



KYOTO UNIVERSITY

Comfortable Sakai: UX Enhancement of the Sakai LMS from students' perspective

Kazuki Takeda[†] and Shoji Kajita[‡]

[†]Department of Electrical Engineering

[‡]Institute of Information Management and
Communication

Kyoto University, Japan



Agenda

- Background
 - Successful adoption of Comfortable PandA at Kyoto Univ.
- Development of Comfortable Sakai
- Future of Comfortable Sakai



Background

Comfortable Sakai Overview

- A Web browser extension for enhancing UX of Sakai LMS
 - **Open-Source Software**
 - **Developing in GitHub:** <https://github.com/kyoto-u/comfortable-sakai>

- Works with major modern web browsers 😊



- Used by **60~70%** of students in Kyoto Univ.

Pain Points of Sakai LMS for Students at Kyoto Univ.

- LMS usage has been rapidly increased since COVID-19
 - ex. Two courses per semester → 10~20 courses per semester (my case)
 - ex. 4 submissions per semester → 60+ submissions per semester (my case)
- No means to check a list of **All** assignments for **All** course sites
 - Missed some assignments
 - Another task management tool was required to track assignment status

Had to deal with these problems

Requirements to Reduce Pain Points

- Aggregated list of assignments
- Easy way to see the status of each assignments
- Easy to install, use, and maintain (← Very important!)

Release of the Extension for Kyoto Univ.

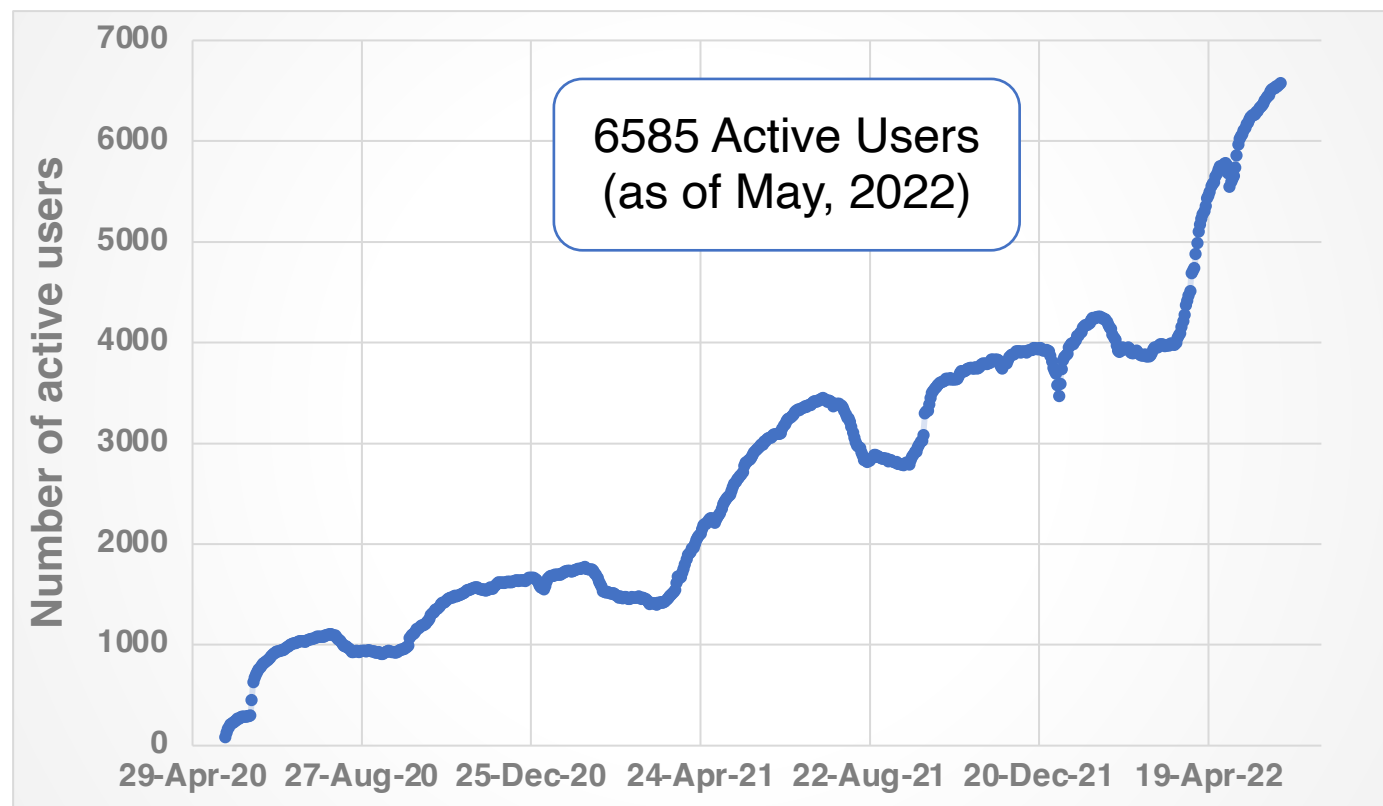
- Released “**Comfortable PandA**” in May, 2020
 - PandA: Sakai LMS at Kyoto Univ.
- Many positive comments from users

