

RAON^z

Handong Team Meeting Archiving and
Exchange Web Platform



Table of contents

01

Introduction

02

**Technical Stack
and Framework**

03

System Design

04

**Development
Steps & Result**

05

Demonstration

06

Q&A



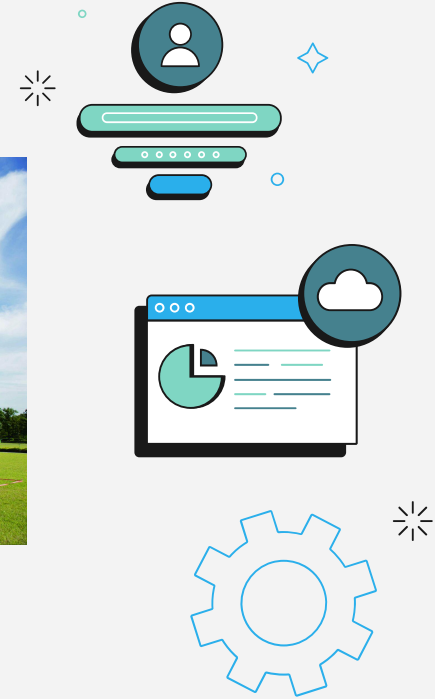
01

Introduction

Handong Team Meeting

Handong RCs

Handong University hosts a variety of Residential Colleges (RCs), within which numerous team meetings are regularly held. These meetings play a crucial role in fostering community formation and interaction among students. **However, the current system faces several significant challenges.**



Problem Definition

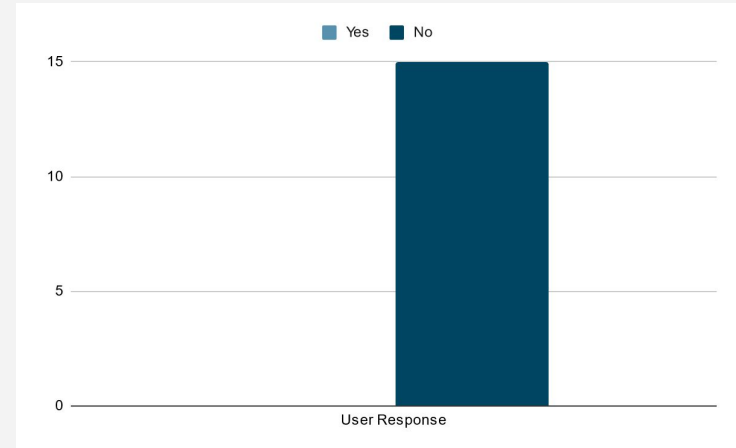
- **Insufficient communication within and between teams and RCs at Handong University** inhibits the establishment of a community-focused culture, hindering overall development.
- **Lack of guidance for team leaders** results in leadership and management challenges, diminishing the efficiency and effectiveness of team activities, and reducing student engagement.
- **Inadequate preservation of materials and information** from team meetings due to the absence of a proper archiving system poses significant obstacles to long-term project management and material reuse.

Interview Result from HGU Students

- Interviews were conducted to 15 Handong students.
 - Are the team meeting contents are shared well?
 - Are there enough information and guidance for team meeting executives?
 - Would you be interested in using a school service that records and shares team meetings?

