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Software Requirements Specification and Technology Neutral Process Design

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v0.1

1 Vision

This projects aim is to provide a system to facilitate the administration of postgraduate publications, including but not limited to journal articles and conference papers. It should be able to store information on Users, Authors and Publications as well as employ a authentication system to ensure only specified parties within the system have access to operations on the stored information. The purpose of keeping track of the publications is, in part, to keep track of the DoE and UP weighted units earned by Users and/or authors. The reason for this is that these users/authors are required to publish a certain amount of units each year in order to determine pay, research funding, and maintaining their research position.

2 Background

Currently the publications are kept track of with a complicated excel spreadsheet. The purpose of the spreadsheet is to keep track of the status of publications in order to generate a report detailing the units earned by a researcher. There are many drawbacks to this system. It is tedious to maintain the spreedsheet. Data is spread over multiple sheets. The larger the database gets the slower it preforms. The information is displayed in a raw textual format which makes it a daunting task to sit through and analyse. It is difficult to add new functionality and change or enhance existing functionality. When pulling in data from multiple sheets it becomes difficult to debug the Lookups.

3 Architecture

3.1 Access Channels

This service should be accessable via web based clients. i.e. web based clients,mobile browsers. As well as an Android application.

3.2 Quality Requirements

- Reliability - The reports generated from the data provided to the system should be
- Scalability - It is estimated that there will be approximatly one hundred users. The system should be able to handle each user being active at the same time even though it is unlikly.
- Cost - Generating a report for all data in the system will be the worst case scenario in this system and thus have a high cost. The system should however be able to produce subsets of the report at a relativly low cost. For example a report for all researchers under a specific research group.

- Security - There should be strict access right applied to each of the subsystems and their components. This means that if a user, by definition of the buisness rules, is not allowed to access a certain functionality, then they will be denied access.
- Auditability - Actions performed on the system should be logged in a manner that would allow one to trace back the history of actions performed on the system.

3.3 Intergration Requirements

The system will operate in a standalone fashion. In the future, however, it may require intergration with google calender.

3.4 Architecture Constraints

Client has not provided any architecture constraints.

4 Functional Requirements and Application Design

4.1 Use Case Prioritization

4.1.1 Report Subsystem

Important:

- Report Subsystem

4.1.2 Research Group Subsystem

- Delete research group: Important
- Add research group: Important
- View research group: Important
- Add researcher: Important
- Update research group: Important

4.2 Use Case/Service Contracts

4.2.1 Report Subsystem

Pre-Conditions:

- User must be logged in to be able to generate a report.

Post-Conditions:

- A simple but comprehensive report must be generated in the format chosen by the user.
- The report must only include papers that the current user is associated with.

4.2.2 Research Group Subsystem

Pre-Conditions:

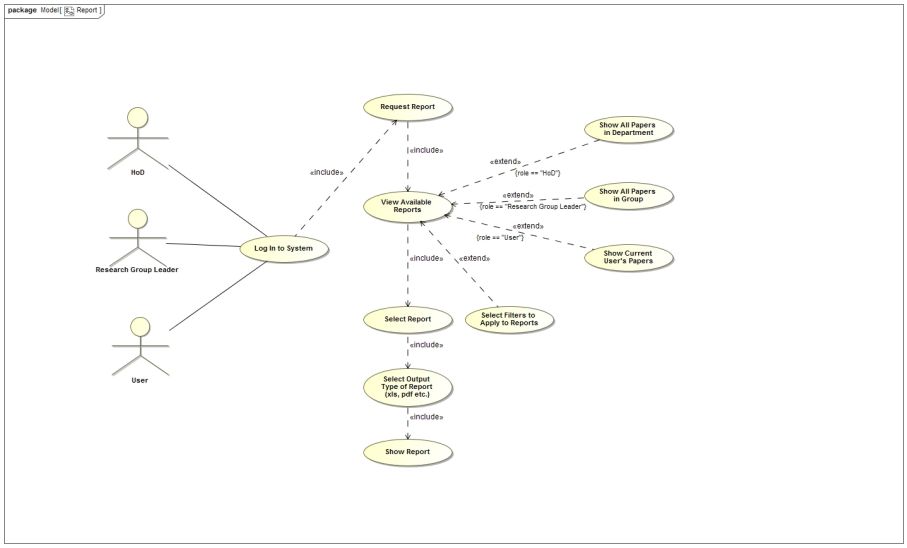
- Delete research group - A research group must exist on the report system database before it can be deleted.
- Add research group - No duplicate research group should exist on the system database.
- View research group - Admin or Research group leader must be logged on to the report system before viewing each of the research groups.
- Add researcher - No identical researcher should exist on the report system database.
- Update research group - The research group must exist on the report system database before it can be updated and this should only be performed by the admin or the research group leader.

Post-Conditions:

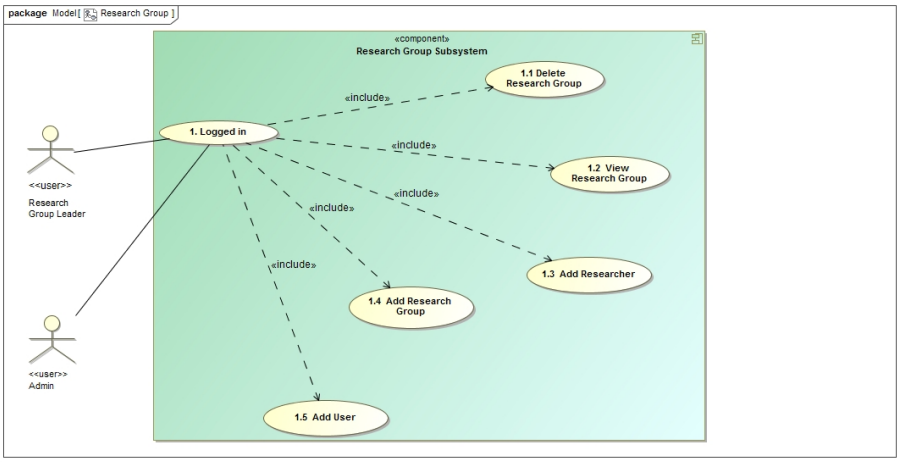
- Delete research group - Research group is deleted from the Report system.
- Add research group - A new Research group is created and added into the Report system database with no duplicate research groups.
- View research group - The profile of a research group is viwed, which shows all the members on that research group.
- Add researcher - A new researcher is added into a specified research group.
- Update research group -The research group is updated.

4.3 Required Functionality

4.3.1 Report Subsystem Use Case



4.3.2 Research Group Subsystem Use Case



5 Open Issues

- What does DoE stand for?
- Specifics with regard to the DoE and UP weighted contributions

- Researcher funding