“It’s so nice to have a list of all assignments. It saved me a lot of time.”

“I can’t live without your Comfortable PandA!”

Successful adoption for Kyoto Univ.

- Number of active users are continuously increasing
 - Over 60% of students are using the extension
- Central IT of Kyoto Univ. has been officially recognized as a third-party tool
- Got some requests to use the extension from other university student





Development of Comfortable Sakai

Requirements beyond Comfortable Panda

- ✓ Inherited useful features from Comfortable Panda
- ✓ Easy to use with **any** Sakai LMS instances at other institutions
 - NOT just only for Kyoto Univ.!
- ✓ Multi-language support
 - English and Japanese (as of now)
- ⚠ Available at every extension store of supported web browser
 - An issue: still depending on me



Comfortable Sakai

Inherited Features from Comfortable PandA

- Colored course site tabs
- Notification Badge
- miniSakai

Inherited Features from Comfortable PandA (1/3)

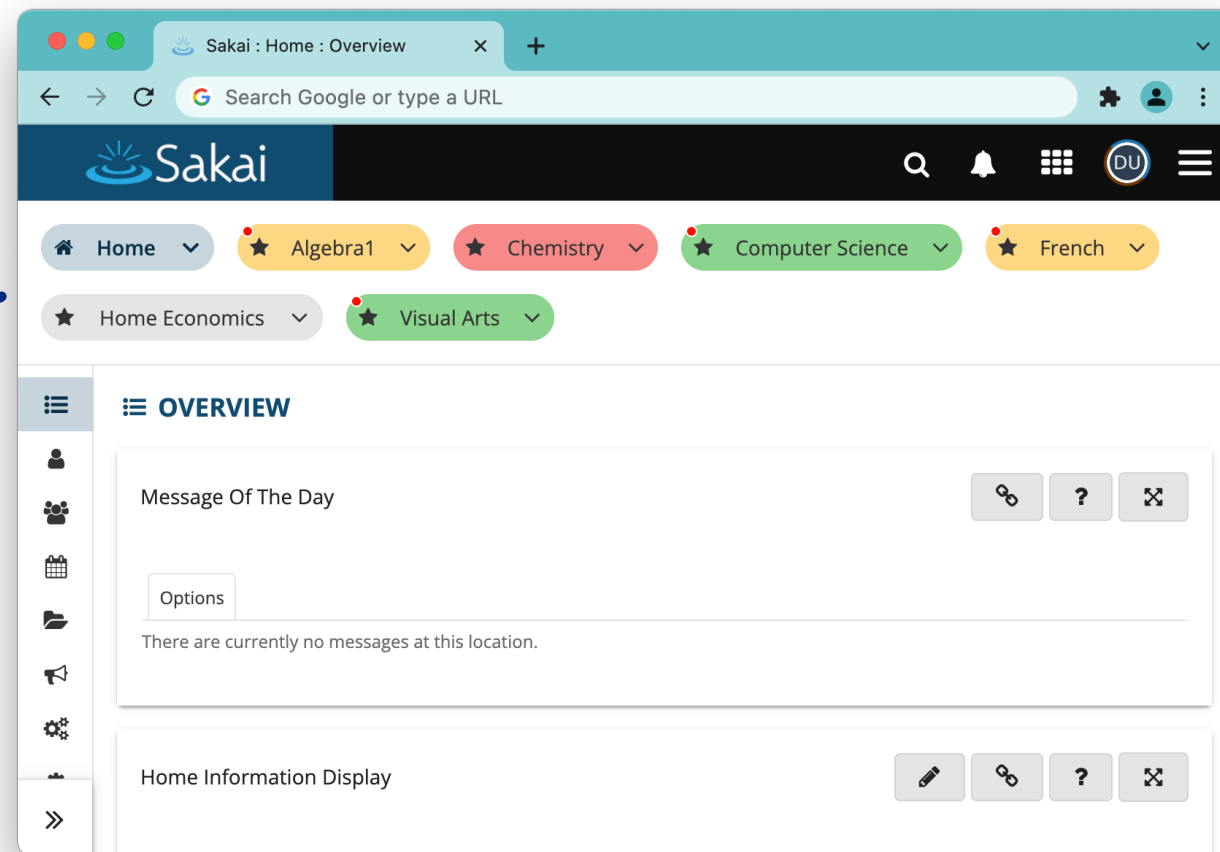
Colored course site tabs

- Colors tabs according to Assignments / Quizzes

Number of Days Until Due Date

-  0 ~ 1 Day
-  1 ~ 5 Days
-  5 ~ 14 Days

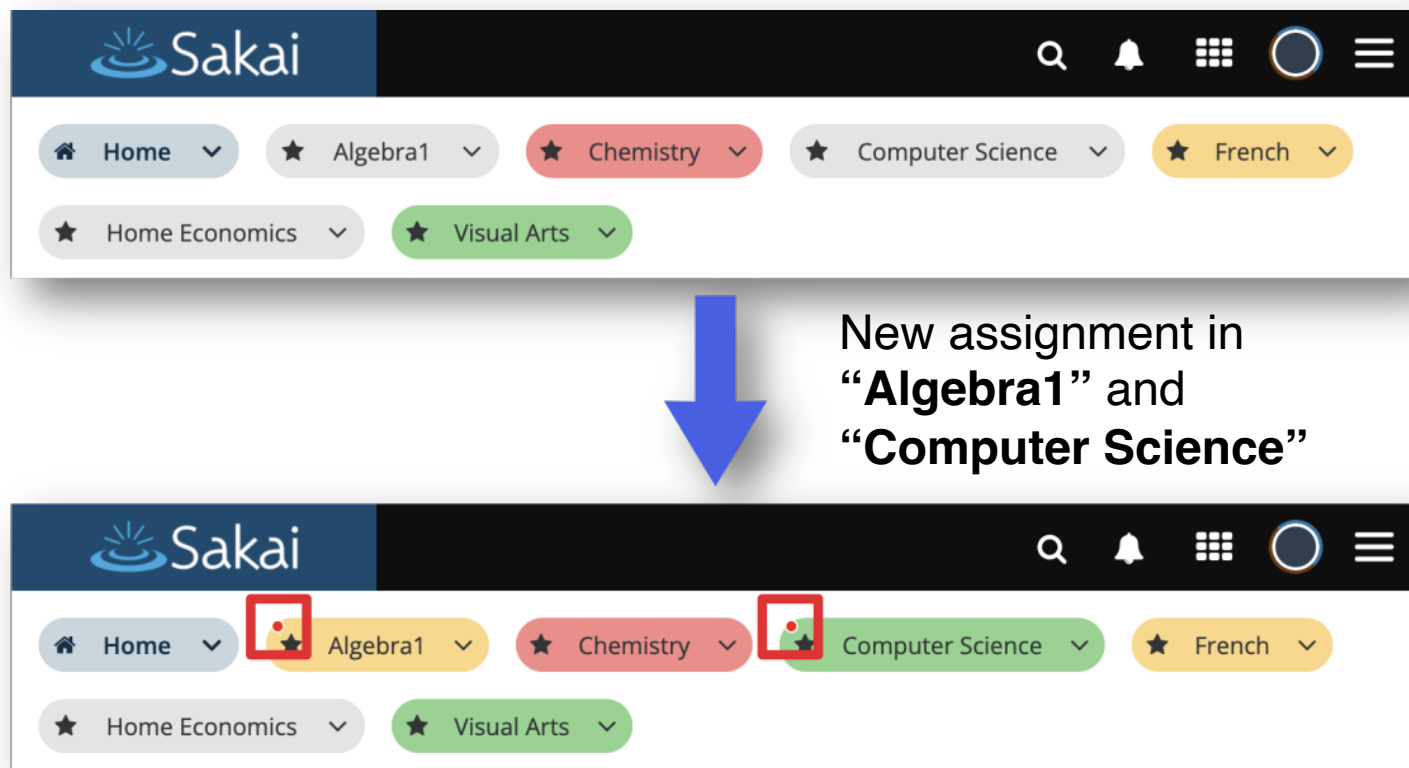
Intuitive color scheme



Inherited Features from Comfortable PandA (2/3)