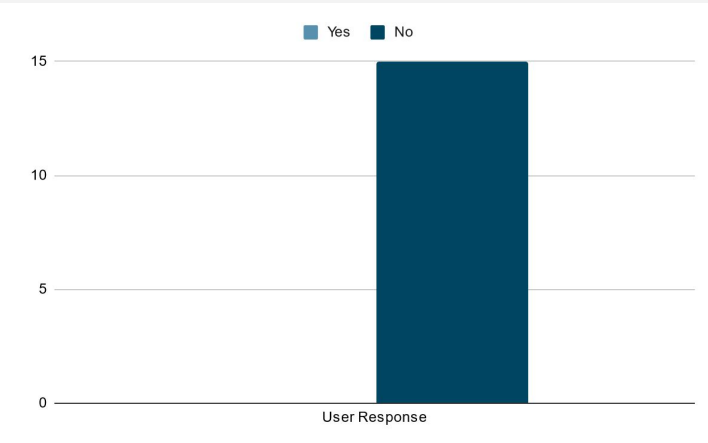
Interview Result from HGU Students

**Are the team meeting
contents are shared well?**



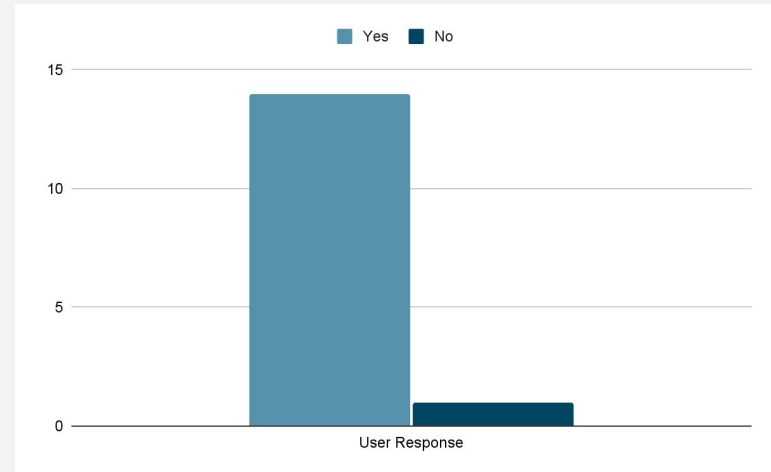
Interview Result from HGU Students

Are there enough information
and guidance for team
meeting executives?



Interview Result from HGU Students

Would you be interested in using a school service that records and shares team meetings?



Requirement Analysis

Main Requirements from Interviewees

- Post uploads and shares through the team
 - Share team meeting contents
 - Team meeting matching feature
 - Team photo gallery
 - Scrap and archiving feature
- RC / Team-based ranking system

RAONZ: Handong Team Meeting Archiving and Exchange Web Platform



We propose a web platform to address the communication challenges within and between teams or RCs at Handong University, **facilitating exchange and preserving meeting materials.**

This platform will support the student support team and team executives in **fostering a stronger team culture and developing leadership skills university-wide.**

Project Organization



Name	Email	ID	Role
Seokjae Ma	21800239@handong.ac.kr	21800239	Project Manager
Donggyu Kim	22000063@handong.ac.kr	22000063	Scrum Master
Sechang Jang	21900628@handong.ac.kr	21900628	Documenter
Junhyeok Choi	21900764@handong.ac.kr	21900764	Developer
MinSeo Lee	22100503@handong.ac.kr	22100503	Developer

Project Description

Document upload feature	Provides the ability to upload and store all materials generated during team meetings.
Login system	Allows easy login via Google login, with three types of permissions: system administrator, student service team, and student.
Bulletin board feature	Offers a bulletin board format for sharing information and facilitating interaction between teams, including team meeting matching service.
Team meeting matching service	Make a matching system to encourage communication between and within RCs.
Information dissemination page	Provides a page for efficiently disseminating important information related to team meetings.
Security	Thorough system construction is necessary for the security of user information and data.
UI/UX	Consideration should be given to intuitive and user-friendly UI/UX that allows users to conveniently utilize the platform.
Scalability	The system design should consider scalability to easily accommodate additional features in the future.



02

Technical Stack and Framework

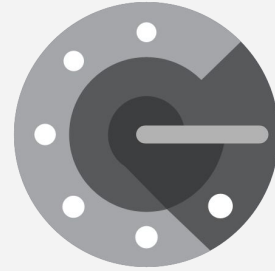
Technical Stack and Framework

- **Frontend Development: React**
- **Backend Development: Spring Boot**
- **Database Management: MySQL**



Technical Feature

- **Google Authentication 2.0**
- **Spring Security**



SCM & CI

- **Git & GitHub**

- distributed version control system



- **Jenkins**

- continuous integration and continuous delivery (CI/CD).



Static Code Analyzer

- **SonarQube**



- static analysis to detect bugs, code smells, and security vulnerabilities

- **FeeDat**

- static bug detection tools by iteratively refining bug detection rules, resulting in the development of ten effective rules implemented in FeeFin

Testing Framework

- **Selenium as GUI Testing Tool**



- an open-source suite of tools for automating web browser interactions, enabling the testing of web applications across different browsers and platforms.

