

2 Design Concepts

Design Concept

- Data Design

1.1 User account data

The user account is the identity created for coordinators and students in the system. The user account data includes personally identifiable information and authentication.

Coordinator

Field	Type	Null	Key	Default	Extra
id	int	No	PRI	NULL	auto_increment
username	varchar(30)	No	UNI	NULL	
email	varchar(128)	No	UNI	NULL	
password	varchar(256)	No		NULL	
create_date	Date	No		NULL	
update_date	Date	No		NULL	

Student

Field	Type	Null	Key	Default	Extra
id	int	No	PRI	NULL	auto_increment
username	varchar(30)	No	UNI	NULL	
profile	varBinary(Max)	No		NULL	
email	varchar(128)	No	UNI	NULL	
password	varchar(256)	No		NULL	
create_date	Date	No		NULL	
update_date	Date	No		NULL	
git_username	varchar(30)	Yes	UNI	NULL	
atl_username	varchar(30)	Yes	UNI	NULL	
jira_username	varchar(30)	Yes	UNI	NULL	

Team data includes the basic details about the team, and members.

1.2 Team data

Team

Field	Type	Null	Key	Default	Extra
team_id	int	No	PRI	NULL	auto_increment
team_name	varchar(256)	No		NULL	
description	varchar(256)	Yes		NULL	
project_id	int	No	MUL	NULL	
project_name	varchar(256)	No		NULL	

Team_member

Field	Type	Null	Key	Default	Extra
id	int	No	PRI	NULL	auto_increment
team_id	int	Yes	MUL	NULL	
student_id	int	Yes	MUL	NULL	

1.3 Report and Project Data

The report data includes the process quality, product quality and communication for each team, and the individual quality for each student.

Project data records the basic information about the project.

Project

Field	Type	Null	Key	Default	Extra
project_id	int	No	PRI	NULL	auto_increment
project_name	varchar(128)	No		NULL	
description	varchar(256)	Yes		NULL	
team_id	int	Yes	MUL	NULL	

Process_quality

Field	Type	Null	Key	Default	Extra
process_id	int	No	PRI	NULL	auto_increment
process_name	varchar(128)	No		NULL	
quality_report	varchar(256)	Yes		NULL	
team_id	int	Yes	MUL	NULL	

Product_quality

Field	Type	Null	Key	Default	Extra
product_id	int	No	PRI	NULL	auto_increment
product_name	varchar(128)	No		NULL	
quality_report	varchar(256)	Yes		NULL	
team_id	int	Yes	MUL	NULL	

Communication_quality

Field	Type	Null	Key	Default	Extra
communication_id	int	No	PRI	NULL	auto_increment
communication_name	varchar(128)	No		NULL	
quality_report	varchar(256)	Yes		NULL	
team_id	int	Yes	MUL	NULL	

Individual_contribution

Field	Type	Null	Key	Default	Extra
contribution_id	int	No	PRI	NULL	auto_increment
contribution_name	varchar(128)	No		NULL	

