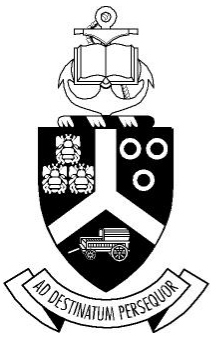

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

COS 301

Department Of Computer Science

Phase 1 Mini Project

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1 System Overview

The BuzzSystem aims to enhance the learning process by providing a platform in which Lecturers, Tutors and Students can discuss concepts covered in class in a more user friendly manner which is appealing to students; consequently this will deepen their understanding of the concepts and improve their overall performance.
This is achieved by introducing social networking elements such as tagging and gaming abilities such as earning points, because of these introductions the system will not only encourage competitiveness but also provide reporting functionalities which will indicate the performance of individual users and the system as a whole.

2 Functional requirements and application design

2.1 Use case prioritization

Critical

- UserManagement
- Posting
- BuzzSpace

Important

- Category
- Vote
- Important

Nice to Have

- tagging
- Rewarding

2.2 Use case/Services contracts

Use Cases

Theme: Category	Functions	List Description	Pre-Condition	Post-Condition
Categories are used to group content and they are created/ accessed by users with appropriate user authorisation e.g Lecturers. It also facilitates searching.	Create a Category	Add a category to the system	The category must not be in the system	A new category is added to the system
	Deleting a Category	Locate category in the system , Remove category from the system	The category must exist in the system	Category removed from the system
	Edit Categories	Access the category and make desired changes, save the changes	The category must exist in the system	An updated category is added to the system

Theme: User Management	Functions	List Description	Pre-Condition	Post-Condition
Manage the users of the system and keeps track of their overall participation and rates/ranks them according to their participation. Every user will have different cabablities depending on their level	Assign User Level	Get UserPoints , Check the UserLevel database in the system and assign a user to a level that corresponds to their points.	User must be logged in and exist i.e is not a guest	User is assigned to a UserLevel
	Promote User	Get UserLevel andUserPoints, If the user's points have increased,promote user to a higher level if their points correspond to that level.	User is logged and is not a guest User.	The user will be promoted to a higher level.
	Demote user	Get UserLevel andUserPoints, If the user's points have decreased,demote user to a lower level if their points correspond to that level.	User is logged and is not a guest User.	The user will be demoted to a lower level
	Login	Checks if user exists on the LADP database and logs the user into the system if it exists. If it doesn't exist user will be logged in as a guest.	The user has entered their credentials.	The user will be logged into the system.
	Logout	System checks if user is logged in and logs the user out of the system if it is.	The user must be logged in.	The user will be logged out of the system.

Theme: Reporting	Functions	List Description	Pre-Condition	Post-Condition
Reporting is used to determine the performance of not only the user but also each BuzzSpace and the system as a whole.	Generate report	Get the type of user Depending on the user provide statistical information about: The BuzzSystem,buzz space,Discussion,User,thread. Statistical information includes: Number of Post. Number of Upvotes/ Downvotes. Number of Plagiarised posts etc.	The user must be logged in and exists and is requesting a report which they are authorised to access e.g Only Lecturers can view the The Buzz Styem's report.	A generated report is returned to the user.

Theme: Voting	Functions	List Description	Pre-Condition	Post-Condition
Voting is responsible for the management of assigning points to a thread and reducing points of a thread consequently it laso changes the Thread Owner's Userpoints	Upvoting	Get thread from a system Increase the thread's points or number of votes.	User must be logged in and allowed to upvote a thread. The thread must exist.	The threads number of upvotes will increase by one upvote after a user has upvoted. This information will be saved in the database and the system will keep track of the total upvotes.
	Downvoting	Get thread from a system Decrease the thread's points or number of votes.	User must be logged in and allowed to downvote a thread. The thread must exist.	The threads number of upvotes will increase by one upvote after a user has upvoted. This information will be saved in the database and the system will keep track of the total downvotes.

