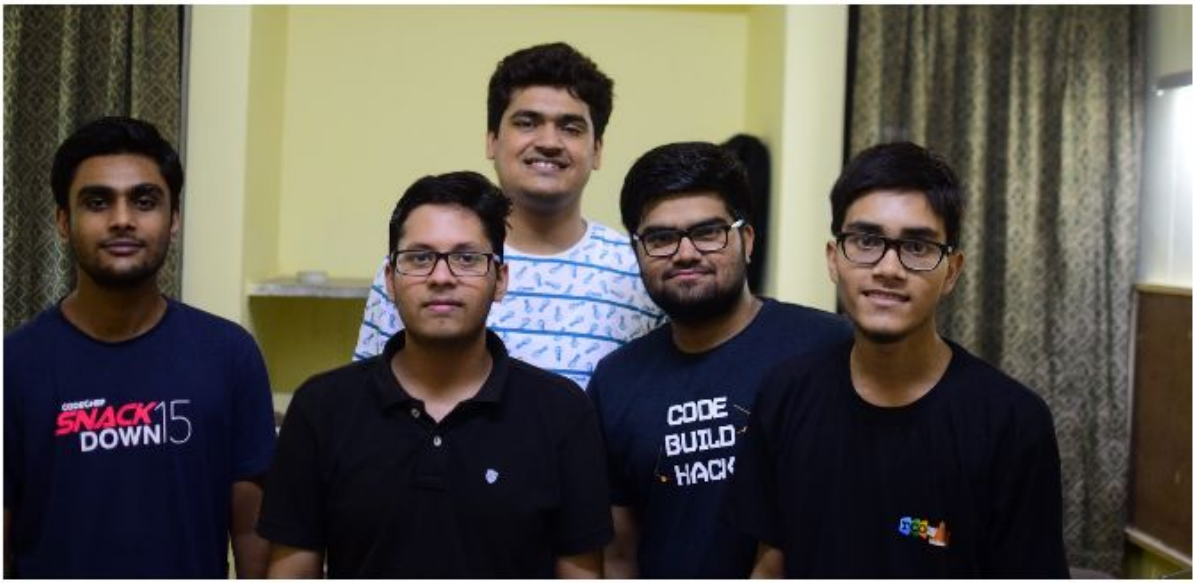
Software Engineering 2016



Vidhan Jain, Prashant Sharma, Mohit Kumar,

Shashwat Shalvi, Shubham Gupta

B07 - HoverSpace

Screencast video link: https://youtu.be/gQIRMB_thr4
Demo link: http://hoverspace.herokuapp.com/
User IDs/Passwords for Demo: guest01/guest01

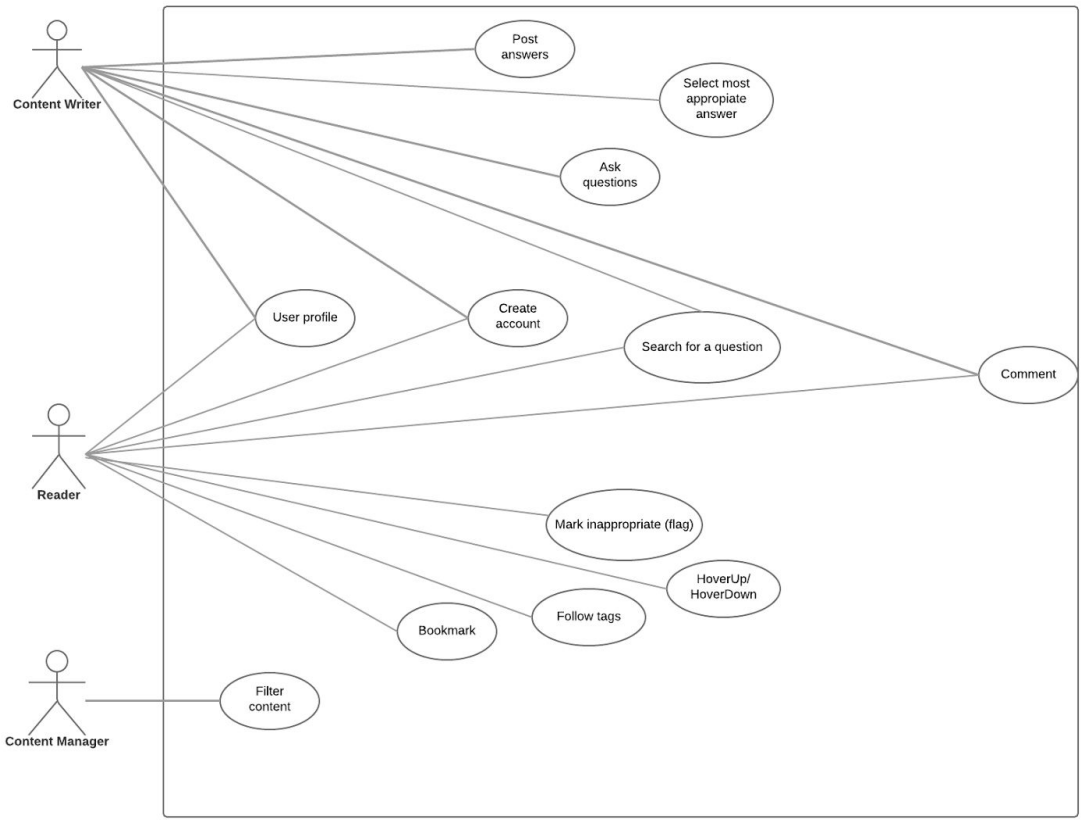
Product Owner: Mohit Kumar and **Scrum Master**: Shashwat Shalvi

Purpose of Application

This web application is supposed to make a public forum on which user can post questions, answer them related to academics and daily life.