- **JUnit**

JUnit

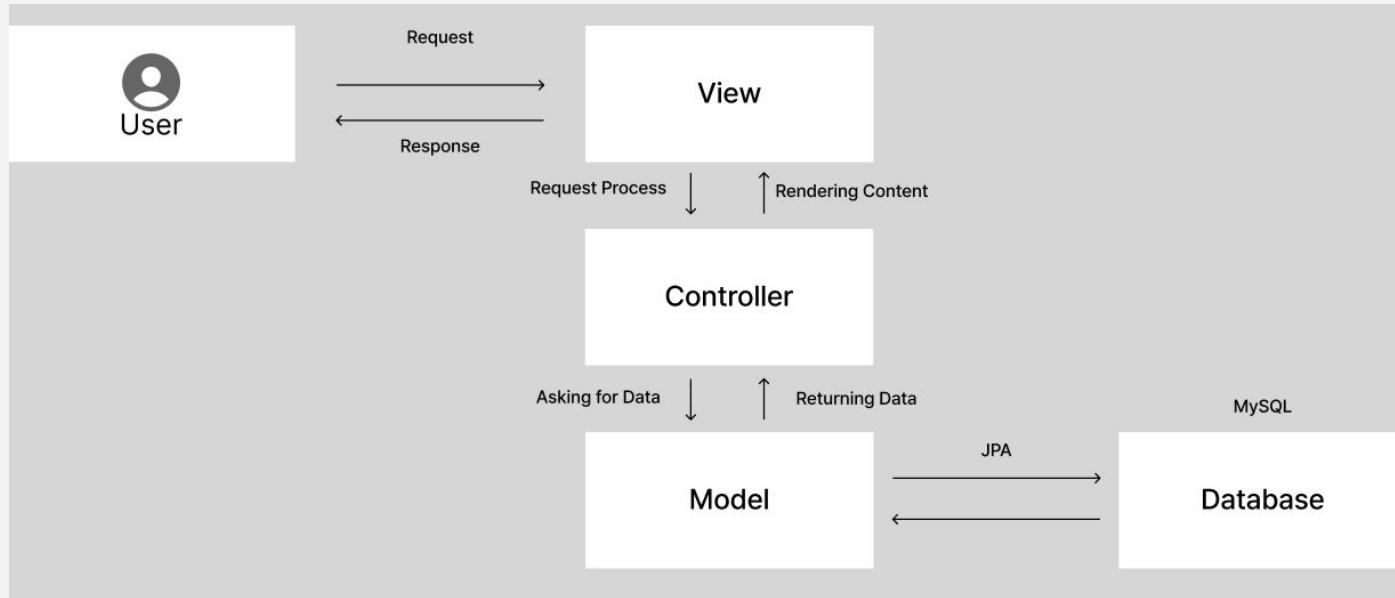
- an open-source framework for Java programming that provides annotations and assertions to simplify unit testing, allowing developers to write and execute tests



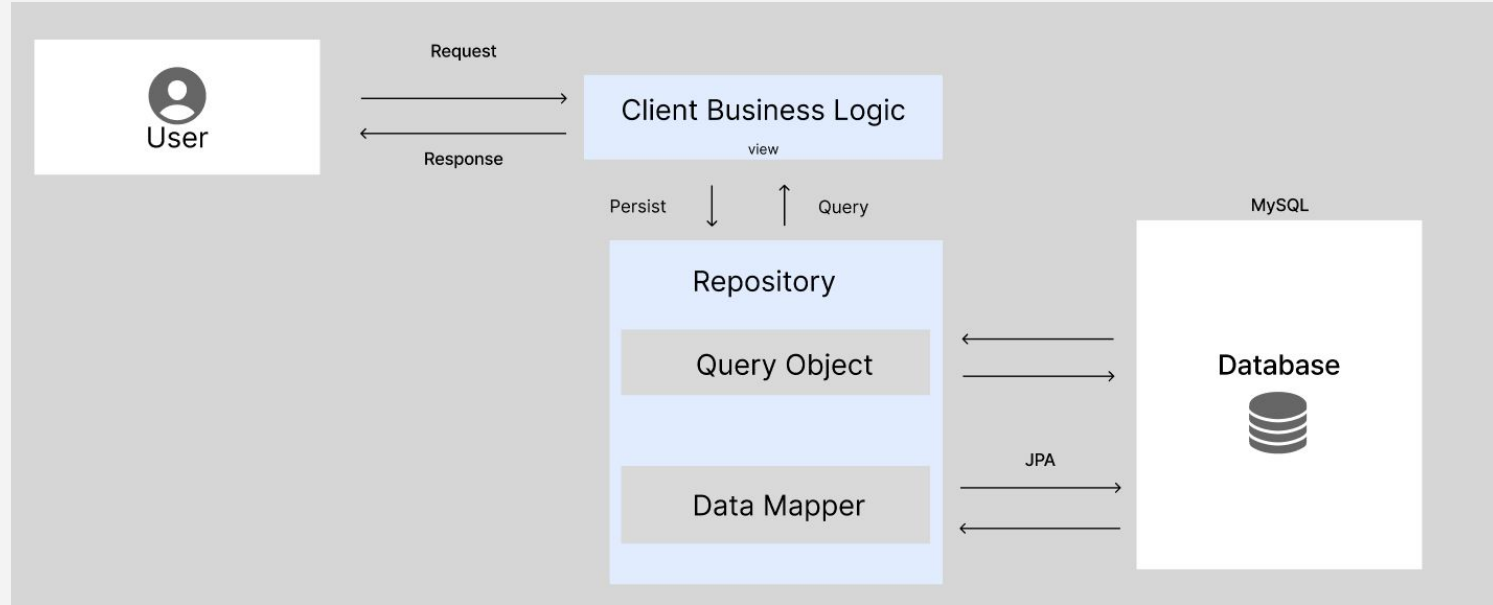
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System Design