Theme: Social Tagging	Functions	List Description	Pre-Condition	Post-Condition
Tagging gives the system a social network type of feel and consequently makes the system more appealing to students and other general , public users.	Search	Searching	A user will use the # symbol in order to search for a discussion or post that is relavent to what they are lookig for.	All discussions and threads containing the searched for word will be brought from the database and placed in order from most to least upvotes.
	Filter	Filtering	There should be check boxes to indicate the attribute the user can use to filter and a texbox that allows them to specify the attribute (e.g Filter by date)	
	Index	Index for searching	System has an unindexed list of all the social tags.	System has indexed the list of social tags to optimize searching

Theme: Rewarding	Functions	List Description	Pre-Condition	Post-Condition
	Assign Benefits	Get UserPoints Determine which benefits a user should have access to. Assign benefits	The user must be logged in and exists i.e is not a guest	The user has acquired benefits

Voting is responsible for the management of assigning points to a thread and reducing points of a thread consequently it laso changes the Thread Owner's Userpoints				

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Tagging gives the system a social network type of feel and consequently makes the system more appealing to students and other general , public users.	Search	Searching	A user will use the # symbol in order to search for a discussion or post that is relavent to what they are lookig for.	All discussions and threads containing the searched for word will be brought from the database and placed in order from most to least upvotes.
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	Index	Index for searching	System has an unindexed list of all the social tags.	System has indexed the list of social tags to optimize searching

Theme: Rewarding	Functions	List Description	Pre-Condition	Post-Condition
The rewarding is responsible for assigning benefits to a user based on their overall participation. The higher the UserPoints the more functionality benefits a user will obtain.	Assign Benefits	Get UserPoints Determine which benefits a user should have access to. Assign benefits	The user must be logged in and exists i.e is not a guest	The user has acquired benefits

Theme: BuzzSpace	Functions	List Description	Pre-Condition	Post-Condition
Categories are used to group content and they are created/ accessed by users with appropriate user authorisation e.g Lecturers. It also facilitates searching.	Create a Category	Add a category to the system	The category must not be in the system	A new category is added to the system
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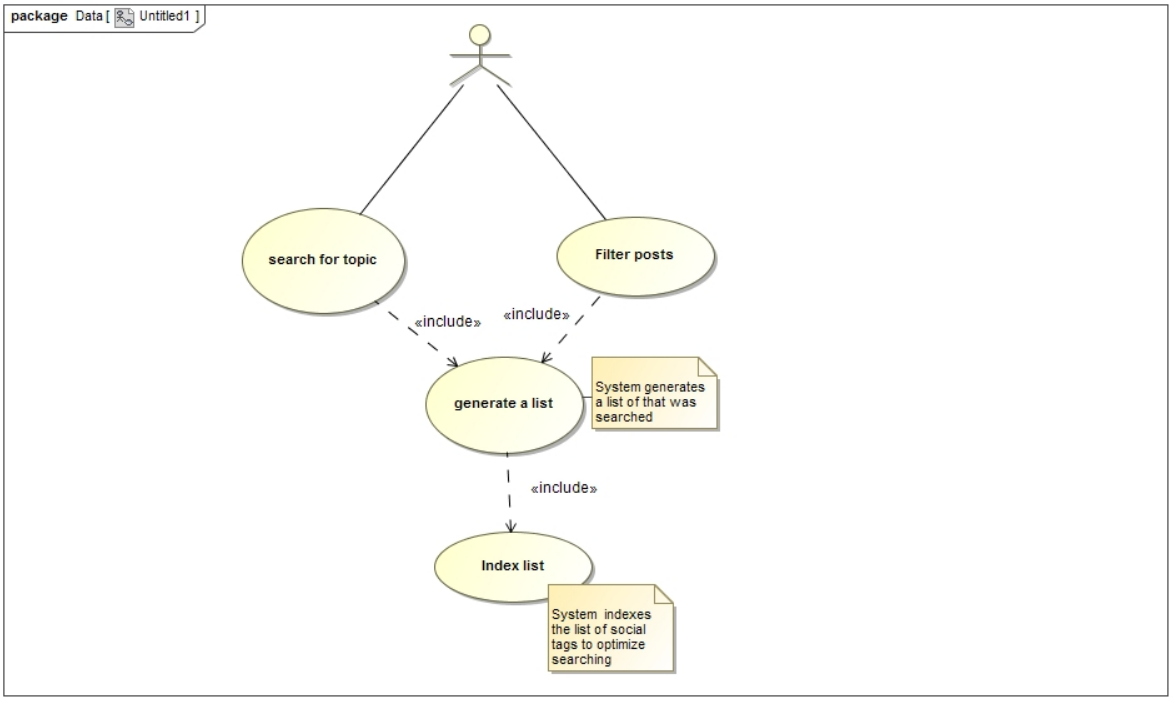
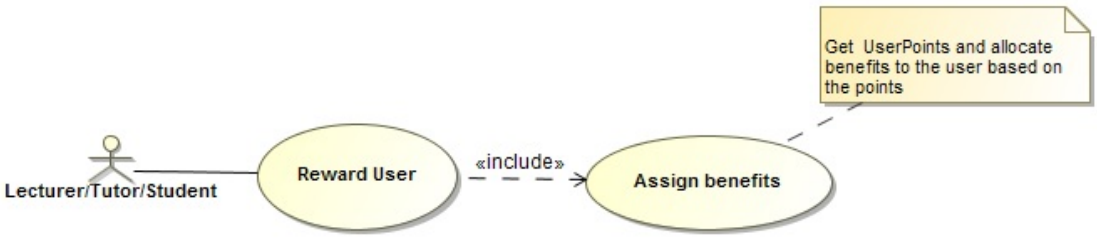
	Edit Categories	Access the category and make desired changes, save the changes	The category must exist in the system	An updated category is added to the system

