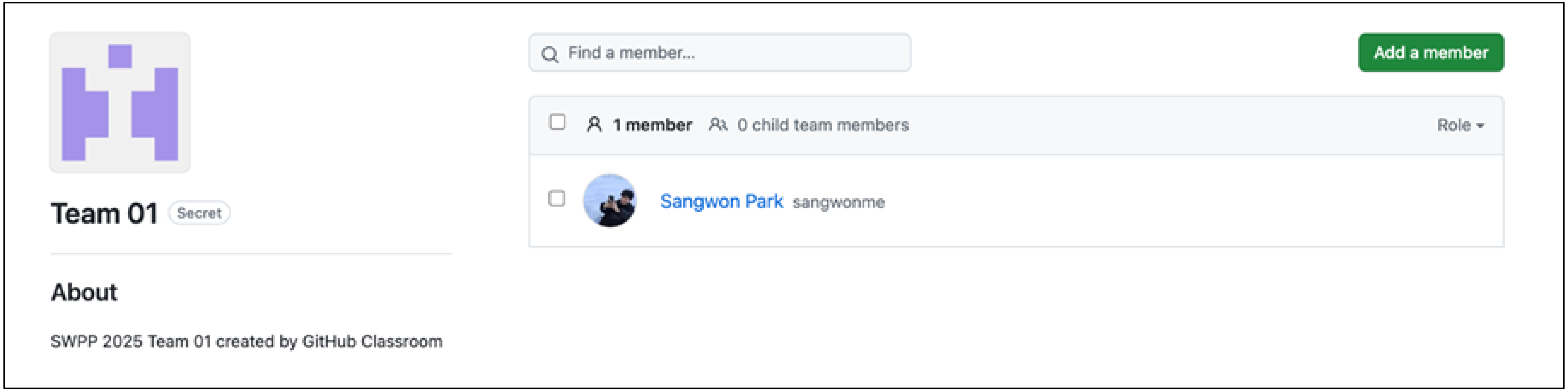
`https://github.com/snuhcs-course/swpp-2025-project-team-01`

We've configured the repository associated with this assignment.

5 mins

Team Exercise 1: Join GitHub Classroom

- If you joined to wrong team, let TA knows
  - Team: https://github.com/orgs/snuhcs-course/teams



Team 01 Secret

□ 1 member 0 child team members

□ Sangwon Park sangwonme

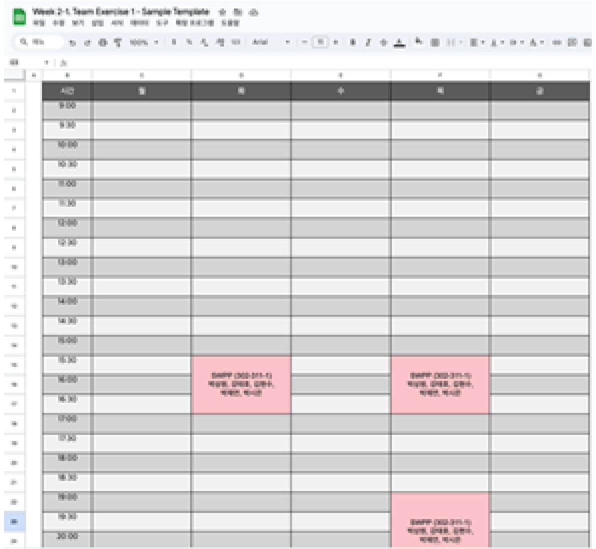
About

SWPP 2025 Team 01 created by GitHub Classroom

10 mins

Team Exercise 2: Create Shared Timetable

- Create a combined timetable of all your members using google spreadsheet. Here is a sample template
- Share the spreadsheet with your team's TA via Slack



Week 2-1. Team Exercise 1 - Sample Template

시간	월	화	수	목	금
9:00					
9:30					
10:00					
10:30					
11:00					
11:30					
12:00					
12:30					
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15:30		SWPP (302-311-1) [illegible]		SWPP (302-311-1) [illegible]	
16:00					
16:30					
17:00					
17:30					
18:00					
18:30					
19:00				SWPP (302-311-1) [illegible]	
19:30					
20:00					

10 mins

Team Exercise 3: Introduce your group!

- Create a short presentation with the following information:
  - Your team's name
  - Your team's goal (very important!)
  - A screen capture of your team's common timetable
  - Brief information about each member of the team
  - Anything else you would like to share
- Submit the slides on eTL until the end of class
- Lets hear from teams on Thursday.

Thank You.
Any Questions?