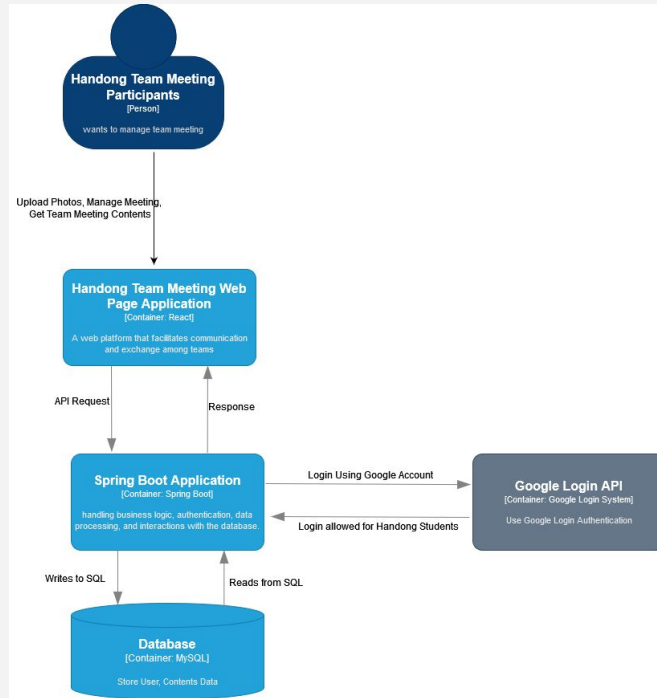
Architectural Pattern: MVC Pattern



Architectural Pattern: Repository Pattern



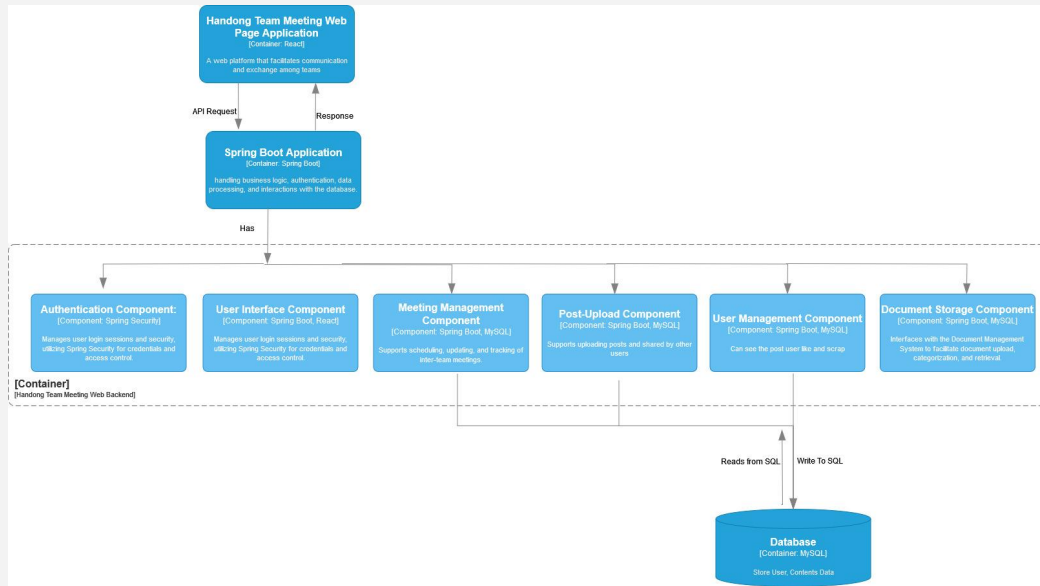
C4 Model: Container Diagram on C4 model



Web Application:

- **Frontend:** Developed with React, serves the dynamic content and interfaces directly with the users through their web browsers.
- **Backend:** Spring Boot application, handling business logic, authentication, data processing, and interactions with the database.
- **Database:** MySQL database, stores user data, meeting records, and archived documents.