2.3 Required functionality

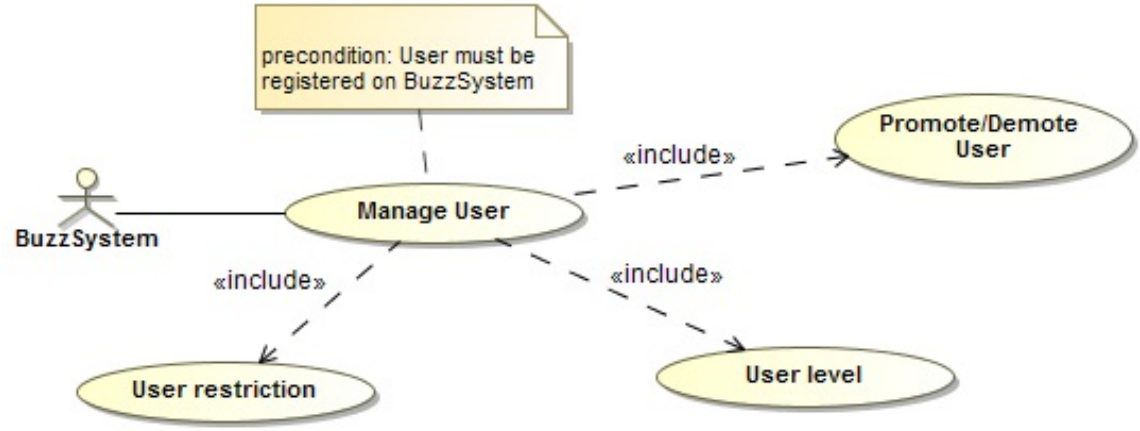
Social Tag



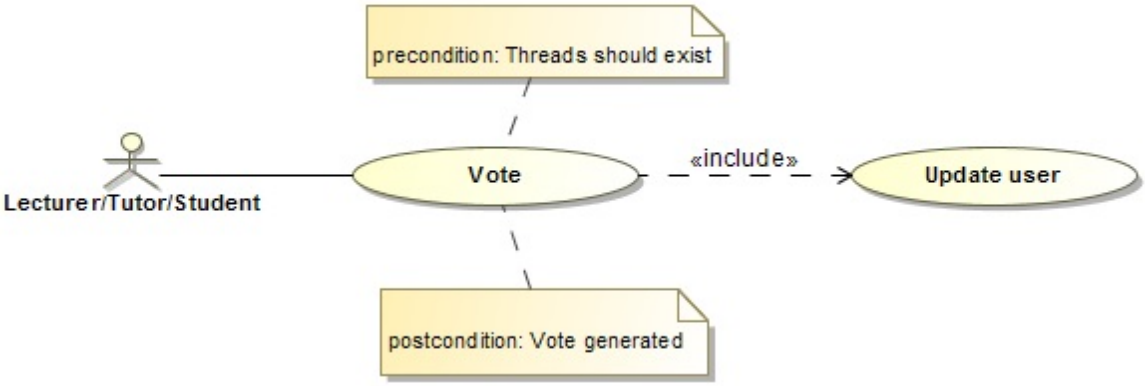
Rewarding