quality_report	varchar(256)	Yes		NULL	
student_id	int	Yes	MUL	NULL	

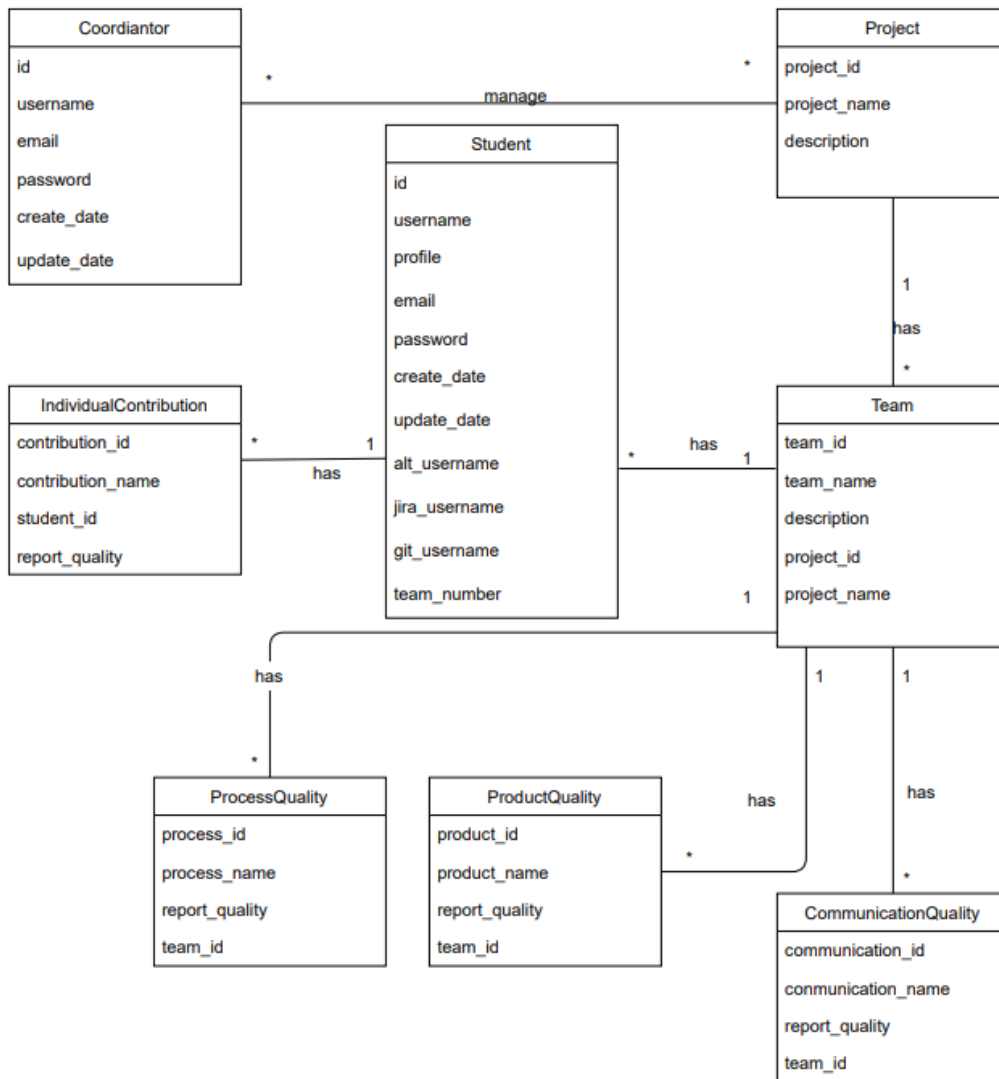
1.4 Use case diagram

The use case diagram shows the primary requirements of the system. Through the system, the coordinator can login, view and manage quality reports of all teams and students, configure projects with the help of the system. Use case diagram provides visual representation and help developers design the system from users' perspective.



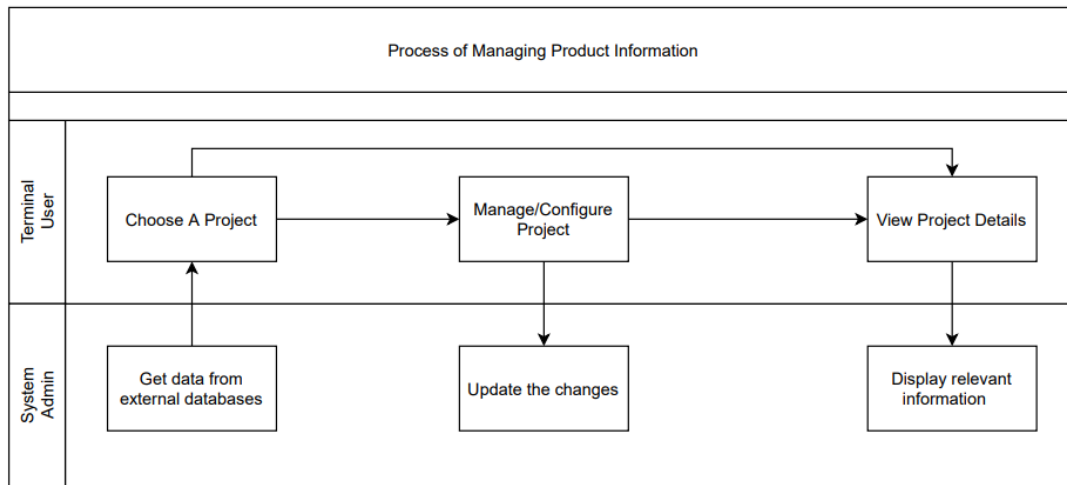
1.5 Domain Model

The domain model is a visual representation of a real situation object in the domain. It is used to refer to the area developers are dealing with. The graph below shows the basic information and the relationship between each class.