Notification Badge

- Displayed when a new assignment is published
- Students will less often miss un-announced assignments

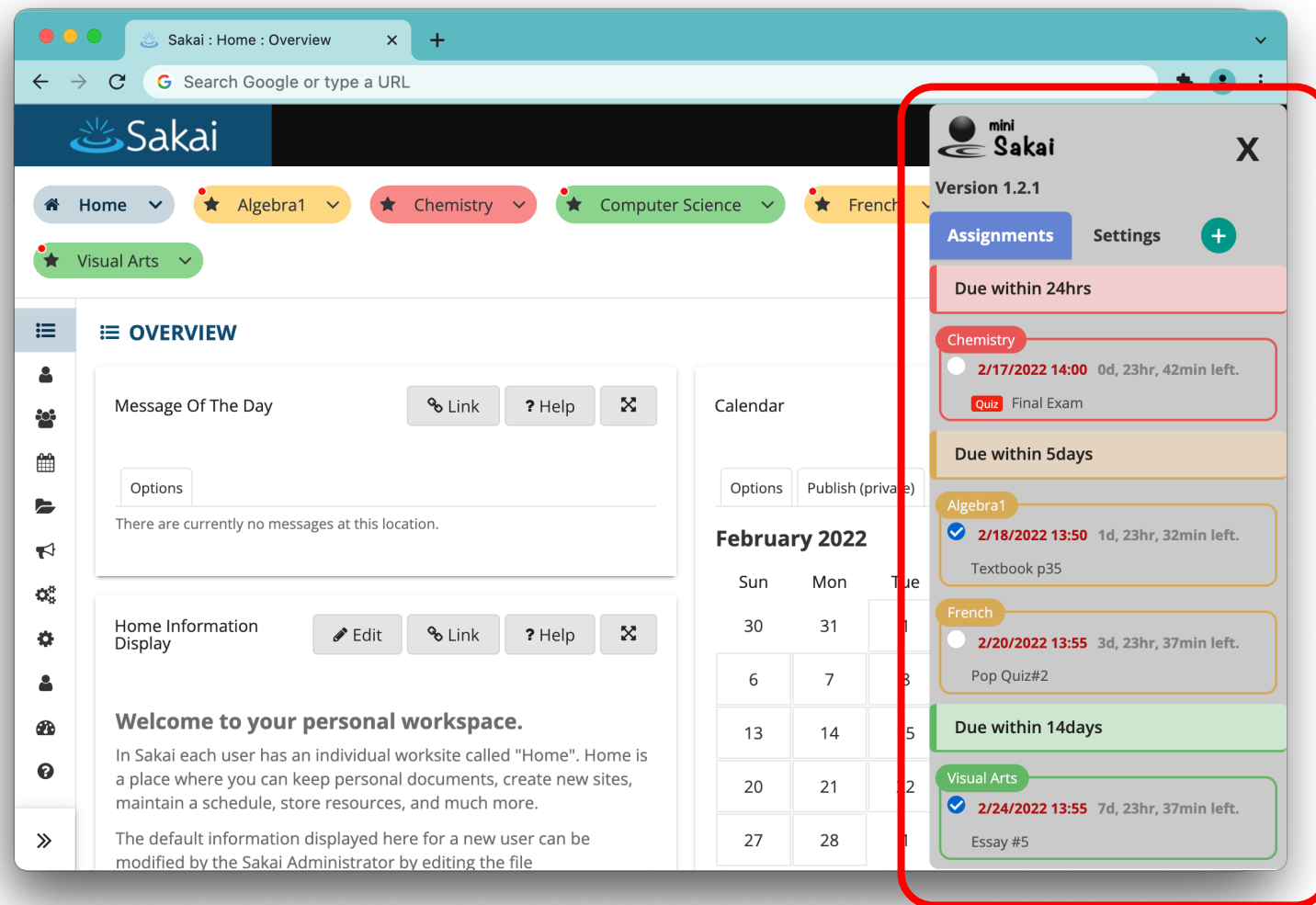


The image shows two screenshots of the Sakai LMS interface. The top screenshot shows a navigation bar with course menus: Home, Algebra1, Chemistry, Computer Science, French, Home Economics, and Visual Arts. The bottom screenshot shows the same interface, but with red notification badges (a person icon) appearing on the Algebra1 and Computer Science menus. A blue arrow points from the top screenshot to the bottom one, indicating the change. Text to the right of the arrow reads: "New assignment in 'Algebra1' and 'Computer Science'".