C4 Model: Component Diagram on C4 model



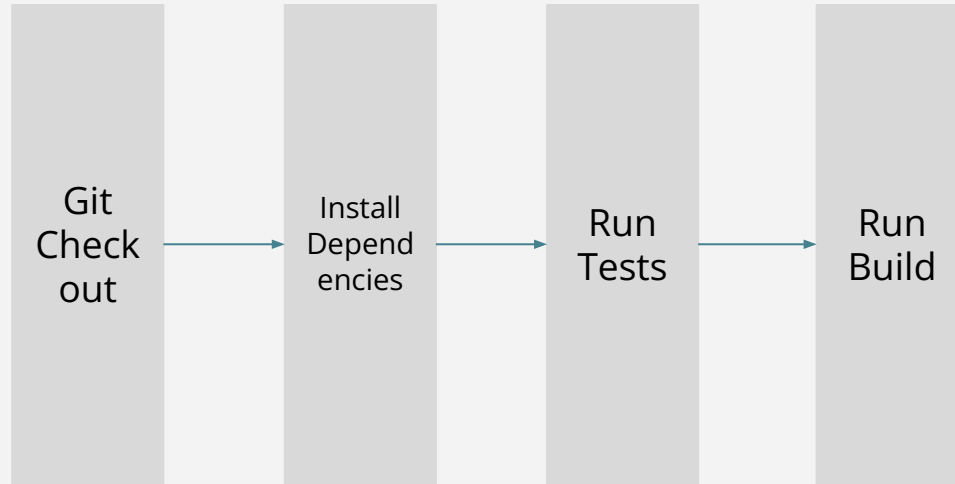
- **User Interface Component:** Handles the rendering of the user interface and user interactions.
- **Authentication Component:** Manages user login sessions and security, utilizing Spring Security for credentials and access control.
- **Meeting Management Component:** Supports scheduling, updating, and tracking of inter-team meetings.
- **Document Storage Component:** Interfaces with the Document Management System to facilitate document upload, categorization, and retrieval.
- **Post-Upload Component:** Supports uploading posts and shared by other users
- **User Management Component:** Can see the post user like and scrap



