COMP2003HK Computing Group Project (22/AY/AUNS/M) - Group 9
Natural Science Survey System

Initial Project Plan

Group Members:

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GitHub Repository: https://github.com/hkuspace-pu/project-submission-group-9

Project Vision

Hong Kong Bird Hub (HKBH) is a cross-platform online system which provides instant access to a database of bird observations. Whether you are a scientist, researcher or amateur naturalist, HKBH is a user-friendly application to keep records of species conveniently, safely and securely. It is also fun for the general public to use HKBH to share their bird observations while a love-to-nature message is inspired as everybody participates. Unlike other applications, all information submitted to HKBH is approved before being published to the general public.

Project Objectives

- Surveyors can record and submit a record using any device within 5 minutes.
- Moderators can approve an observation submission within 2 minutes.
- Researchers can find the species they need using the search function within 5 seconds.
- The user can register a new account with the system within 2 minutes.
- The user can log in to the system within 5 seconds.

User Stories

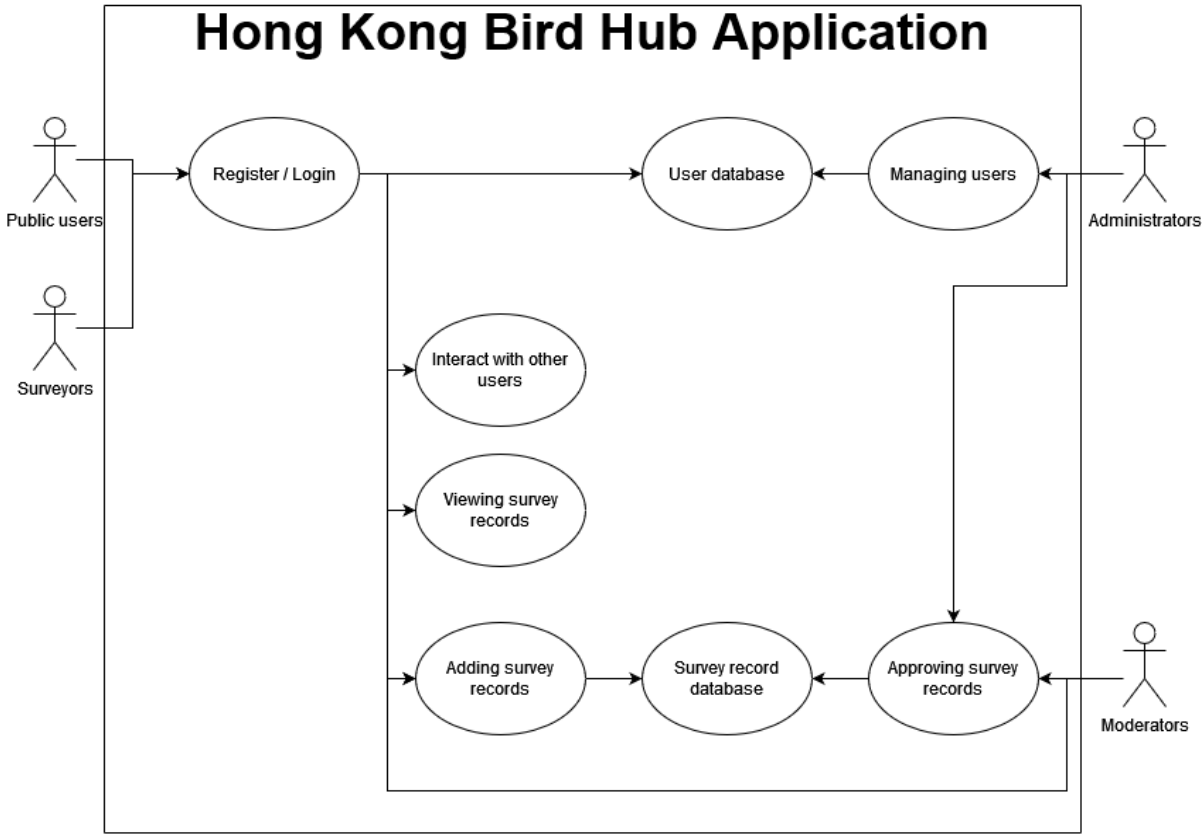
As a guest user, I wish to:
- Register and login into the system
- Add and discover survey records
- Interact with other users
- Access the service through different devices

As a surveyor, I wish to:
- Add survey records without needing approval from moderators
- Export survey records data