Inherited Features from Comfortable PandA (3/3)

miniSakai

- A side panel list that shows aggregated list of assignments



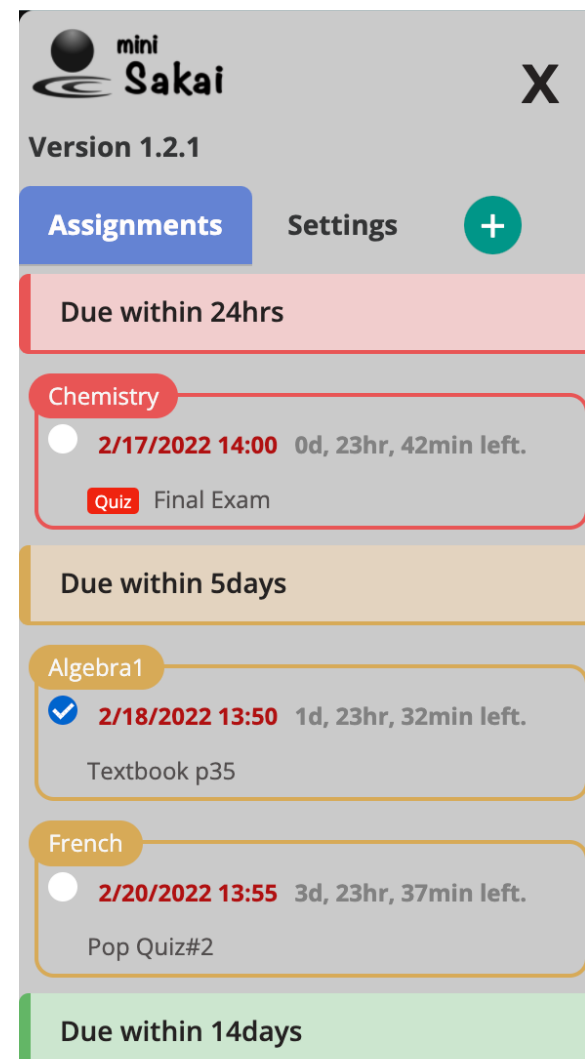
The screenshot displays the miniSakai interface. The main content area shows an overview of the user's workspace, including a message of the day, home information display, and a calendar for February 2022. A side panel on the right, highlighted with a red border, shows the 'mini Sakai' sidebar. This sidebar includes the version number (1.2.1), navigation options for 'Assignments' and 'Settings', and a list of assignments categorized by due date:

- Due within 24hrs**
 - Chemistry: 2/17/2022 14:00 (0d, 23hr, 42min left) - Quiz Final Exam
- Due within 5days**
 - Algebra1: 2/18/2022 13:50 (1d, 23hr, 32min left) - Textbook p35
 - French: 2/20/2022 13:55 (3d, 23hr, 37min left) - Pop Quiz#2
- Due within 14days**
 - Visual Arts: 2/24/2022 13:55 (7d, 23hr, 37min left) - Essay #5

Inherited Features from Comfortable PandA (3/3)