Use case diagram - Revised

Use case diagram **without** nested boundary



Product Backlog - Revised

Story ID	As a/an	I want to …	so that …	Priority (H/M/L)
HS001	Registered User	Ask questions	I could get answer	H
HS002	Unregistered User	Create an account	I could read answers and ask questions	H
HS003	Content Writer	Answer questions	Share my experience and knowledge	H
HS004	Registered User	HoverUp(Upvote) and HoverDown(Downvote) questions and answers	It can help other users	M
HS005	User	View user profiles	I can see what questions they have answered and their questions.	M
HS006	Registered User	“Flag” inappropriate answers	I can help report vulgar answers.	L
HS007	Registered User	Add as favourite	I could see the answers later	L
HS008	Content Manager	Review & Filter content	I can remove the vulgar content.	L

Story ID	As a/an	I want to …	so that …	Priority (H/M/L)

HS009	Questioner	Select most appropriate answer	Can accept most appropriate answer.	M
HS010	Registered User	Edit the questions or answers i have posted.	I can change my or update my question or answer as and when needed.	M
HS011	Admin	Ensure system is up and running perfectly	There is no glitch in working application.	H
HS012	User	Search whether a similar question is already asked or not.	I could see desired question or ask it if nothing similar to it exists.	H
HS013	User (registered / unregistered)	Browse Top Stories	I can read the questions users ask and their answers.	H
HS014	Reader	Follow Tags	I can see all the questions based on a topic.	L