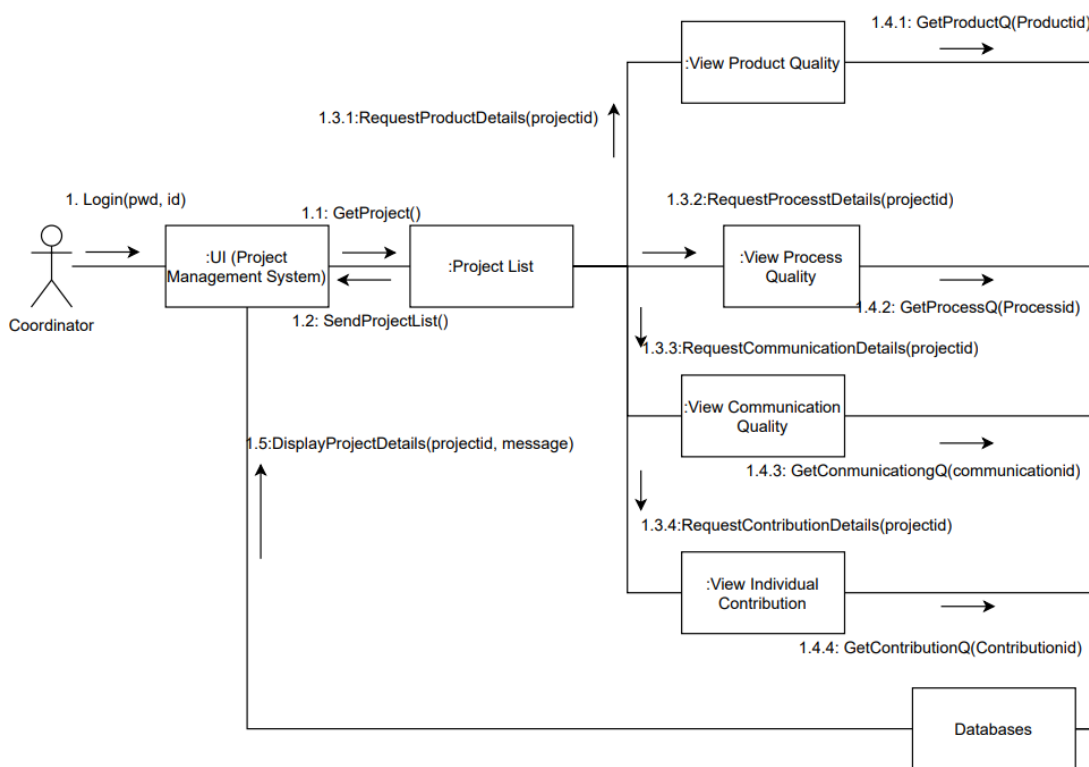
1.6 Process Diagram

The process diagram shows the process of the system operation. The interaction between terminal user and system admin is displayed.



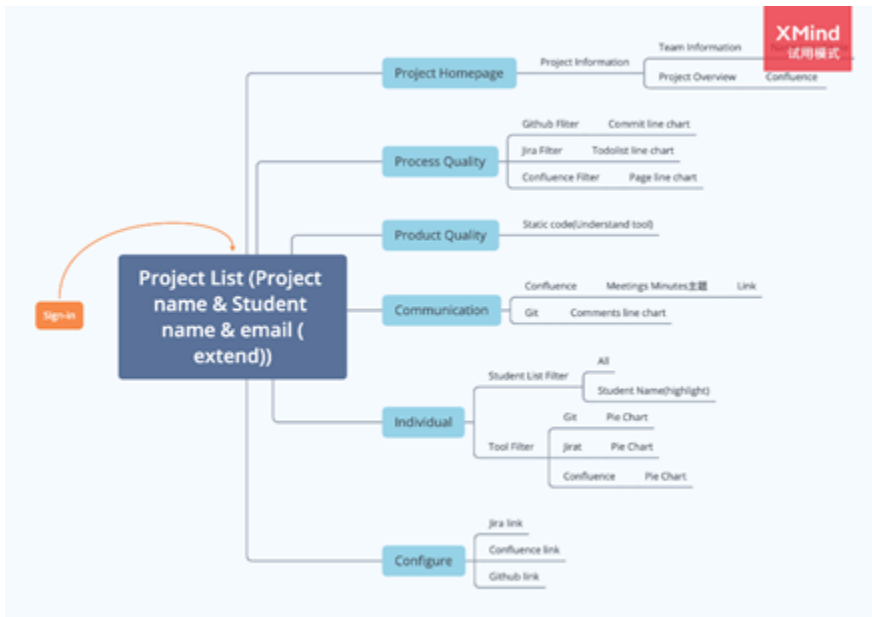
1.7 Communication Diagram

The communication diagram shows how the user, backend system and frontend system are communicating with each other and the information passed in each step.