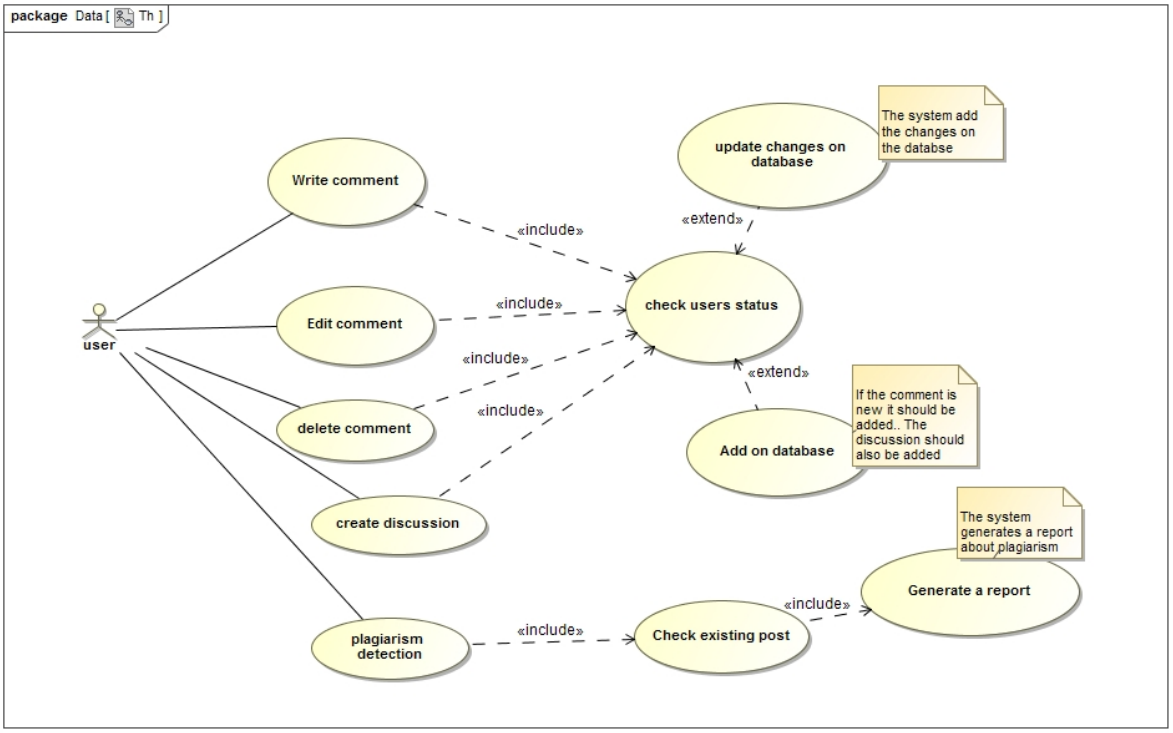
UserManagement



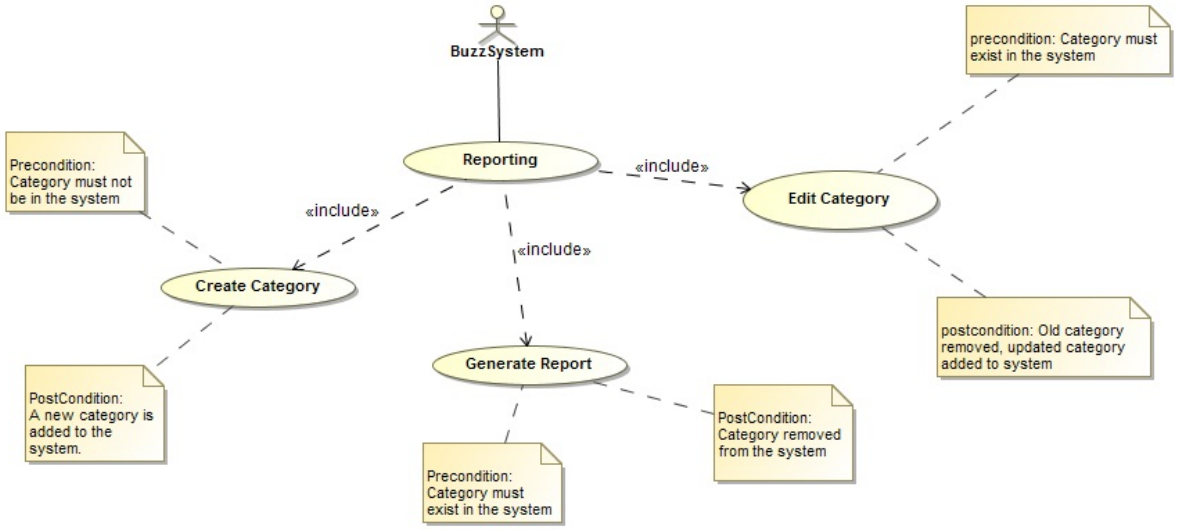
Vote



THREADS

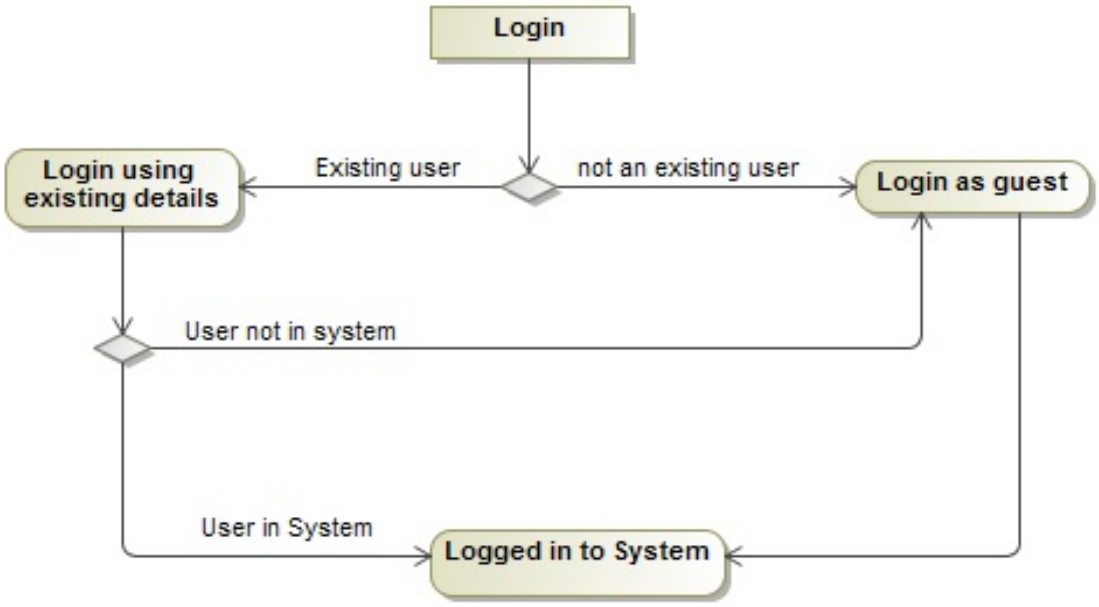


REPORING