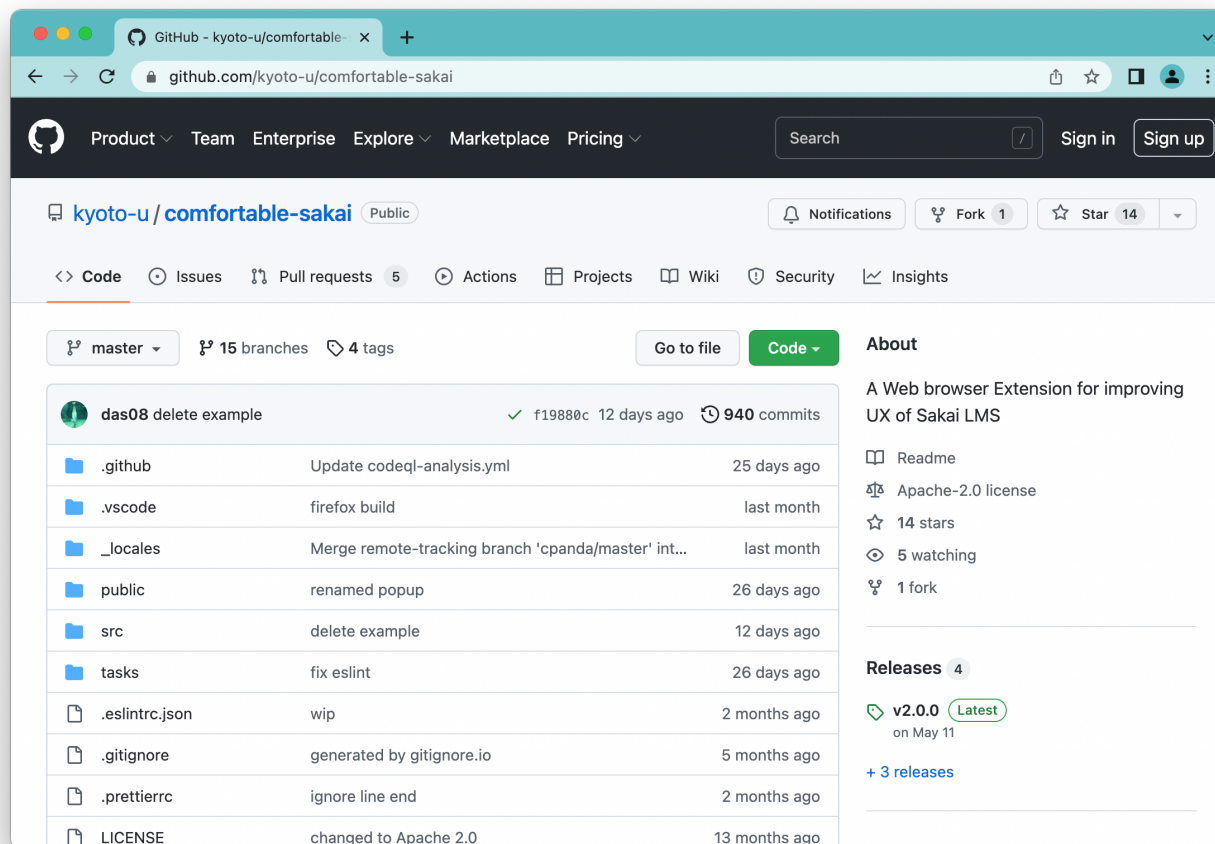
miniSakai

- Displays all assignments and quizzes sorted by its due date
- Has check boxes to manage submission status



Comfortable Sakai is an Open-Source Software

➤ Available at GitHub public repository



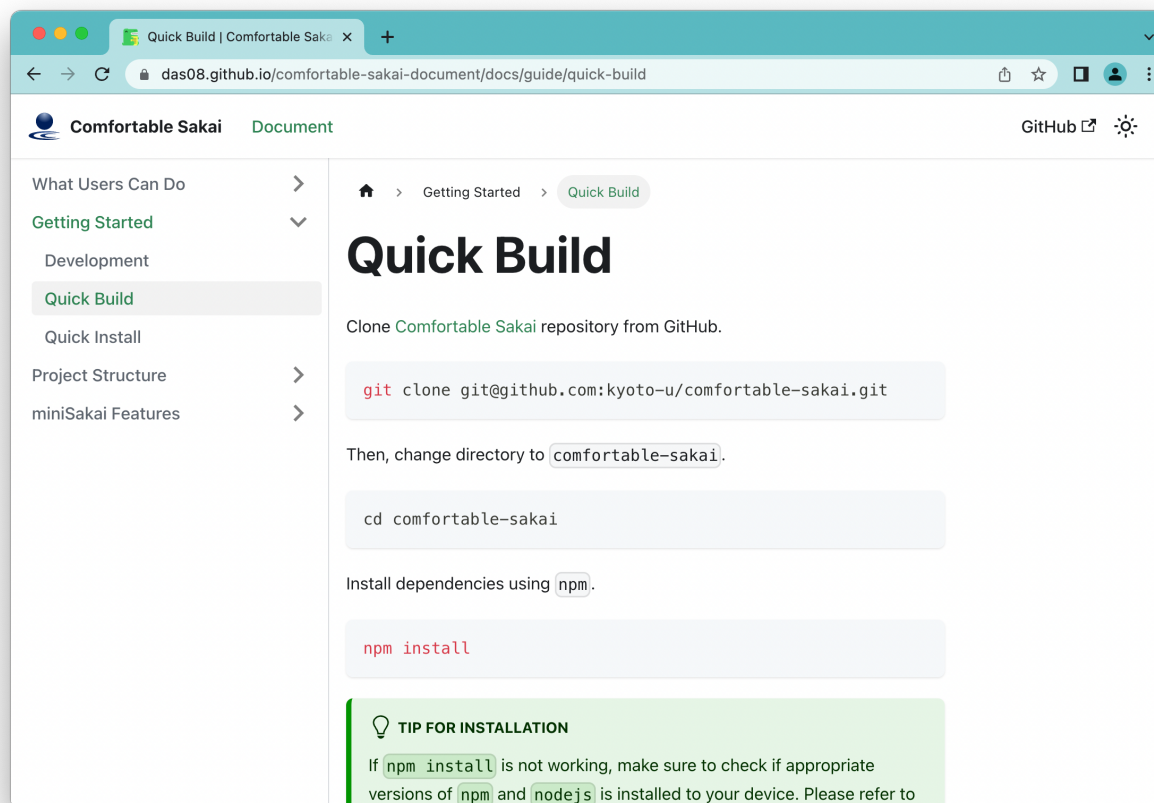
The screenshot shows the GitHub repository page for 'kyoto-u/comfortable-sakai'. The repository is public and has 14 stars and 1 fork. The main branch is 'master' with 15 branches and 4 tags. The repository contains a file tree with folders like '.github', '.vscode', '_locales', 'public', 'src', and 'tasks', and files like '.eslintrc.json', '.gitignore', '.prettierrc', and 'LICENSE'. The 'About' section describes it as a Web browser Extension for improving UX of Sakai LMS, with a Readme, Apache-2.0 license, 14 stars, 5 watching, and 1 fork. The latest release is v2.0.0, released on May 11.