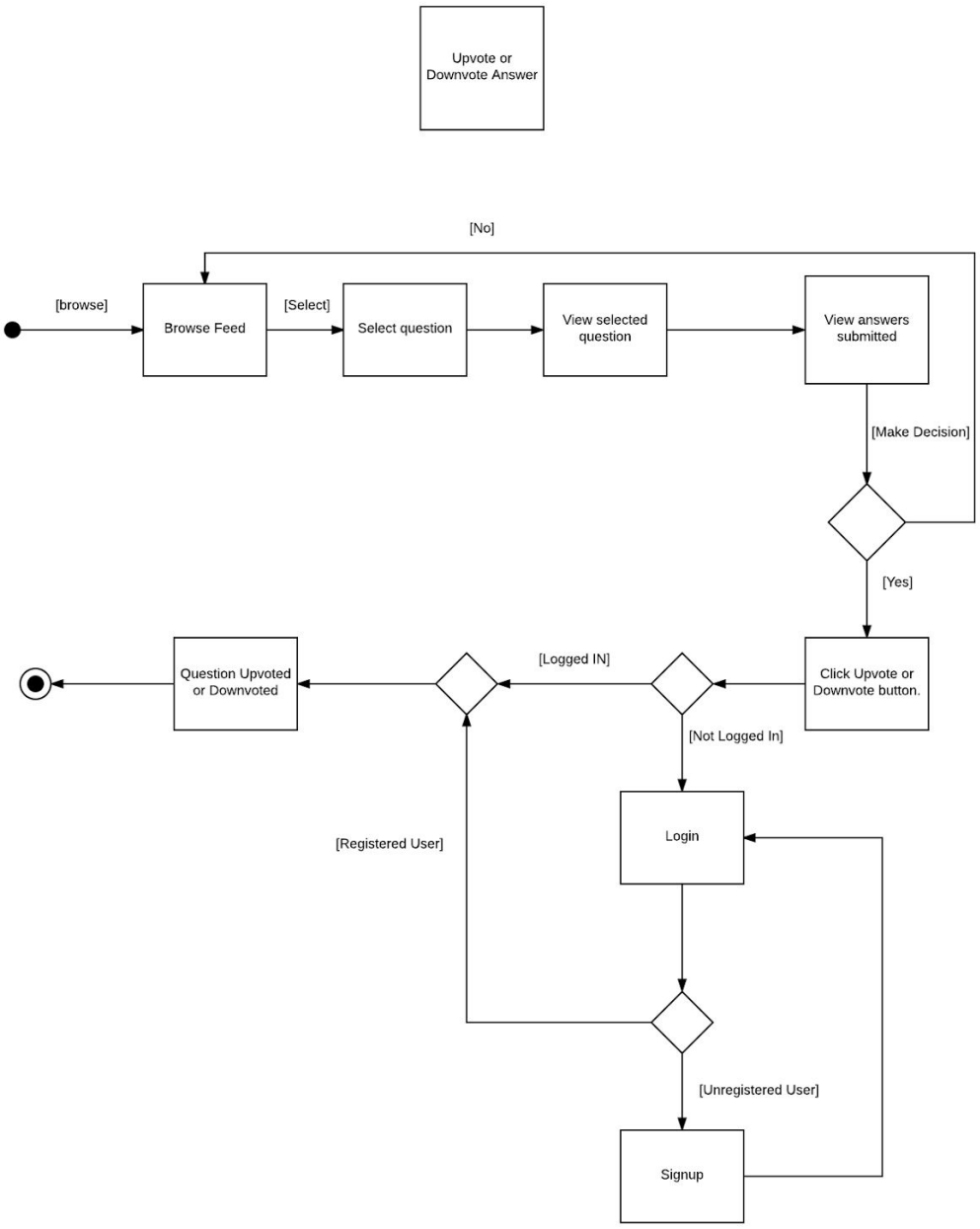
Sprint 3 Plan - Backlog

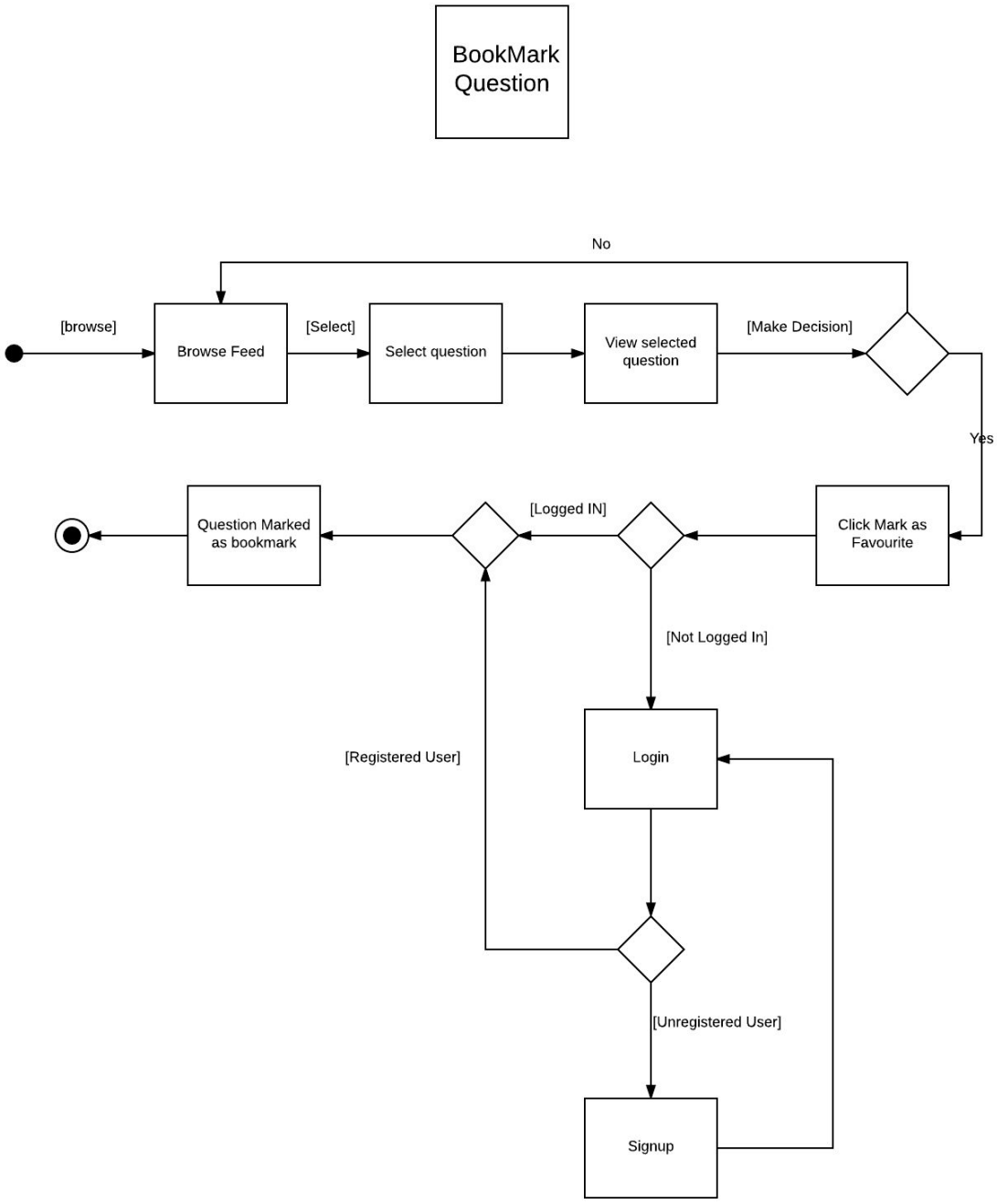
Story ID	As a/an	I want to …	so that …	estimate	actual
HS012	User	Search whether a similar question is already asked or not.	I could see desired question or ask it if nothing similar to it exists.	7	8
HS014	Reader	Follow Tags	I can see all the questions based on a topic.	6	8
HS009	Questioner	Select most appropriate answer	Can accept most appropriate answer.	8	8