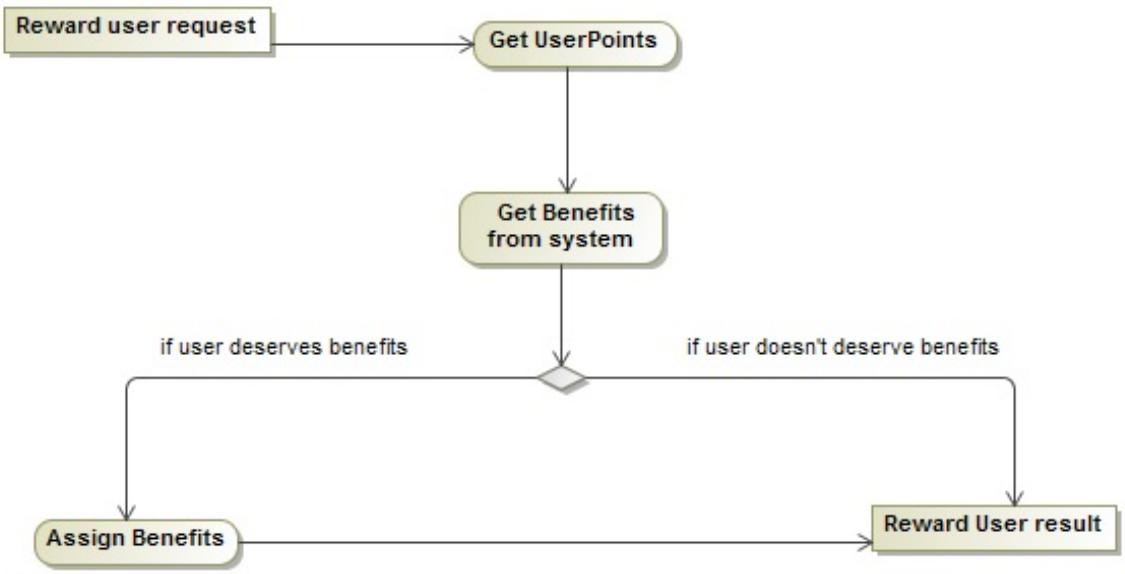


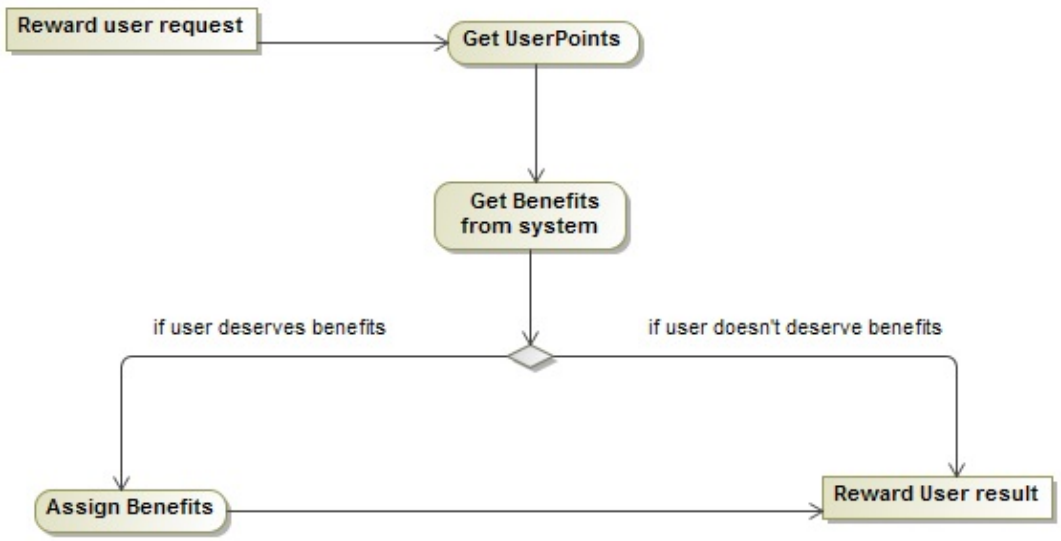
2.4 Process specifications

Login

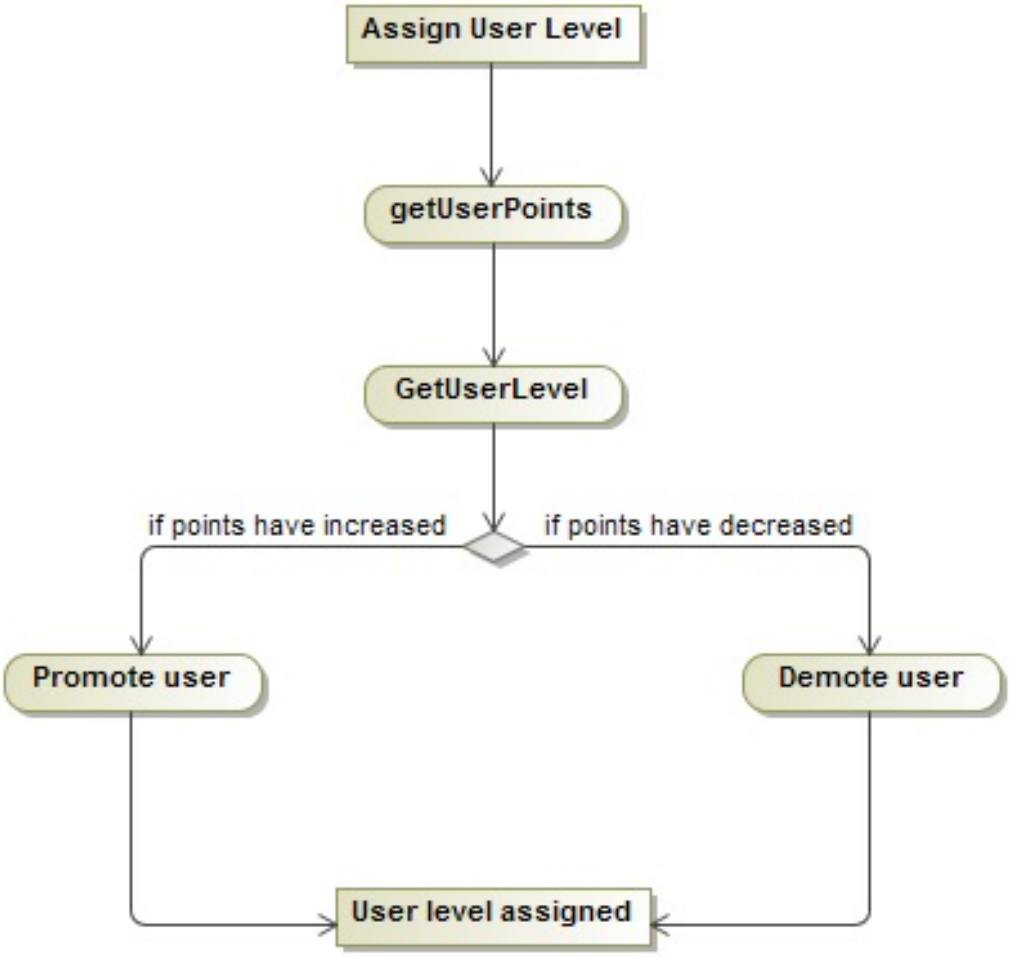


