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Inception Phase Status Assessment

ITC303 – Pharmacy Error Tracker (PET)

Version 1.0

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## Status assessment of overall project against aims

## What Team Pharmacon intends to do and why.

Team Pharmacon intends to create a single page web application to enable hospital pharmacists to enter errors that occur during the dispensing of medicines. Currently, a pharmacist will write an error on a piece of paper with the intention of entering the error into an Excel spreadsheet later when the spreadsheet is available. Errors vary in nature and include directions, dosage/strength, form (e.g. intravenous versus per oral), batch number, expiry date, type of medication, wrong patient, incorrect quantity and so on. The current method of recording errors mean that some errors are not recorded at all, others are forgotten to be entered in to the spreadsheet, and some are lost amongst other paperwork. This leads to incomplete records being kept of the errors that occur and provides limited reporting.

By creating a single page web application that is quick and easy to use, Team Pharmacon intends to provide the pharmacists with a good alternative that will enable the capture of all errors by all users. This will provide pharmacists with a better indication of how, why, or when errors tend to occur. A single page web application based on the cloud, will have the bonus of not being platform dependent, allowing users to the flexibility to use various devices to enter errors.

The application will enable the user to create various forms of visualisations (graphs, charts, reports, etc.) that will enable quick analysis of entered data. These visualisations can be shared with known contacts via email.

## How Team Pharmacon intends to complete the project.

As Team Pharmacon have concerns that they will be able to deploy software on a client’s hardware directly, it has been decided to create a single page web application that will be based on the cloud. The added benefit for this type of application is that the system will not need to adapt to legacy systems. The architecture will need to be:

* Robust and store data securely without significant loss
* Flexible to allow the user to customise the error entry form to suit their needs
* Responsive while operating from a cloud server

To meet these criteria, Team Pharmacon intend to use a few key software resources, these being:

* Vue.js HTML/JavaScript framework
* MySQL database software
* Metabase data visualisation software

Vue.js HTML/JavaScript framework will provide the team with software required to create a user-friendly interface where they will be able to complete the entering of errors quickly and easily.

MySQL database software will provide the secure database in which the data captured through the entry of errors will be stored.

Metabase data visualisation software will provide the user with a quick and easy way to create various types of graphs, charts and reports on the data held in the MySQL database. These visualisations can be saved for future comparison.

## Team Pharmacon has the skills and competency to achieve it.

The team members have various levels programming skills. All members have had experience with Java programming. Three members have skills in web design and two members have experience in using MySQL.

The decision to use the proposed software is a risk as members have not previously used Metabase or Vue.js. However, completing the Technical Competency Demonstrator indicates the team has the ability, and is acquiring the knowledge, to use the software.

Though the team members’ knowledge about and the use of the software is still in its infancy, continued sharing of how-to videos, tips and documentation, along with using the software will ensure that each member’s knowledge base increases quickly.

## Specific deliverables

The single page web application that the Team intends to deliver will have the following deliverables:

* User-friendly interface
* Three levels of authorisation limiting the functions available to users:
  + Staff Member – Add, search, update errors
  + Supervisor – Functions of Staff Member plus: Generate reports/visualisations; Send reports; Add, update, delete contacts
  + Administrator – Functions of Supervisor plus: Customise Error Entry form; Add, update, delete users.
* Flexibility – the Administrator can customise the Error Entry form to suit local needs. Database will be automatically updated with a new instance reflecting the changes made.
* Creation of various visualisations/reports using Metabase data visualisation software
* Ability of Supervisor or Administrator to send visualisations/reports to a contact or list of contacts via email.

## Current issues

The main issue currently is the knowledge and ability to use the various software held by the Team.

Completion of LCOM was longer than expected due to unforeseen circumstances. This extension will decrease the time available for LCAM. The team will attempt to complete the first iteration of the Inception Phase in a shortened period of time, by the existing end date in the project plan, which would get the project back on track.

Documentation completion is taking longer than expected and appears to be left to the end making it difficult to meet timelines. The team will try to complete documentation for items as they are completed. The team will also attempt to spread out the documentation requirements for LCAM over the duration of the Inception Phase.