• UI Design

User Interface can help users easily interact with the product. The aiming of the system design is to make the tools user-friendly, simple, and clear. The navigation bar on the left side illustrates the modules of the product which includes a homepage for coordinators and six project management modules for each project. The following below is the page structure of the product.



2.1 Coordinator homepage

The project list page shows all the projects that the coordinator is responsible for. Details of the project provide the information of confluence link and "Delete" buttons. The homepage also supports importing projects by a search bar.

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Home (C)

Logout

Homepage

PROJECT MANAGEMENT









Project Imported	Confluence Link	Operation
Motivational Modelling	https://confluence.cis.unimelb.edu.au:8443/display/Sample2	<button>DELETE</button>
Planimation	https://confluence.cis.unimelb.edu.au:8443/display/Sample4	<button>DELETE</button>
Software Resources for CIS subjects	https://confluence.cis.unimelb.edu.au:8443/display/Sample6	<button>DELETE</button>

2.2 Project overview

The form provides student information including student name, student profile, student ID and email address of the project.

Project Overview

COMP90082-2021-SM1-SP

Name	Profile	Student ID	Email Address
Boyang Sun		boyangs	boyangs@student.unimelb.edu.au
Chongjing ZHANG		chongjingz	chongjingz@student.unimelb.edu.au
Fengrui Zhang		fengrzhang	fengrzhang@student.unimelb.edu.au
Haoyu Qin		haoyuq	haoyuq@student.unimelb.edu.au
Jingyu Li		jingyu15	jingyu15@student.unimelb.edu.au
Jinzhe Shan		jinzhes	jinzhes@student.unimelb.edu.au
Sai Zhang		saiz	saiz@student.unimelb.edu.au
Fu Xie		xiefx	xiefx@student.unimelb.edu.au

2.3 Process quality

This part helps coordinators to evaluate the process quality of the project through Jira, Confluence, and Github. Different buttons present different charts of the tool, and the selected button is dark to let the user know which platform is on the screen. By clicking on the Github filter, coordinators can make a view of the line chart of commit times over time. Jira filter illustrates the line chart of items on the To-do-list. The confluence filter shows the line chart of the number of pages.



2.4 Product quality

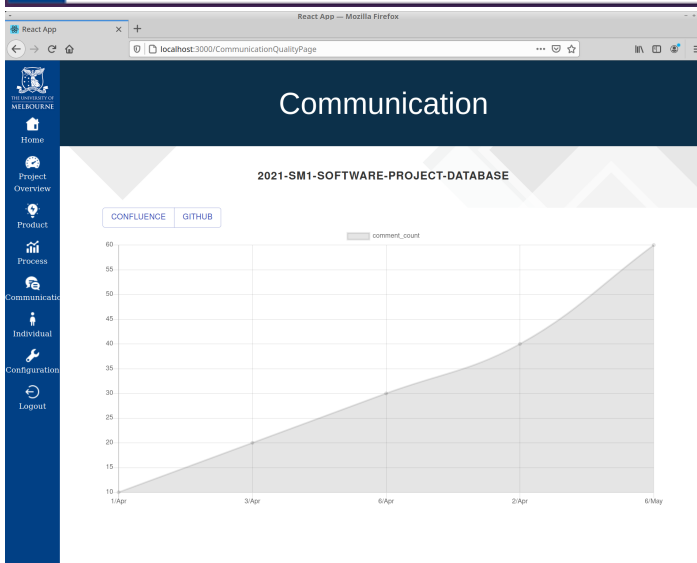
This page helps coordinators to evaluate the product quality based on static code analysis. Includes project name and a list of criteria that measures product quality.

Product Quality	
90014-TEAM3-DE-QUOKKA	
Metric	Number
Lines	60015
Classes	951
Files	495
Functions	3617
Comment Lines	22083
Comment Lines / Code Lines	0.32
Declarable Statements	7241
Executable Statements	59407