Rewarding

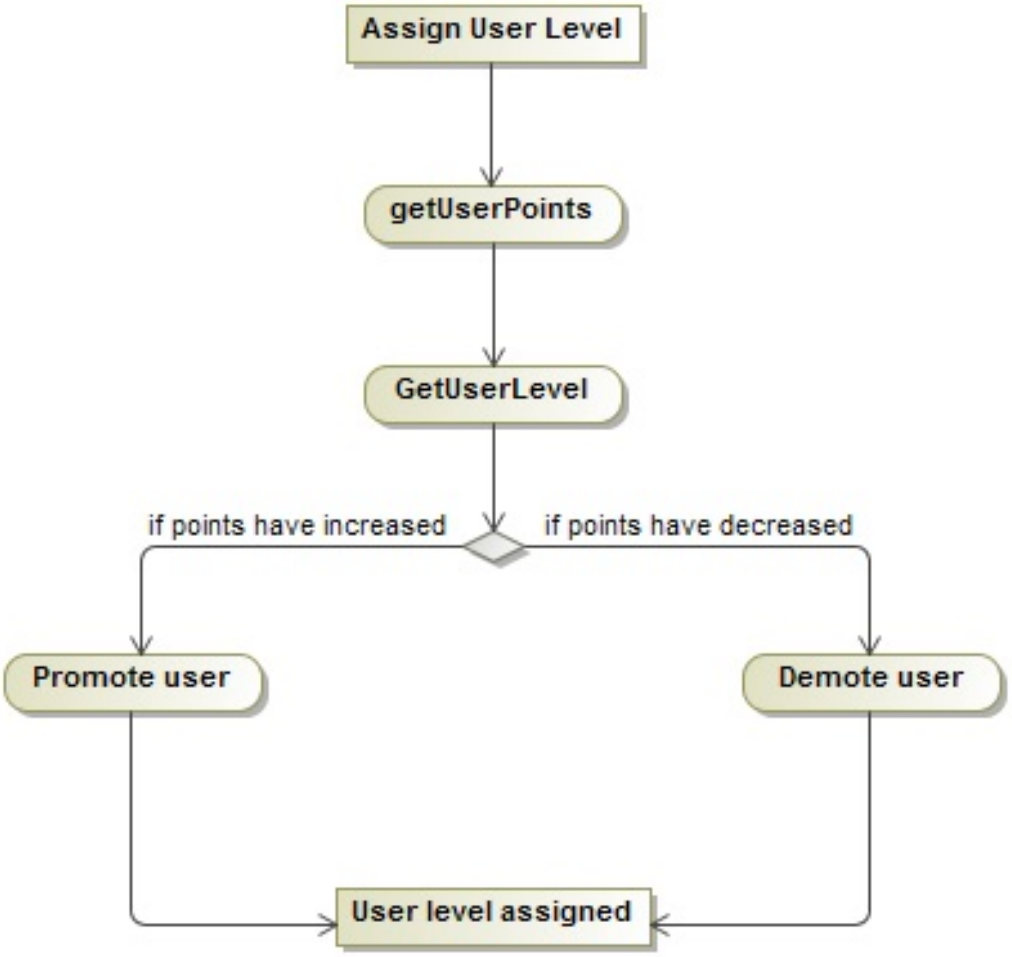
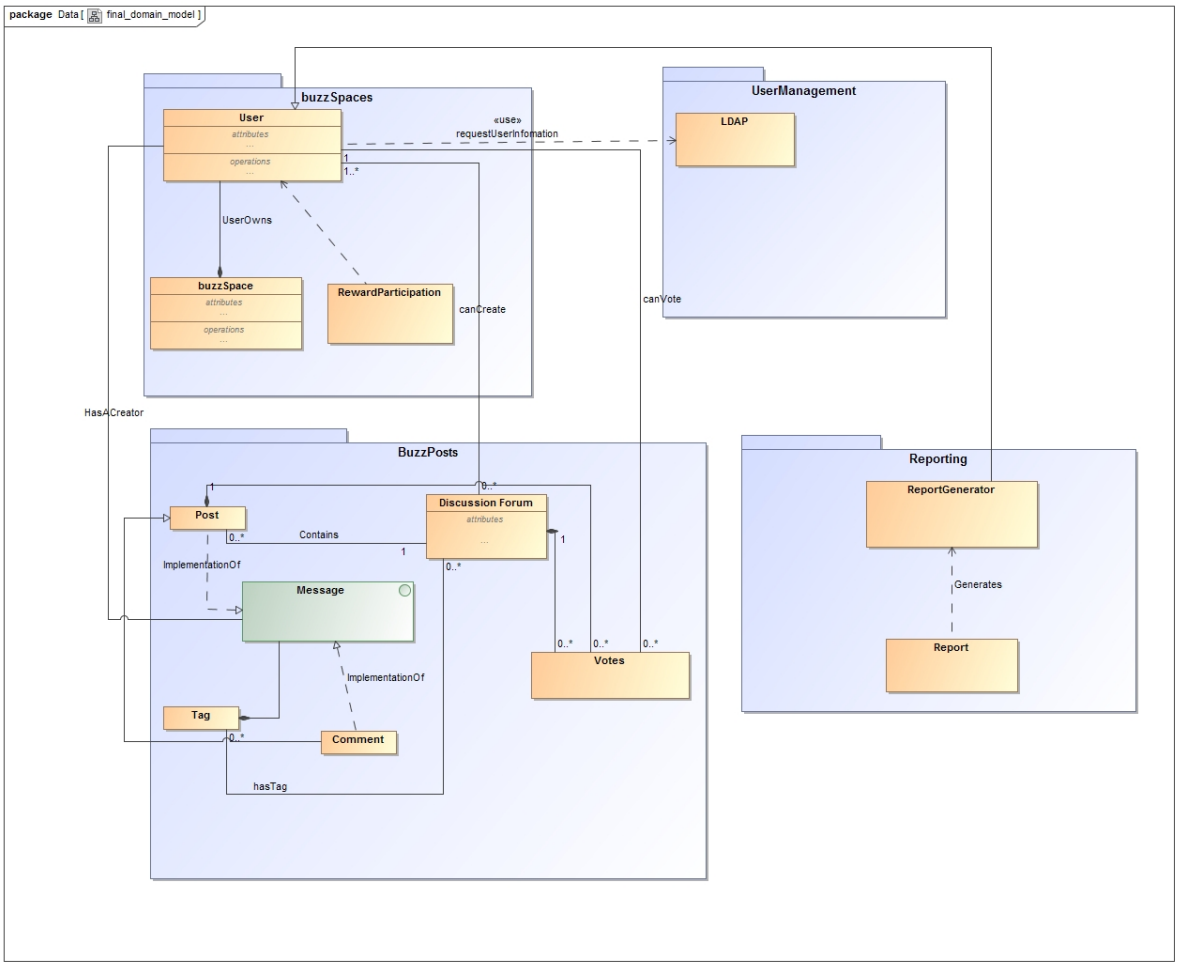



Reward user request
Get UserPoints
Get Benefits from system
if user deserves benefits
if user doesn't deserve benefits
Assign Benefits
Reward User result

UserManagement



UserLevel


Assign User Level
getUserPoints
GetUserLevel
if points have increased
if points have decreased
Promote user
Demote user
User level assigned

2.5 Domain Model