HS005	User	View user profiles	I can see what questions they have answered and their questions.	7	8
HS008	Content Manager	Review & Filter content	I can remove the vulgar content.	8	8
HS006	Registered User	“Flag” inappropriate answers	I can help report vulgar answers.	7	8
HS010	Registered User	Edit the questions or answers i have posted.	I can change my or update my question or answer as and when needed.	4	9

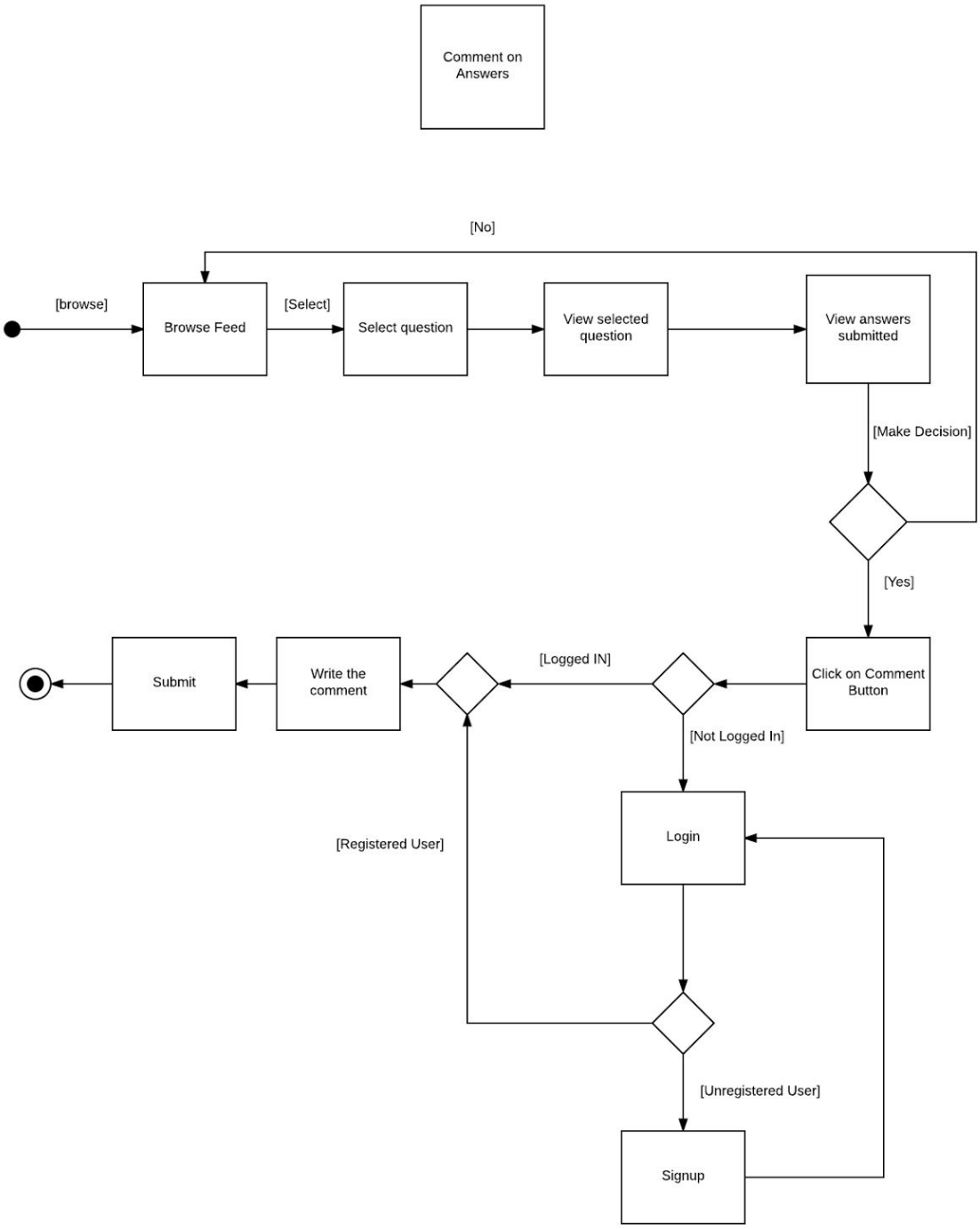
Sprint 3 Plan - Acceptance criteria and test result

