Pandemic Pal

Terms of Reference

Team Explorer (ICBC 10)

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Version 0.1

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Project Information

The goal of the project is to design and implement Pandemic Pal, a responsive and mobile-friendly, web-based application that helps ICBC staff engage and respond to flexible work hours. Its features include allowing staff to reserve a desk/office for any number of specified days. This app will also provide staff with notifications and wellness tips via social media type features. Lastly, staff may also make requests to manage physical in-office mail using the app.

Objectives and Scope

The core services that Pandemic Pal should implement are divided into three main categories described below. Each category may also detail some stretch goals as well as objectives that are out of the scope of the project.

1) **"Where I am working"**

   Main goals

   - A user interface enabling reservation of specific physical desks to work at, in specific property locations, for any day up to 6 months in advance, for employees scheduled at their home office
   - An aggregated view of the number of ICBC employees registered to be onsite for any given date, and on each respective floor/building
   - Visualization of floor plans and correspondence between the desks in them to desk name codes.
   - Floor plans and locations of property are updatable by administration
   - An interface to a calendar is to be provided, for ease of use

   Stretch goals

   - ICBC API[1] documentation for retrieval of staff id and name
   - Generation of individual Microsoft Outlook (version 16) calendar entries for the days an individual is registered
   - Improve application usability by allowing users to reserve desks by selecting regions of a floor plan image

   Not in Scope: automatic detection of workspaces from floor plans uploaded by administration, registration of new buildings into the system, allowing multiple employees to schedule part-time use of the same desk on the same day

2) **"Staying connected"**

   Main goals

   - A forum where users can posts of any topics such as pets, sports, music and etc. if created by the admin already
   - In the forums posted, other users can see and add more information and share their similar interests
   - There will also be forums that are related with COVID that provides updated COVID-19 news, Wellness tips and other important announcements
   - There will also be forums about the latest updates that are relevant for their locations they are using

[1] Application Programing Interface, for accessing other systems

- Administrator will be able to monitor and delete postings to make sure the forums are kept clean and are appropriate for safe work environment

Not in Scope: messaging system between users with similar interests, functionality that allows regular users to create topics, auto-generated COVID-19 updates and wellness tips (will be fetched externally)

3) **"Mail Management Concierge"**

Main goals

- Tracking of physical mail and parcels arriving at ICBC sites.
- Employees to whom this mail is addressed may request help when they are not physically present, including "hold", "forward", "open", and "closed" instructions..
- Administration (and the employee it is relevant for) can view, act on, and provide feedback on the request.
- Request parameters include: requestor name and contact info, location, instruction type, request completion date, and status ("new"/"work in progress"/"closed").

Not in Scope: indication of mail and parcels arriving to ICBC to be claimed, tracking when mail or parcels have arrived

Constraints

The end product is expected to run within the Microsoft Edge desktop browser and the Safari mobile browser. Additionally, Pandemic Pal may not incorporate any specific MYSQL[2] component that is not portable to other databases. Pandemic Pal is to allow for concurrent usage of up to 50 users at peak times, with expected average use of 2 or 3. Pandemic Pal is to handle up to approximately 1000 peak live active registrations in the system, with expected average volumes around 300. High system performance is to be maintained by use of a DBA[3] script to archive old data.

Assumptions

We assume ICBC will provide access to servers, which will host the application, and databases to store any necessary information.

Dependencies

The implementation of the feature for the retrieval of staff id / name would require dependencies on ICBC API documentation.

[2] My Structured Query Language, a database technology
[3] Database administration

Cost

Because the technologies we plan to use are completely open-source, the cost of coding and implementing the web application is anticipated to be negligible. The cost of actually deploying and hosting the completed application and any associated database technologies is uncertain at this point and will require further consultation with the ICBC sponsors.

Timeline

Date	**Key Activity**
22nd January	Project Plan Soft Deadline
25th January	Project Plan Hard Deadline
28th January	Sponsor On-site
30th January	Requirements Soft Deadline
2nd February	Requirements Hard Deadline
6th February	Design Soft Deadline
9th February	Design Hard Deadline
23rd February	Sponsor On-site: Project Status Meeting
25th February	Sponsor On-site: Project Status Meeting
13th March	Test Plan Soft Deadline
16th March	Test Plan Hard Deadline
13th April	Sponsor On-site: System Delivery

Licensing

BSD:

- We want to allow ICBC to be able to use part of our code in their future systems.
- BSD as open source has no restrictions on the availability of the code or future behavior
- Permissive License

Key Artifacts / Deliverables

This project will consist of 8 key artifacts and will be delivered on these dates:

1. Terms of Reference - January 20th
2. Draft Project Plan - January 27th
3. Requirements Document - February 4th
4. Design Document - TBD
5. Project Status- TBD
6. Final Test Plan - TBD
7. Product Preview - TBD
8. System Delivery - TBD
    a. Source code and final executables
    b. System documentation / instructions

Risks

Cost Risks
Due to all development and planning efforts being coursework, as well as no vital matter of business being handled by this project, its development poses no budgetary or cost risk. However, due to the need of a webserver and a database for full deployment, additional costs incurred by using Pandemic Pal may scale with its deployment and usage within ICBC.

Implementation Risks
The implementation of Pandemic Pal is prone to having errors or bugs that may affect the functionality of the application. This will be mitigated through incorporating thorough system integration testing (SAT) and user acceptance testing (UAT) plans into our project. Furthemore, with the final system delivery we will be offering a two week warranty period to further resolve any issues that the user is facing.

Timeline Risks
The project spans a standard 14-week semester, with many members of the project team taking several courses concurrently. Hence there is a risk of not being able to meet all project “stretch goal” requirements. We will try to mitigate this with active communication between all parties involved and adhering to our proposed timeline.

Security Risks
Without security experts to verify the software, Pandemic Pal may expose vulnerabilities that can lead to compromise of the server or network it is deployed on. However, as it will not be built to directly rely on any existing ICBC systems, we expect this risk to be isolated in nature. Notably, interfacing with ICBC’s API should pose only as much risk as the API already posed itself.