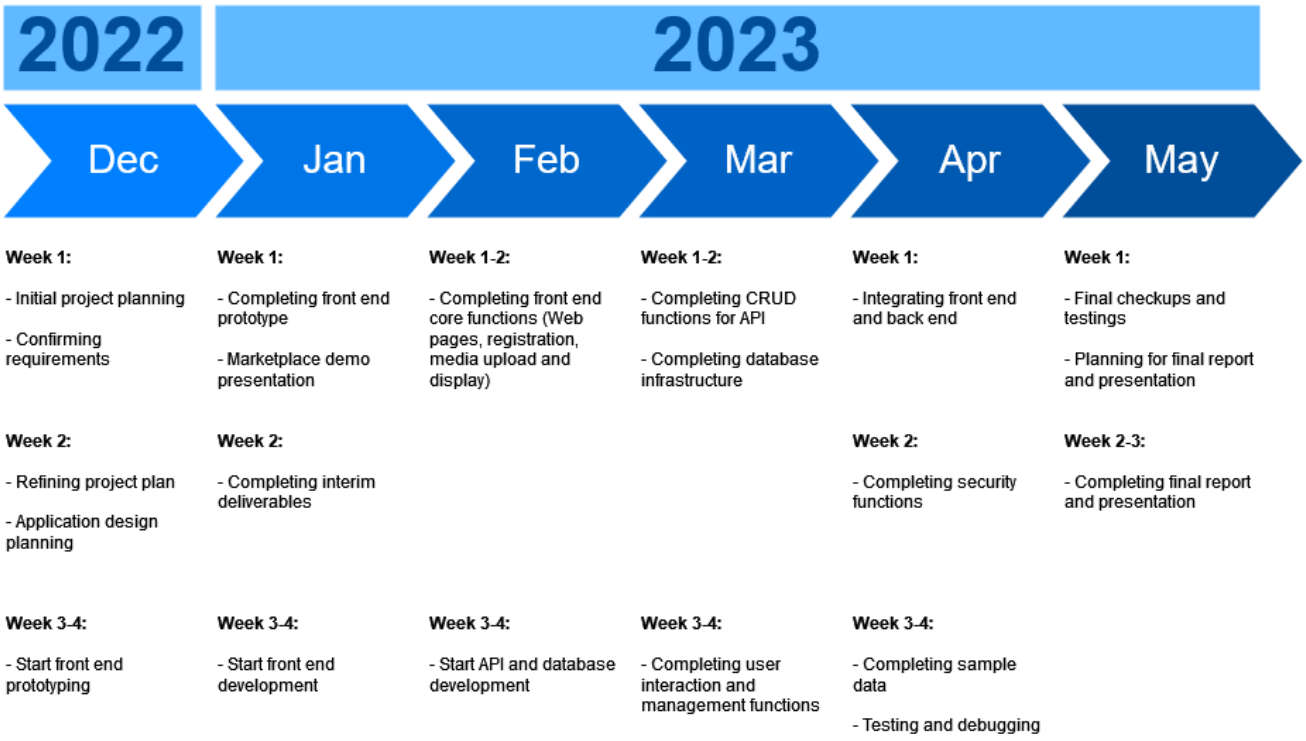
As a moderator, I wish to:
- Approve survey records from guest users
- Manage survey records with full permissions (i.e., add, edit, delete, export)

As an administrator, I wish to:
- Manage survey records with full permissions (i.e., add, edit, delete, export)
- Manage user account status (i.e., banning, changing roles, deleting)

Use Case Analysis



Initial Sprint Plan



Risk Management Plan

Please find below the probability and impact matrix we used for risk estimation.

Probability and Impact matrix					
Prob. \ Impact	Trivial	Minor	Moderate	Major	Critical
Rare: This will probably never happen	Low	Low	Low	Medium	Medium
Unlikely: Do not expect it to happen	Low	Low	Medium	Medium	Medium
Possible: It might happen	Low	Medium	Medium	Medium	High
Likely: It will probably happen	Medium	Medium	Medium	High	High
Very likely: Will undoubtedly happen	Medium	Medium	High	High	High

Classification	Description
Low	No need to elaborate on a response. This is an accepted risk.
Medium	Prepare a quick response. Watch triggers.
High	Prepare a detailed response. Watch triggers very closely.

Response types	Description
Escalate	Escalate the risk to a higher authority: Client, etc.
Avoid	Eliminate the cause of risk
Mitigate	Reduce the probability or impact of risk
Accept	Contingency plan for risk
Transfer	Have a third party take on responsibility for risk

We can estimate the probability of each risk based on past project experience and consider the impact on the project.

Risk	Probability of occurrence	Impact	Impact level	Classification	Response types	Response description
Team member is sicked	Possible	The development could be delayed	Major	Medium	Avoid	We aim to have a work-life balance among the team members to maintain good health.
The software developed are being hacked by hackers	Unlikely	Potentially make the whole system down.	Critical	Medium	Mitigate	Host our software application on the high-security cloud server platform.
Poor time management	Likely	Possible stuck and delay	Moderate	Medium	Mitigate	Try to monitor and remind each team member to follow our planned timeline.
Data loss due to any hardware or software failure	Unlikely	Loss of work done.	Major	Medium	Avoid	Setup manual and automatic backup for all the project documents and code.
The client will request correcting some bugs or adding features, not in the	Likely	Client will be unsatisfied with bugs	Major	High	Accept	Depending on the issue size, we can do a favour to the client. But the client should know that it's a favour
Developing the wrong software functions	Possible	Possible stuck and delay	Major	Medium	Avoid	Having better communication with clients by using user surveys, prototyping, etc.
Developing the wrong user interface	Possible	May need to redesign the user interface	Critical	High	Avoid	Having better communication with clients by using user surveys, prototyping, etc.
Real-time performance problems	Possible	Bad user experience	Moderate	Medium	Mitigate	Software tuning and server optimisation.
Not enough communication within the team members	Likely	Misunderstanding issues may occur	Major	High	Mitigate	to communicate with each other by all means actively
Other team members will be on vacation or leave for some reason	Possible	Possible stuck and delay	Major	Medium	Mitigate	We may need to re-assign the tasks or recruit another member.
Late changes to requirements	Unlikely	Possible some re-work	Moderate	Medium	Escalate	Discuss with key stakeholders if necessary.

Communication Plan

Action items	Responsible	Recipient(s)	Method / Channel	When / Frequency
Request client feedback	Scrum Master	Dr Ivy Wong	Meeting / Email	At the end of the sprint At the end of the project
Set the status meeting and its agenda	Scrum Master	Team members	Zoom / Whatsapp	Weekly
Collaborate with the client on GitHub to define and validate project tasks	Technical Lead	Client's Team Team members	GitHub	As needed
Report risks and project blockers	Scrum Master	Dr Ivy Wong	Meeting / Email	As needed
Functionality testing and review	Product Owner	Team members	Zoom / Whatsapp	At the end of the sprint
Sprint Review	Technical Lead	Team members	Zoom / Whatsapp	At the end of the sprint