Story ID	Acceptance criteria	Test Result
HS009	User must be a registered user with Hoverspace.com to select any answer as most appropriate answer.	yes
HS009	Only the user who has asked the question can mark an answer as most appropriate answer.	yes
HS006	User must be registered with Hoverspace.com to mark any answer or question as inappropriate for public viewing.	yes
HS010	User must be logged in to edit his questions or answers.	no

Activity diagrams (Revised to match with our final product)




BookMark Question
No
[browse]
Browse Feed
[Select]
Select question
View selected question
[Make Decision]
Yes
Click Mark as Favourite
[Logged IN]
Question Marked as bookmark
[Not Logged In]
[Registered User]
Login
[Unregistered User]
Signup


Comment on Answers
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[browse]
Browse Feed
[Select]
Select question
View selected question
View answers submitted
[Make Decision]
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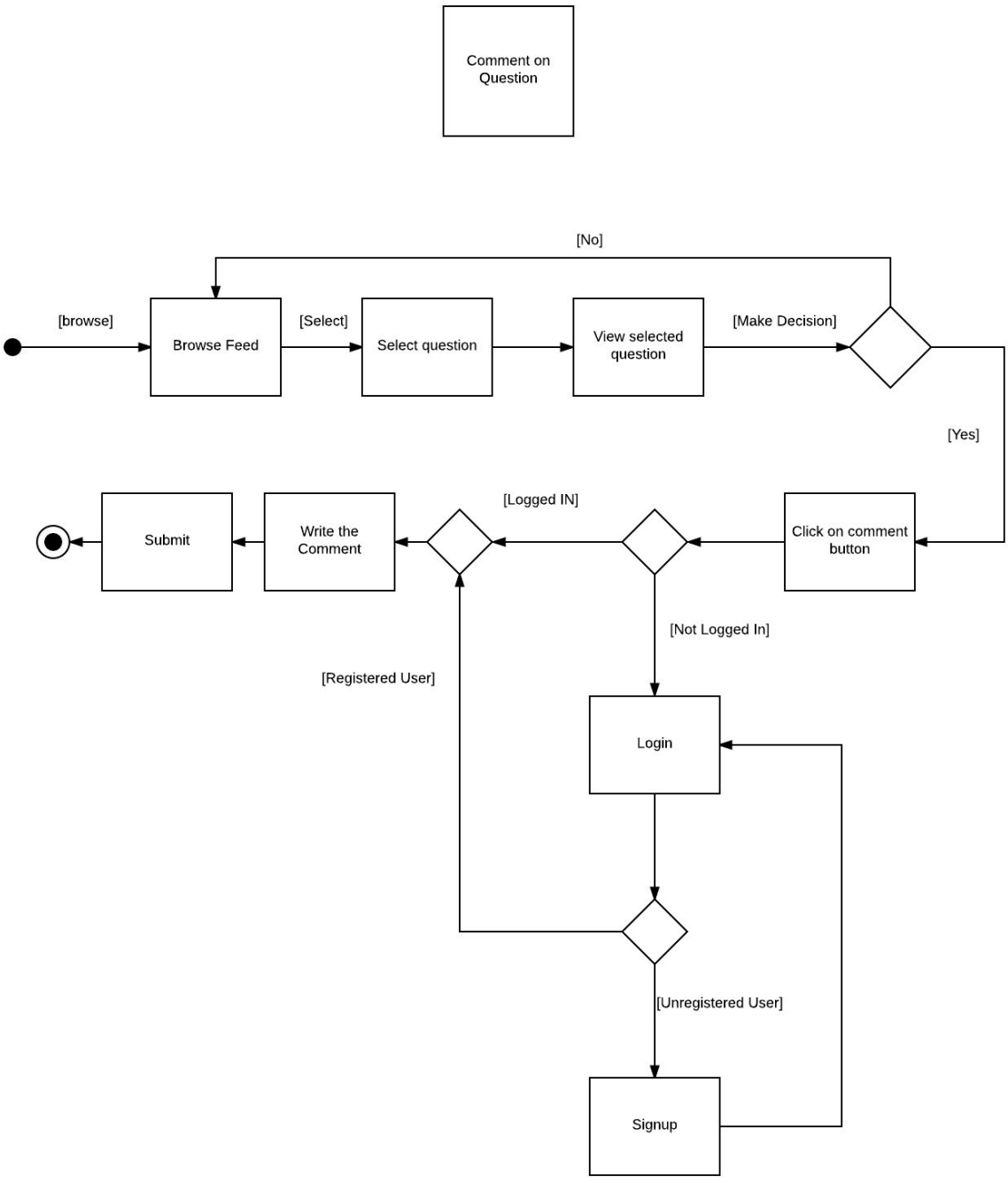
Click on Comment Button
[Logged IN]
[Not Logged In]
Write the comment
Submit
Login
[Registered User]
[Unregistered User]
Signup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[browse]
Browse Feed
[Select]
Select question
View selected question
[Make Decision]
[Yes]
Submit
Write the Comment
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Click on comment button
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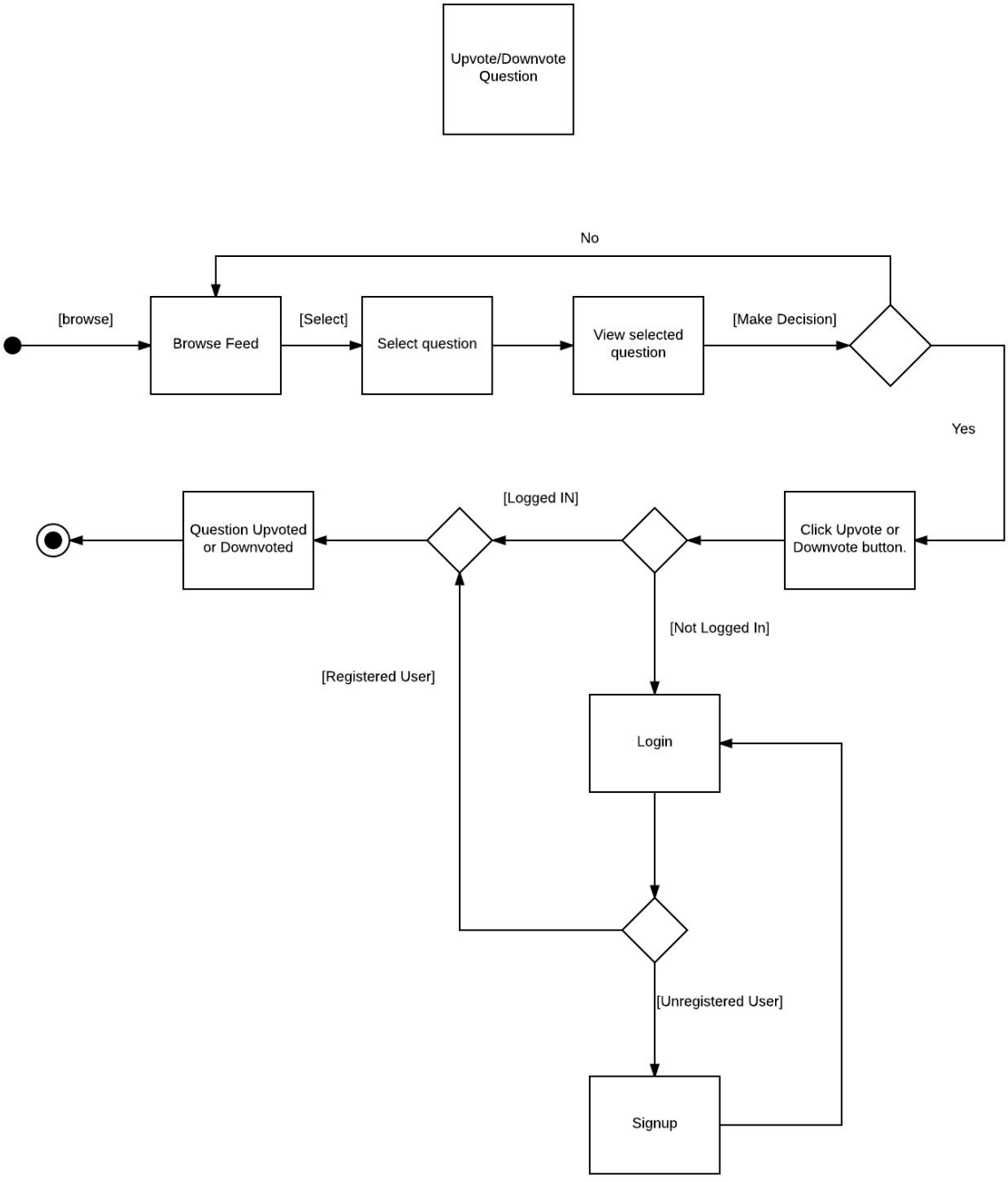
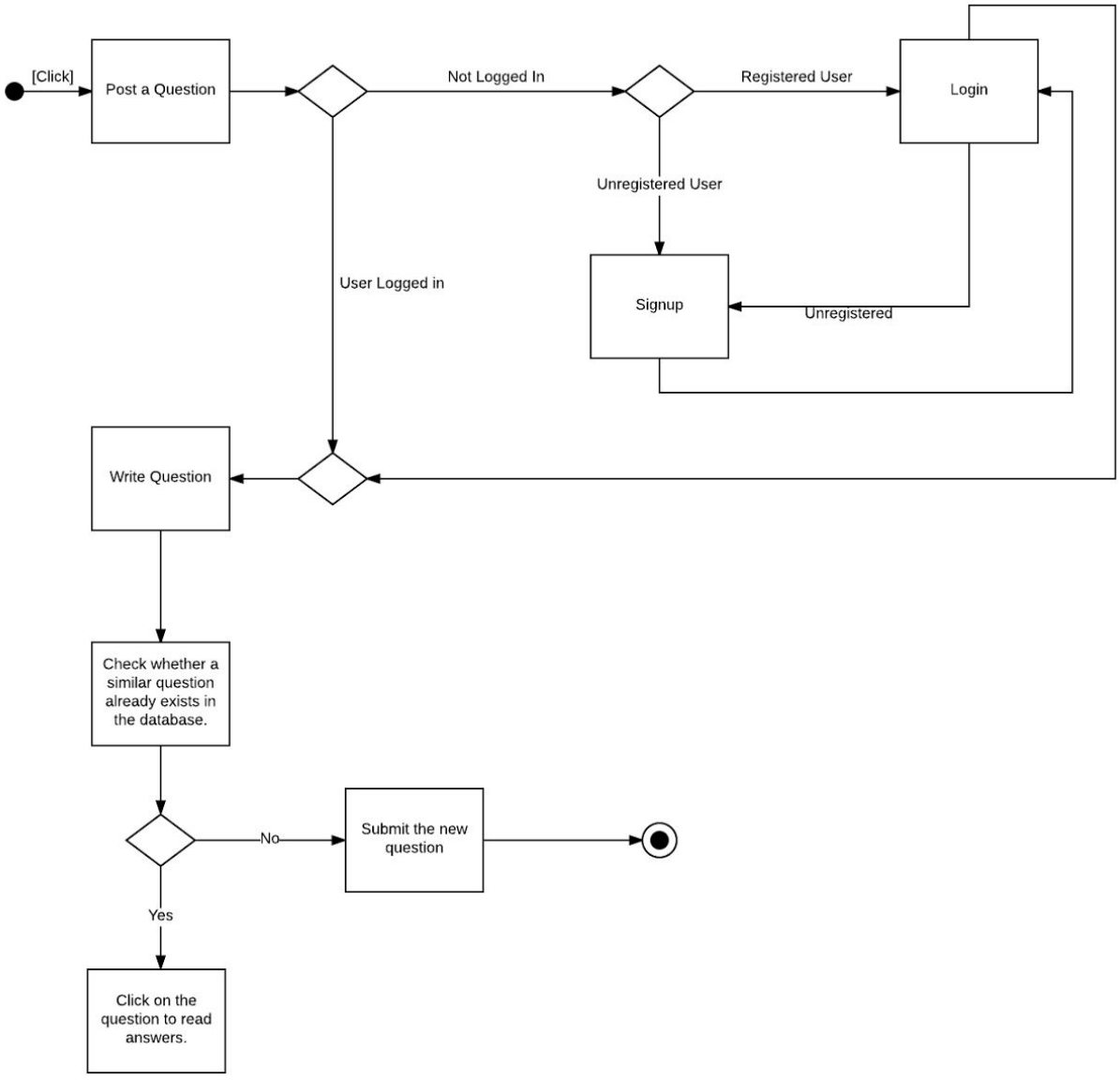
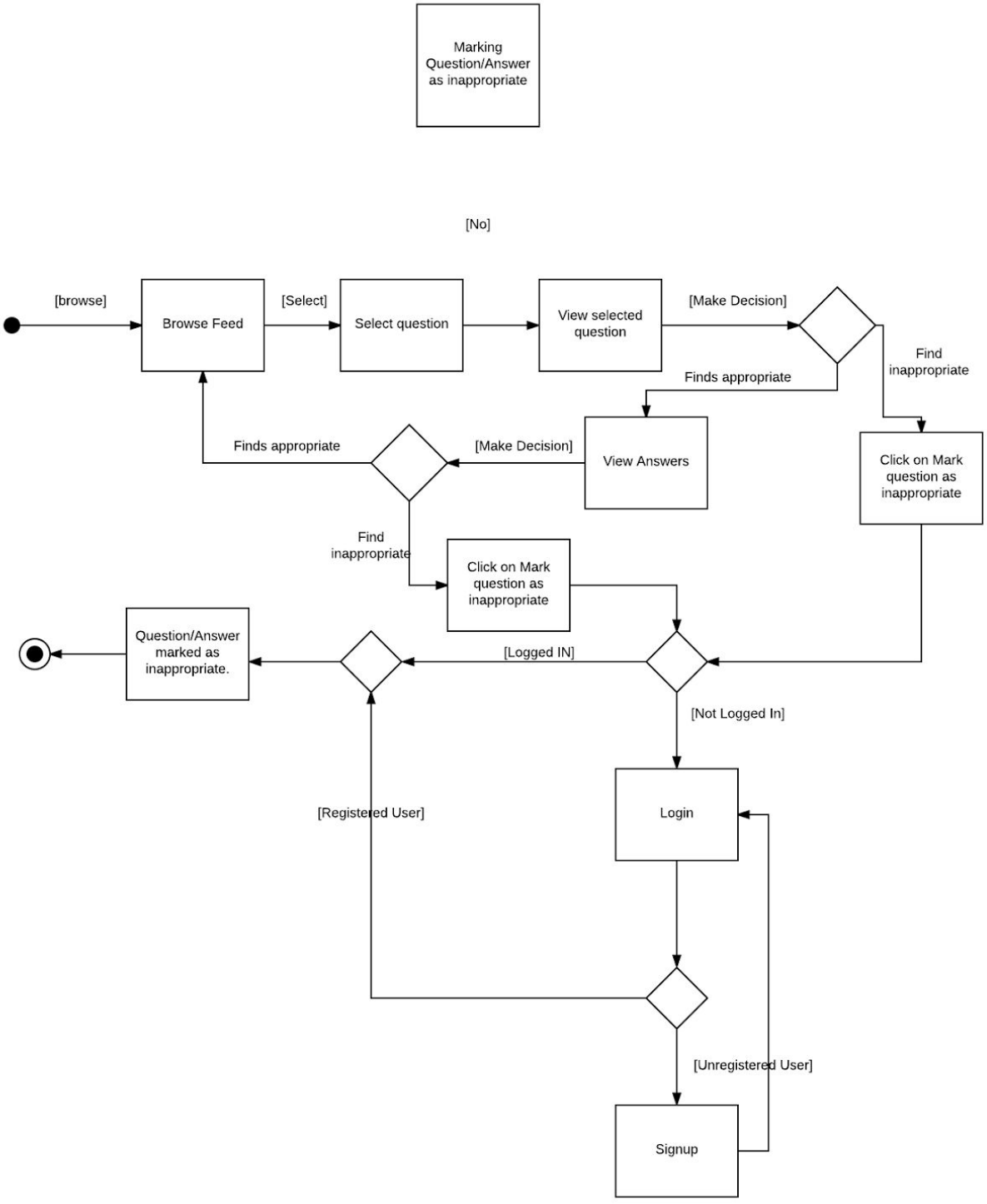
Login
[Unregistered User]
Signup