Currently there is no easy way of setting up a local testing environment. To test code to see if it works, changes must be pushed to the server for testing. A solution to this issue is create a set of instructions which all team members can follow to enable testing of code locally.

## Status of risks and risk mitigation strategies

Knowledge of software – status is current. Team members are currently sharing various YouTube links through Discord.

Flow on effect of LCOM – status is current. Use the semester break time to start work on next iteration to ensure time lost does not influence future iterations to any degree.

Applications Metabase and Vue.js not meeting project needs – status is current. The ability of the Team to provide the Technical Competency Demonstrator for LCOM indicates that the software will meet project needs.

Ability to Customise Error Entry Form – status current. This risk will be analysed through the completion of various use cases required to meet LCAM. If the customisation proves to be difficult, this function will be dropped from the project.

Scheduling of Use Case development – status current. The scheduling of the use cases has been outlined in the [Project Plan](https://bitbucket.org/itc303teampharmacon/pharmacy_app/src/27768688badbe16223af242270ffe7b1d5be5b88/documents/Project%20Plan%20-%20Pharmacy%20Error%20Tracker.docx?at=master&fileviewer=file-view-default). Scheduling appears feasible and will be monitored through each iteration.

Team members not committing to version control – status current. Currently team members are committing changes to version control as per agreement. The risk remains current for the time being though chances of occurrence is very low. This risk will probably be closed in the coming weeks.

Loss of data due to system failure – status current. With team members committing to version control on a regular basis, the probability that loss of data will impact the project is low. As the team starts to build the application, it will become very important that commits happen at each break in development so that any data loss is limited if a team member has a failure.

Loss of knowledge through loss of team member – status current. Team members appear totally committed to this project. Unless something unforeseeable happens, the risk of a team member leaving or being asked to leave is negligible.

## Progress of overall project

Currently the project is one week behind its schedule due to the need to extend the time required to deliver LCOM. Team members will need to ensure that this delay does not impact the future iterations and milestones.

## Progress of specific aspects of project

[Project Vision](https://bitbucket.org/itc303teampharmacon/pharmacy_app/src/27768688badbe16223af242270ffe7b1d5be5b88/documents/Vision%20Document.docx?at=master&fileviewer=file-view-default) – this document has been completed and has been added to version control.

[Initial Requirement model](https://bitbucket.org/itc303teampharmacon/pharmacy_app/src/27768688badbe16223af242270ffe7b1d5be5b88/documents/System-wide%20Function%20Requirements.docx?at=master&fileviewer=file-view-default) – this document has been completed and has been added to version control.

[Proposed Architecture](https://bitbucket.org/itc303teampharmacon/pharmacy_app/src/27768688badbe16223af242270ffe7b1d5be5b88/documents/System%20Architecture%20Documentation.docx?at=master&fileviewer=file-view-default) – this document has been completed and has been added to version control.

[Risk List](https://bitbucket.org/itc303teampharmacon/pharmacy_app/src/27768688badbe16223af242270ffe7b1d5be5b88/documents/Pharmacy%20Error%20Tracker%20Risk%20List.xlsx?at=master&fileviewer=file-view-default) – this document has been completed and has been added to version control.

[Master Test Plan](https://bitbucket.org/itc303teampharmacon/pharmacy_app/src/27768688badbe16223af242270ffe7b1d5be5b88/documents/Master_Test_Plan.docx?at=master&fileviewer=file-view-default) – this document has been completed and has been added to version control.

[Initial Project Plan](https://bitbucket.org/itc303teampharmacon/pharmacy_app/src/27768688badbe16223af242270ffe7b1d5be5b88/documents/Project%20Plan%20-%20Pharmacy%20Error%20Tracker.docx?at=master&fileviewer=file-view-default) – this document has been completed and has been added to version control.

[Technical Competency Demonstrator](https://bitbucket.org/itc303teampharmacon/pharmacy_app/commits/ce0705b206c6c0ebc553ee7d3f9a5f3cfac3e150) – this has been completed and demonstrated to James Tulip during Review meeting held 11 April 2018.