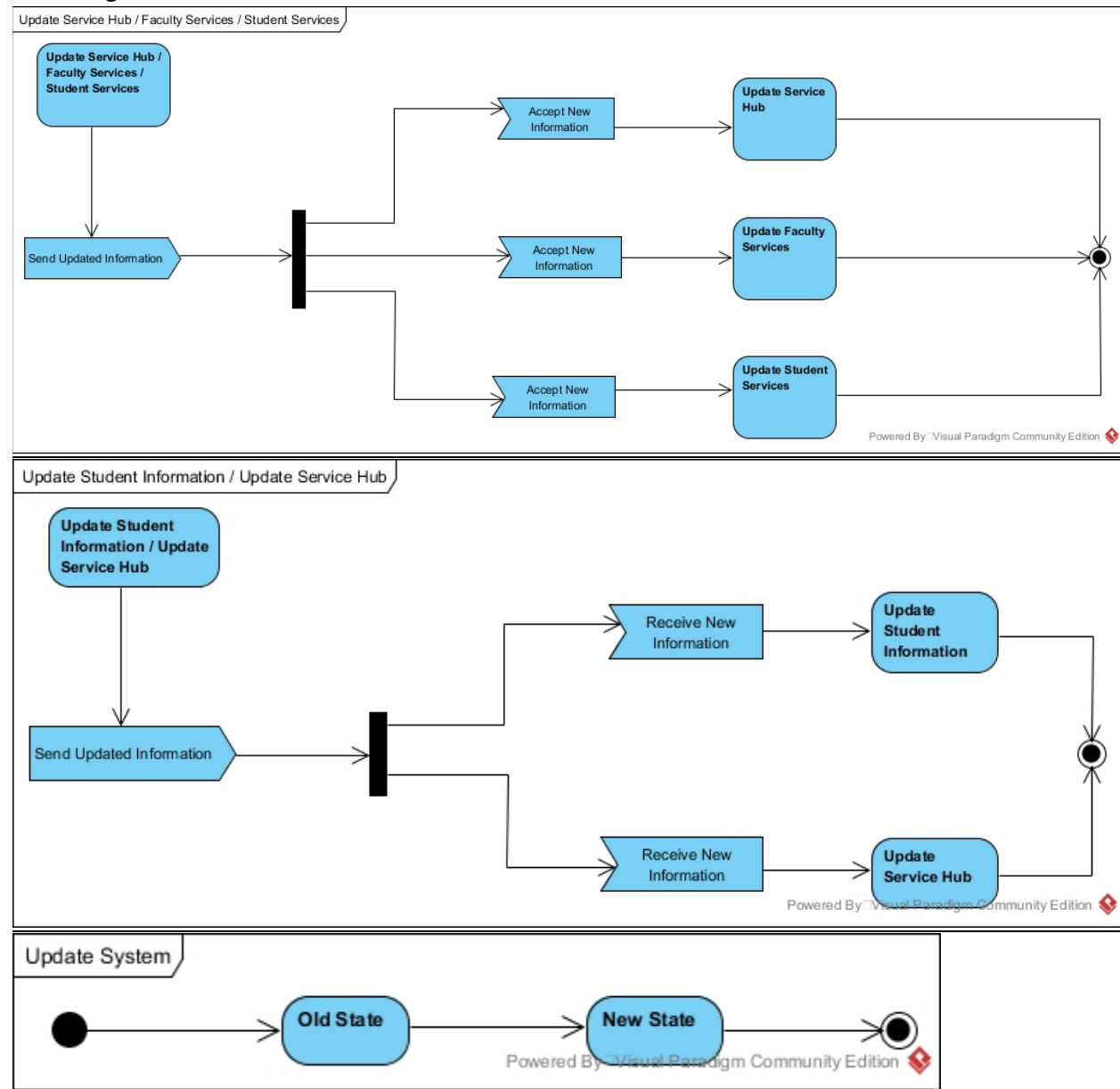
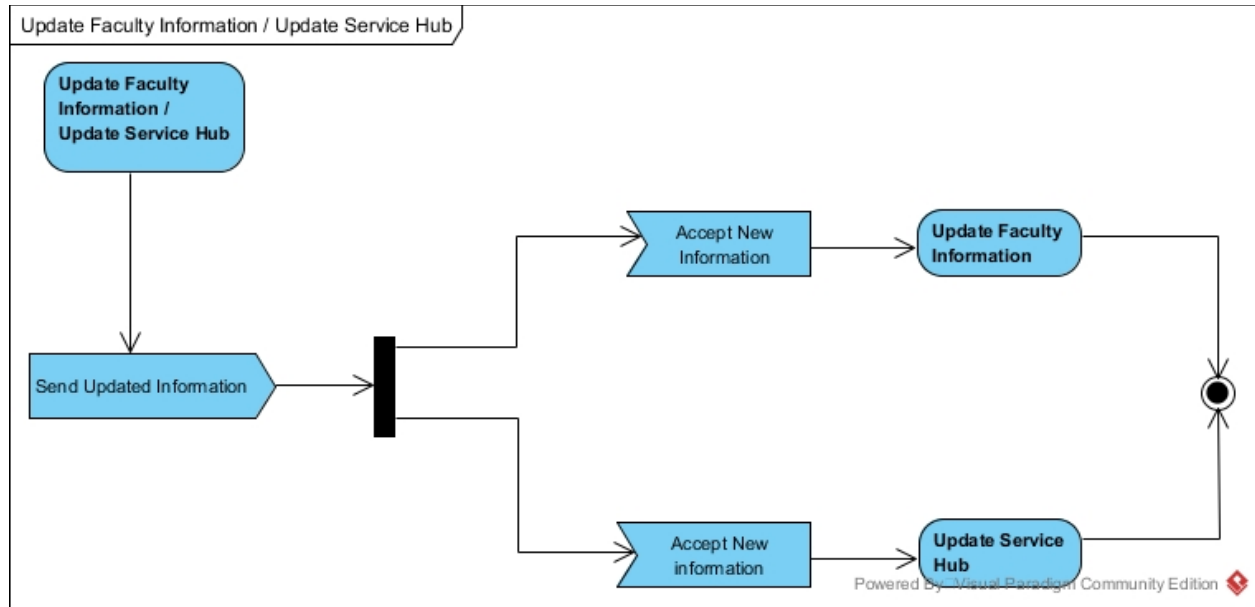