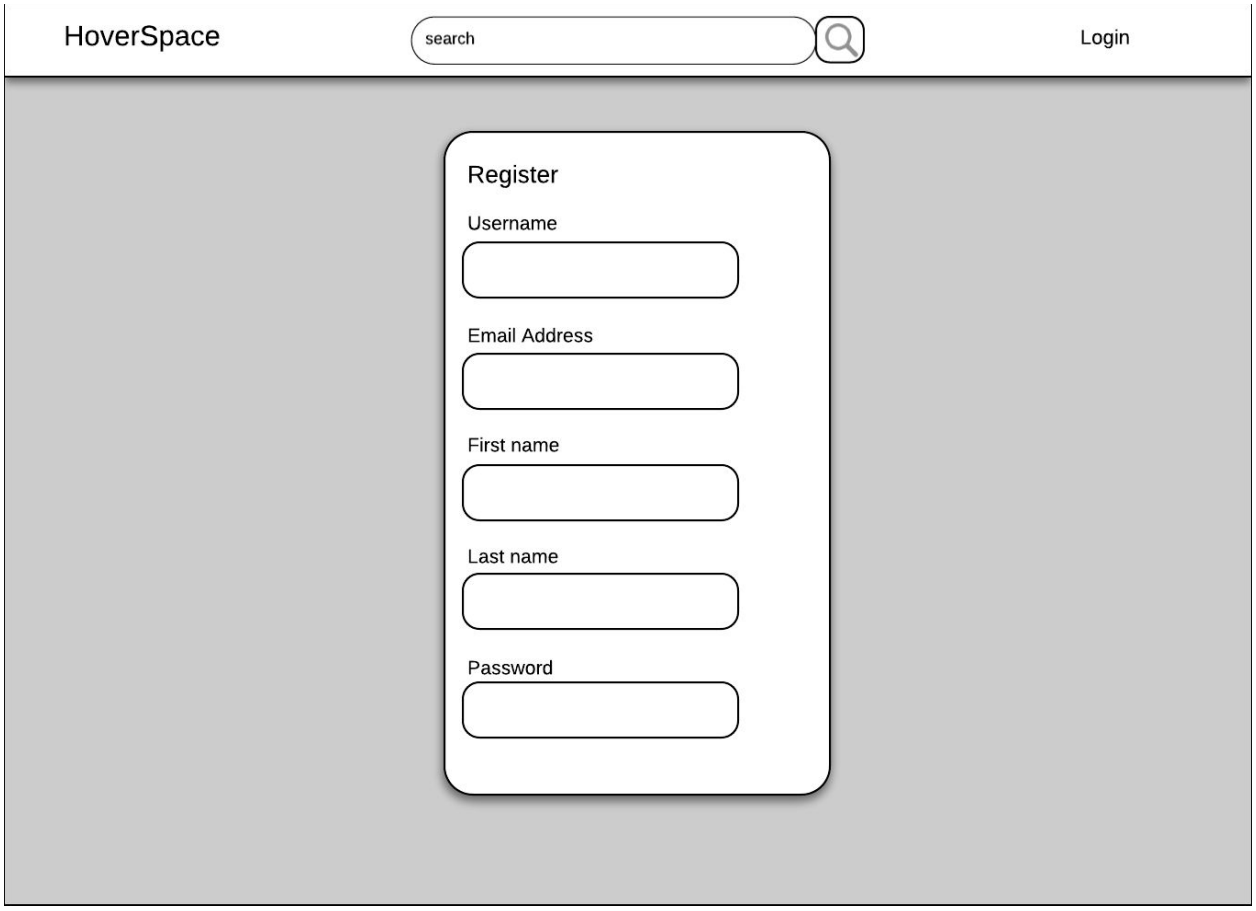

Upvote/Downvote Question
No
[browse]
Browse Feed
[Select]
Select question
View selected question
[Make Decision]
Yes
[Logged IN]
Question Upvoted or Downvoted
Click Upvote or Downvote button.
[Not Logged In]
[Registered User]
Login
[Unregistered User]
Signup