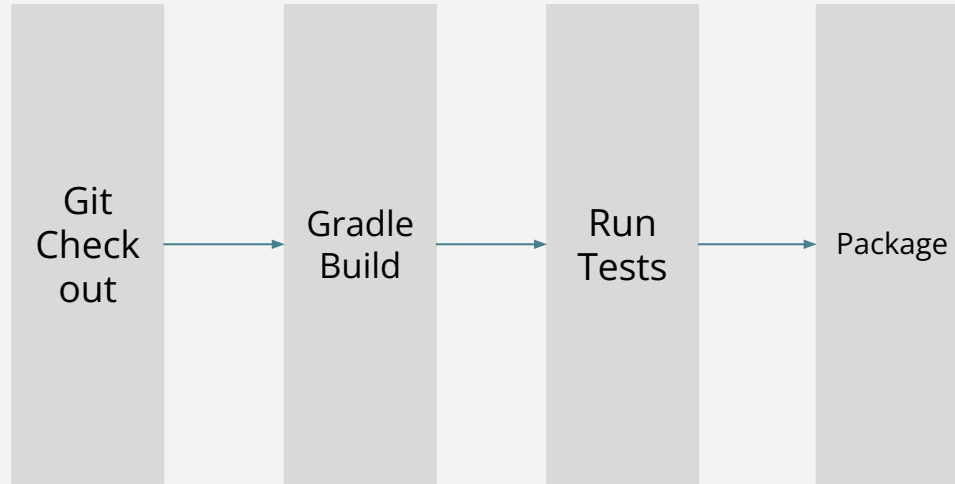
04

Development Result & Result

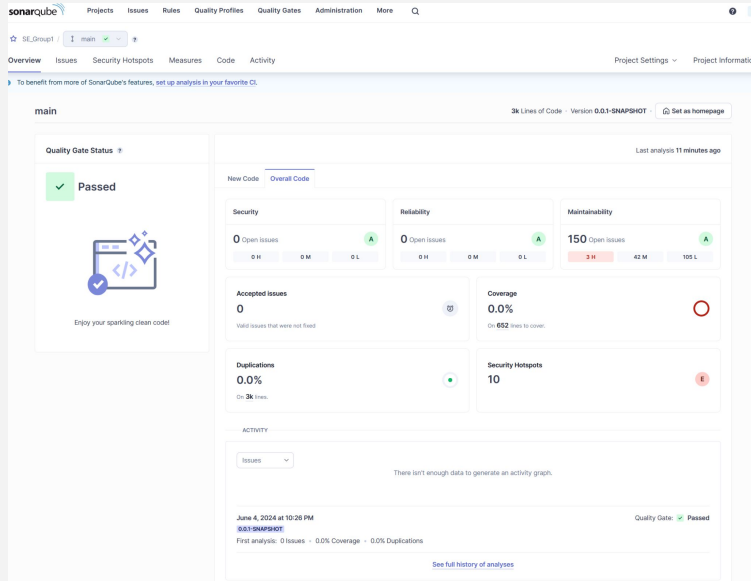
Jenkins Pipeline: FrontEnd



Jenkins Pipeline: Backend

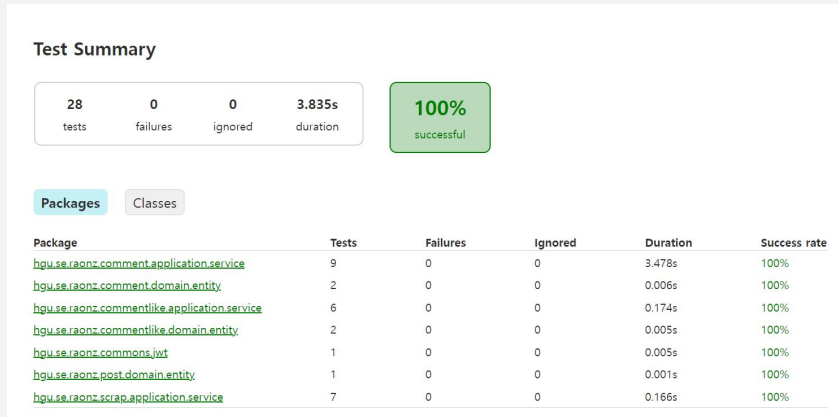


SonarQube Result



- "A" on security
- 0% of duplicated
- "A" on the maintainability
- "A" on the readability
- Most of the issues were false positives

JUnit Result



- All test case passed, including internal test cases
- Except on the case of having difficult to test functionality due to integration of DB

Selenium Result

```
teamMeetingMatching.py >...
1 from selenium import webdriver
2 from selenium.webdriver.common.by import By
3 from selenium.webdriver.common.keys import Keys
4 from selenium.webdriver.support.ui import WebDriverWait
5 from selenium.webdriver.support import expected_conditions as EC
6 import time
7
8 # Initialize the WebDriver (Make sure the path to your WebDriver is correct)
9 driver = webdriver.Chrome(executable_path='./chromedriver')
10
11 try:
12     # Open the web application
13     driver.get("http://localhost:3000/dashboard/teammatch") # Change URL to your application's URL
14
15     # Wait for the team matching container to load
16     WebDriverWait(driver, 10).until(
17         EC.presence_of_element_located((By.CLASS_NAME, "team-matching-container"))
18     )
19
20     # Verify the presence of the search bar
21     search_bar = driver.find_element(By.CLASS_NAME, "search-bar")
22     assert search_bar is not None, "Search bar not found."
23
24     # Perform a search operation
25     search_input = search_bar.find_element(By.TAG_NAME, "input")
26     search_button = search_bar.find_element(By.CLASS_NAME, "search-button")
27     search_input.send_keys("피규")
28     search_button.click()
29     time.sleep(1) # Wait for search results to update
30
31     # Verify the presence of the navigation buttons
32     nav_buttons = driver.find_elements(By.CLASS_NAME, "reference-nav")[0].find_elements(By.TAG_NAME, "button")
33     assert len(nav_buttons) == 2, "Navigation buttons not found or incorrect count."
34
```

- Selenium Example Code
 - You can check the test codes in our GitHub
- All test case passed

FeeDat Result

```
1 | =====  
2 ../BackEnd/raonz/src/main/  
3 =====  
4 # of all paths: 71
```

- No Bug



05

Demonstration



Thanks!

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