The diagram illustrates the following main processes:

- System Initialization:** Starts with a start node, leading to 'Clear Request to Login', 'Enter Username and Password', and 'Check Login Info'. A 'Wrong Login?' path loops back to 'Enter Username and Password'.
- User Authentication:** 'Check Login Info' leads to 'Check User Type'. If '[Student Login]', it proceeds to 'Student Login', 'Assign Student Info from Service Hub', 'Request Student Services', and 'Show Course and Account Options'. If '[Faculty Login]', it proceeds to 'Faculty Login', 'Assign Faculty from Service Hub', and 'Request Faculty Services'.
- Course Management (Faculty Path):** 'Request Faculty Services' leads to a decision 'Add / Remove Courses'. This branches into '[Add Course]', '[Remove Course]', and '[Edit Course]'. Each branch involves 'Check Pre-existing Courses', 'Display Courses to User', and 'Check Time Constraints'. The '[Add Course]' branch includes 'Prompt Search for available courses'. The '[Edit Course]' branch includes 'Check Pre-existing Courses' and 'Update All Course Changes'. The '[Remove Course]' branch includes 'Check Pre-existing Courses' and 'Update All Course Changes'.
- Course Management (Student Path):** 'Show Course and Account Options' leads to a decision 'Add / Remove Courses'. This branches into '[Add Course]', '[Remove Course]', and '[Edit Course]'. Each branch involves 'Check Pre-existing Courses', 'Display Courses to User', and 'Check Time Constraints'. The '[Add Course]' branch includes 'Prompt Search for available courses'. The '[Edit Course]' branch includes 'Check Pre-existing Courses' and 'Update All Course Changes'. The '[Remove Course]' branch includes 'Check Pre-existing Courses' and 'Update All Course Changes'.
- User Management:** 'Update All Course Changes' leads to 'Update Service Information', 'Prompt Search for available courses', and 'Update Service Information'. This leads to a decision 'Manage Users / Classes'. This branches into '[Manage Students / Faculty]' and '[Manage Classes / Courses]'. The '[Manage Students / Faculty]' branch includes 'Manage Students / Faculty', 'Create Student Account', 'Assign Student Info', 'Request Student Services', and 'Show Course and Account Options'. The '[Manage Classes / Courses]' branch includes 'Manage Classes / Courses', 'Add Course', 'Remove Course', 'Edit Course', 'Check Pre-existing Courses', 'Display Courses to User', and 'Check Time Constraints'.
- Finalization:** The process concludes with 'Update Information' and 'Update Service Information'.