2.5 Communication

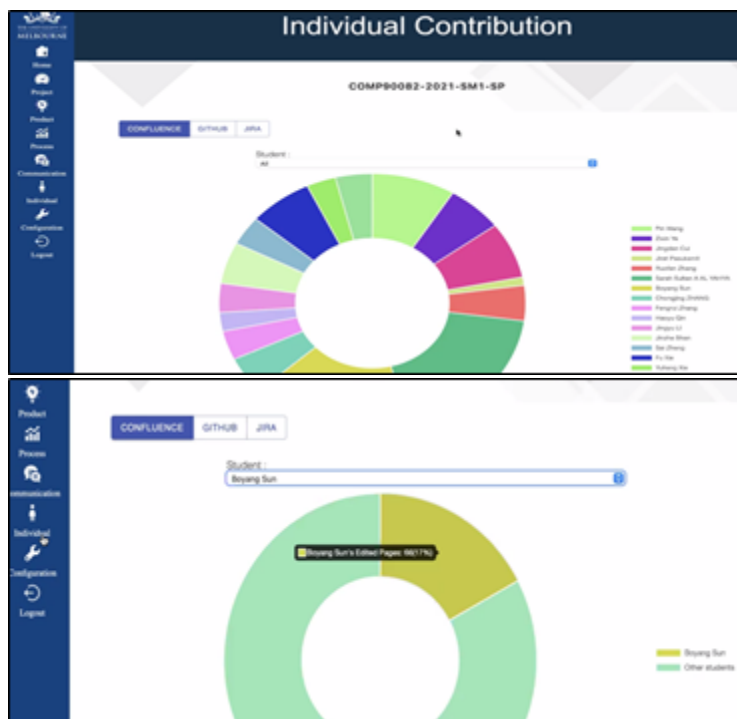
This page shows the activeness of communication on Confluence and Github. Check the Confluence button, it will show a list of every meeting with meeting time and meeting minutes, the cells of meeting minutes will be links that are able to be clicked. Check the Github card, it will show a line chart of the number of comments over time.

Communication	
COMP90082-2021-SM1-SP	
Meeting Name	Meeting Minutes
Meeting with client #1	https://confluence.unimelb.edu.au/8443/Spaces/communication/Spaces/1473118
Meeting Notes for 23rd March	https://confluence.unimelb.edu.au/8443/Spaces/COMP900822021SM1SP/Meeting-Notes-for-23rd-March
10 Meetings	https://confluence.unimelb.edu.au/8443/Spaces/COMP900822021SM1SP/10-Meetings
Meeting Notes for 28th March	https://confluence.unimelb.edu.au/8443/Spaces/COMP900822021SM1SP/Meeting-Notes-for-28th-March
Form and Meeting Notes on 28th March	https://confluence.unimelb.edu.au/8443/Spaces/communication/Spaces/1473118
Stand-up Meeting 18 March 2021	https://confluence.unimelb.edu.au/8443/Spaces/COMP900822021SM1SP/Stand-up-Meeting-18-March-2021
Stand-up Meeting 25 March 2021	https://confluence.unimelb.edu.au/8443/Spaces/COMP900822021SM1SP/Stand-up-Meeting-25-March-2021
Meeting Notes for 30th March	https://confluence.unimelb.edu.au/8443/Spaces/COMP900822021SM1SP/Meeting-Notes-for-30th-March
Meeting with Client #2	https://confluence.unimelb.edu.au/8443/Spaces/communication/Spaces/1473118
Meeting Notes for 1st April/Workshop Stand-up Meeting	https://confluence.unimelb.edu.au/8443/Spaces/communication/Spaces/1473118




2.6 Individual page

This page helps coordinators to see the proportion of individual contribution directly. It has a drop-down option bar that has a list of student names to select. The button group of three platforms represents Github, Jira, and Confluence. Check the drop-down option bars to see every student's contribution in the three channels. The contribution is shown in a pie chart. The pie chart shows the contribution of the selected student.











2.7 Configuration

This page allows the user to check and update the link of Github, Jira. Paste the link of the two channels on this page to get all the information easily on other pages.



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 Home
 Project
 Product
 Process
 Communication
 Individual
 Configuration
 Logout

Project Configuration

COMP90082-2021-SM1-SP

1

Informational Notes

You may need to wait for a few minutes before you can view the data after finishing the configuration

Jira Url:

e.g. https://jira.cis.unimelb.edu.au/8444/projects/igproject?key=summary

Git Url:

e.g. https://github.com/username/repository-name

Git Username:

Git Password:

SUBMIT

2.8 Login

This page is the entry page to an SP project that requires user identification and authentication, performed by entering a username which is an email address and password combination.



Welcome to SP

LOGIN

Username or Email

11111@student.unimelb.edu.au

Password

11111111

LOGIN



Welcome to SP

authentication failed

LOGIN

Username or Email

11111@student.unimelb.edu.au

Password

11111111

LOGIN