Documentation for Development

➤ Available at GitHub pages:

➤ <https://das08.github.io/comfortable-sakai-document/>



Quick guide for development and installation

Try out “Comfortable Sakai”!

Download from the store:

 <https://chrome.google.com/webstore/detail/comfortable-sakai/dljchadmceknaijmdmnaaodjkkidhakh>

 <https://addons.mozilla.org/ja/firefox/addon/comfortable-sakai/>

 <https://apps.apple.com/jp/app/comfortable-panda/id1572408187?mt=12>

Instruction to use and source code available at:

<https://github.com/kyoto-u/comfortable-sakai>



Opportunities and Concerns of Comfortable Sakai

Opportunities of Comfortable Sakai

- Currently, the focus is on assignment-related features

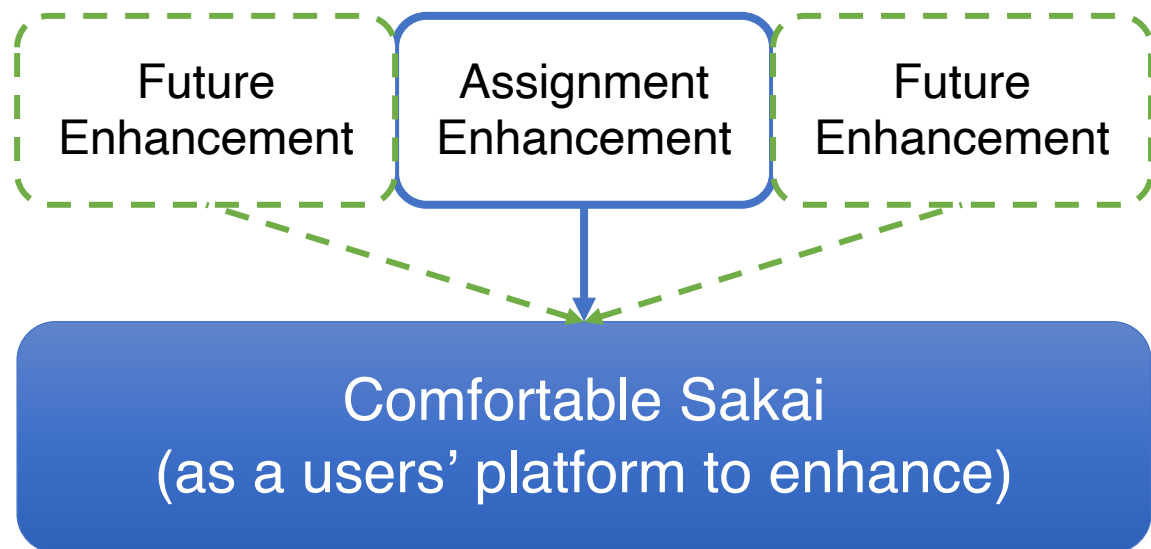
Assignment
Enhancement



Comfortable Sakai
(as a users' platform to enhance)