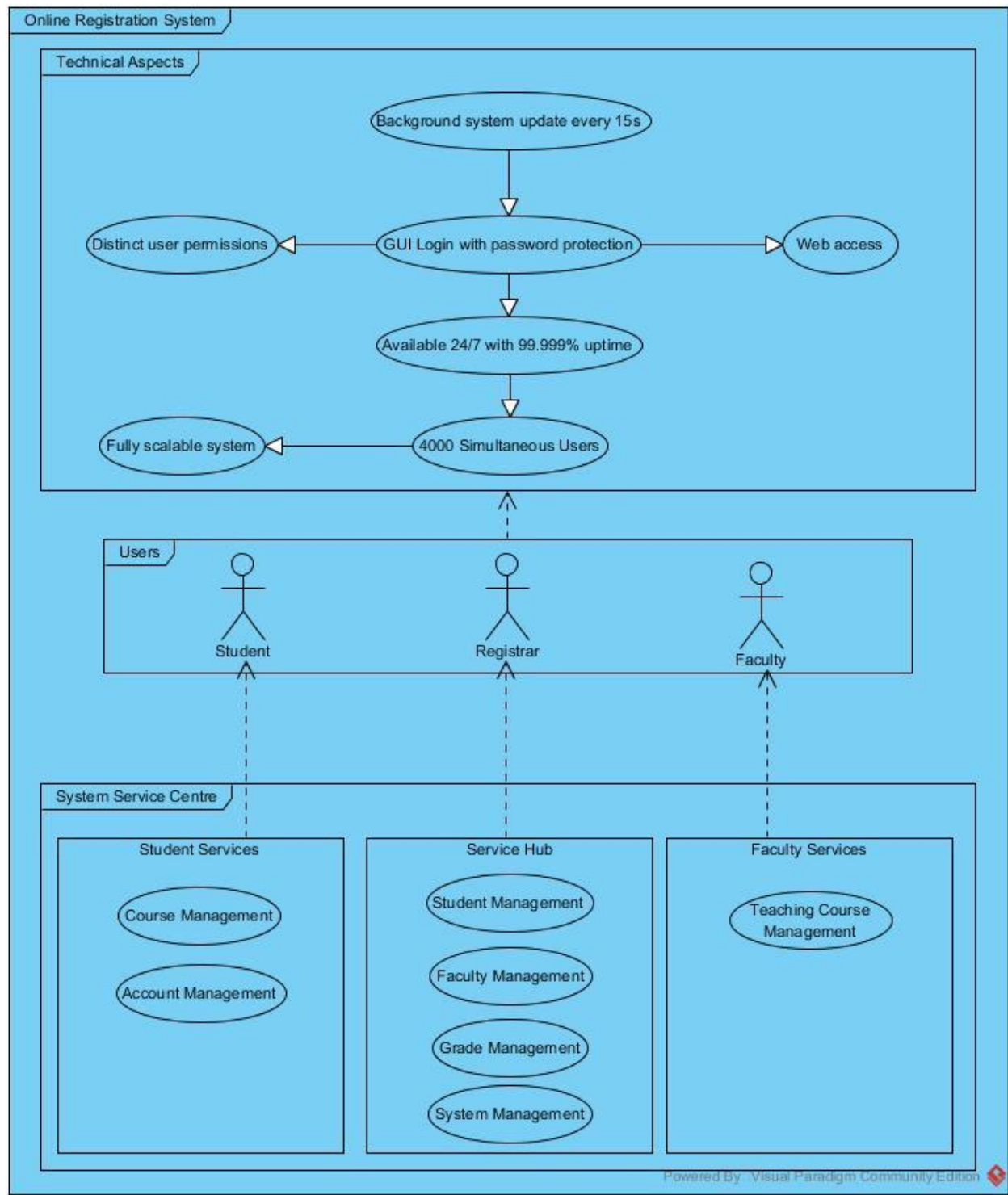
Sub Diagrams





Marketecture Document

Diagram:



Description:

The online registration system has been designed from the ground up while taking some guidance from the current Ryerson University online registration system. Specific requirements were taken into account to assure a reliable and complete system that students, faculty, and the registrar's office can all use.

The marketecture diagram seen above provides a user overview of the system. It briefly shows how each user can interact with the system and some of the system specifications. Below is a more detailed description of the important system requirements and how they pertain to the users in the diagram above.

The important components of the system are its usability, reliable, security, and scalability. The registration system will be built to have a very easy to navigate user interface. This will ensure a smooth user experience and allow the different users to operate the system efficiently. The system is built around some important requirements, which are being implemented at the start, to allow for the basic operations a system like this would need. These include the student services, faculty services and the registrar services. The students are able to view, add, and swap their courses, a very important component of a system such as this. They can also manage their personal information including financial services. The faculty members are able to manage the courses that they are teaching. They are able to manage the courses they are already teaching by setting enrollment limits (if applicable), as well as the course description. On top of these capabilities the faculty members are able to add new courses they are going to teach or remove courses they are no longer teaching. Finally the faculty members are able to upload and edit the individual grades of students in their specific classes. The registrar is able to do a lot more than either of the other two users. They are able to get into both the student and faculty accounts and do changes on their behalf. Not only are they able to make changes for existing users but it is their responsibility to add new students and faculty to the system as needed. They maintain the system, ensuring accurate information, as well as release final grades once the semesters are completed.

The system itself has a secure login. Each student, faculty member, and registrar has a unique login and can only view/manage data related to their account type and the hub that they login to. This is very important for our system as we do not want students to be able to manage their own grades or manipulate sensitive information of other students and specific course information, which is only accessible for faculty and registrar.

This system is also a scalable one. It is currently set-up to handle 4000 simultaneous users but has the capability to be scaled larger if needed. This is feasible with the hardware requirements

and just scaling up the systems servers, which strive for a 99.999% uptime to ensure constant access for the users through various web applications.