Opportunities of Comfortable Sakai

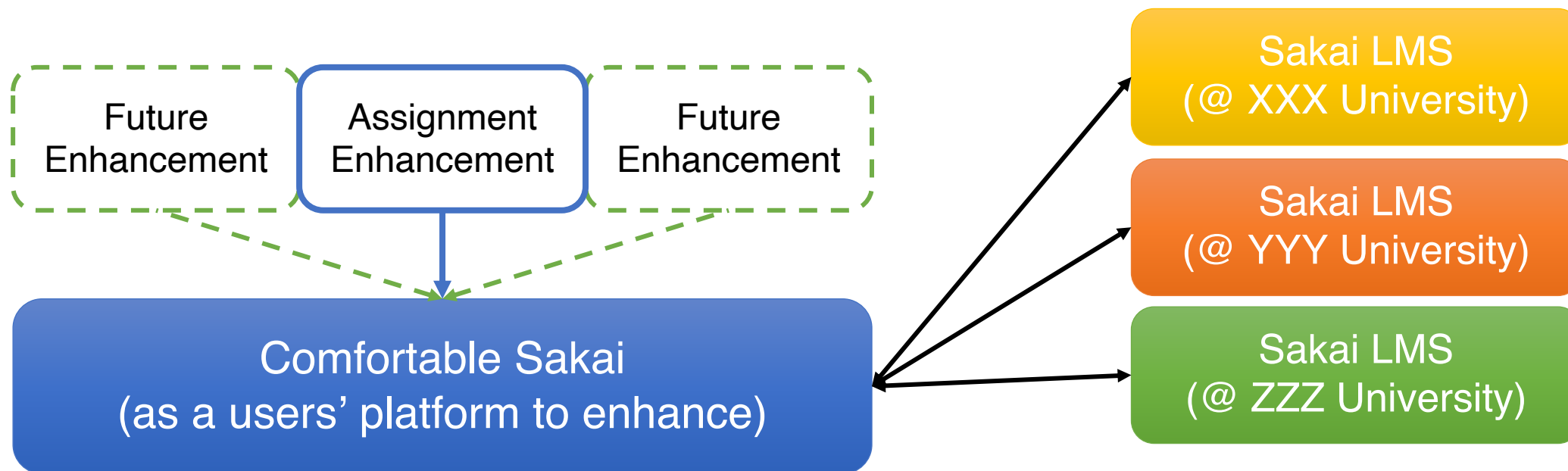
- Can be used as a **foundation** to add other useful features



Many features can be built on to Comfortable Sakai Extension

Opportunities of Comfortable Sakai

- Comfortable Sakai can be used with any Sakai LMS instances



Students can benefit from these features just by installing the extension!

Opportunities of Comfortable Sakai

- **By using Comfortable Sakai Extension as a platform of users' developed tools...**
 - ✓ Collaborative student-led enhancement of Sakai LMS!
 - ✓ ex. Annual Aperero sponsored festival collaborated with capstone courses at Sakai schools
 - ✓ Developed features can be used across other Sakai LMS instances!
 - ✓ No need to update & restart Sakai instance itself
 - ✓ Just 1 click to install extension!

Concerns of Comfortable Sakai

- Sustainable project resources for development & maintenance
 - Core student developers will **graduate in a year**
 - But students' eyes are mandate for future development
 - The way for reincarnation of core student developers is unclear
- Continuous responsibilities for user community
 - Already receiving several "Pull Requests" (code contributions)

Concerns of Comfortable Sakai

- We need colabolators as a:
 - **User**: Requesting new features and reporting bugs
 - **Developer**: Adding new features and fixing bugs
 - **Institution**: Officially supporting Comfortable Sakai on campus

- We need the official community for Comfortable Sakai
 - Planning to apply for an incubation process to launch an official Apereo project
 - Looking for **at least three Apereo member institutions** to meet the criterion

Thank you!

Please Contact Us:

Kazuki Takeda

takeda.kazuki.47s@st.kyoto-u.ac.jp

Shoji Kajita

kajita.shoji.5z@kyoto-u.ac.jp

We welcome your participation!!