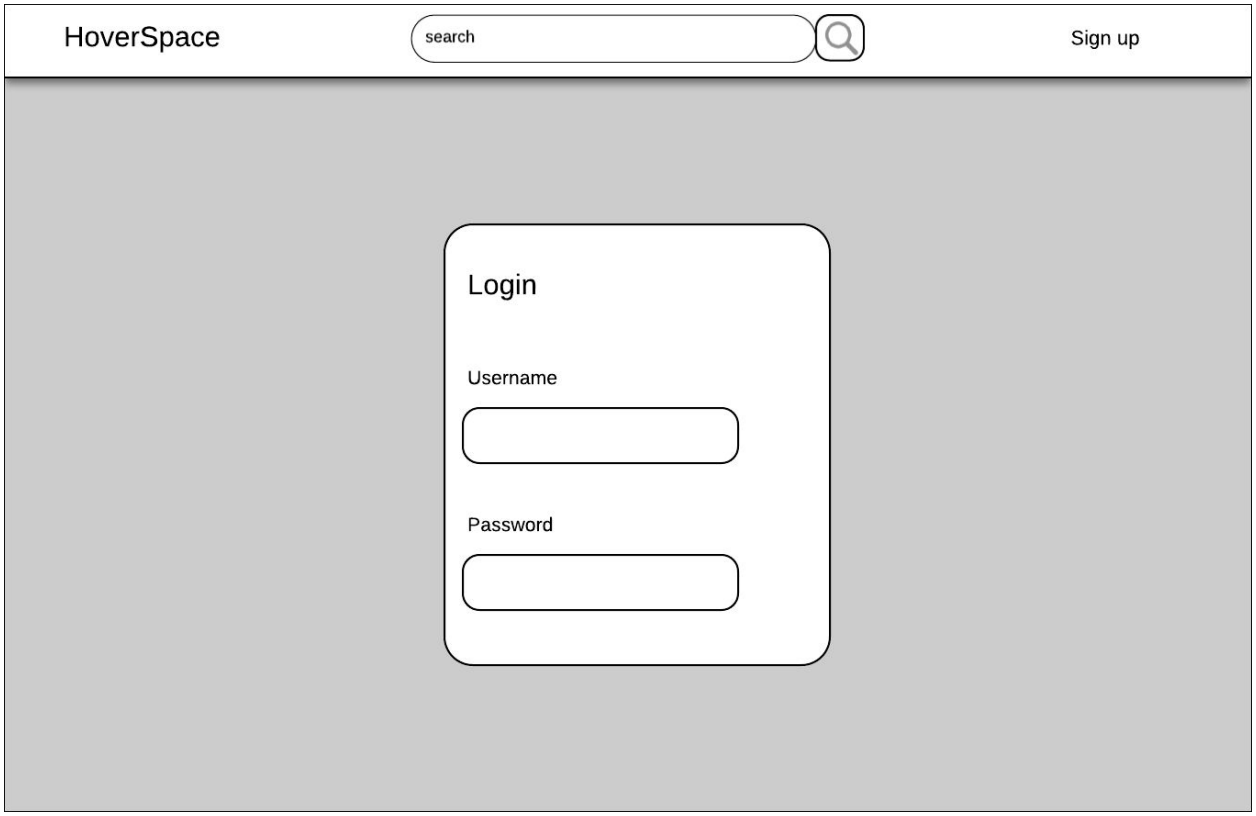
Post Question Activity Diagram (REVISED)

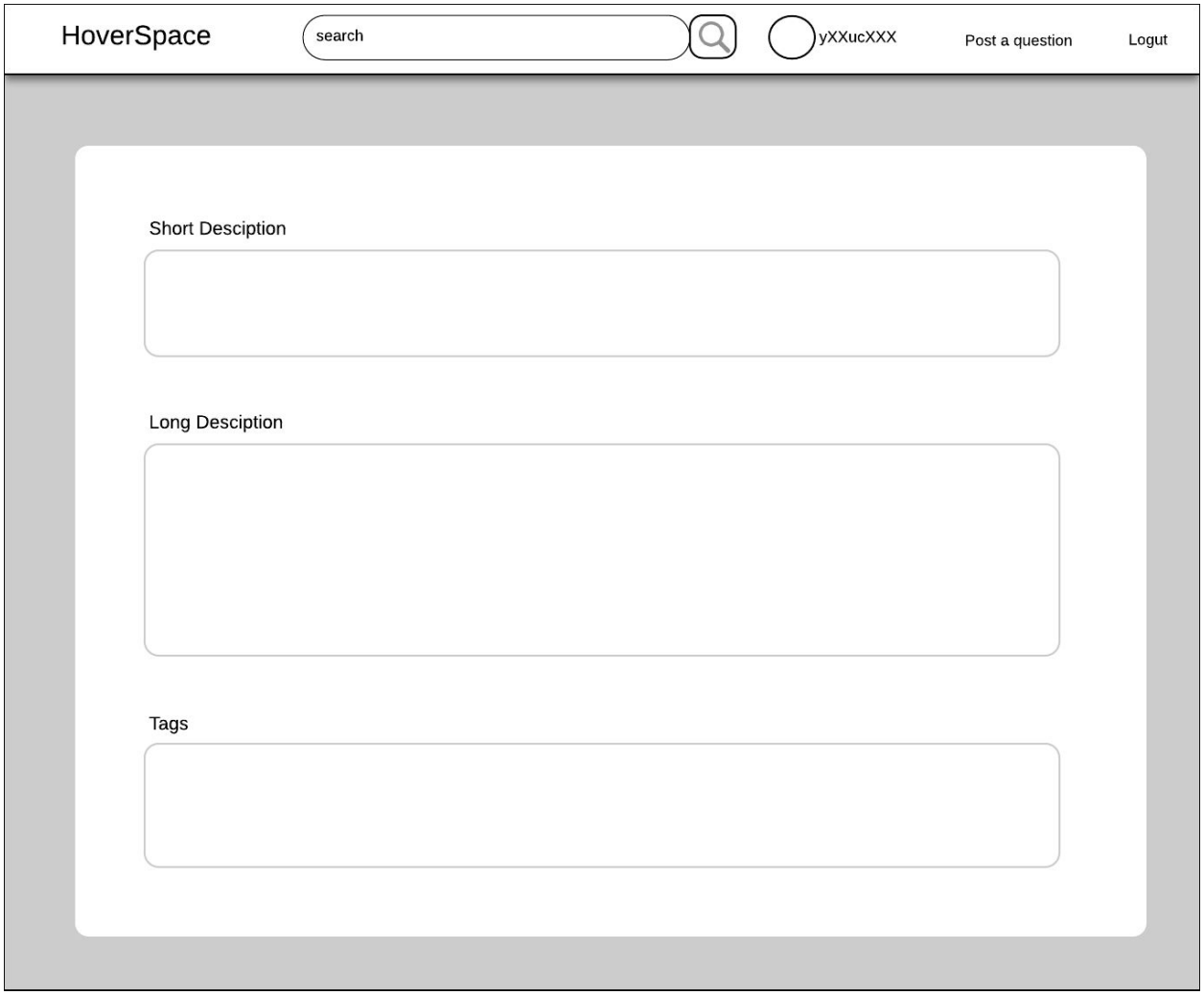



Marking Question/Answer as inappropriate
[No]
[browse]
Browse Feed
[Select]
Select question
View selected question
[Make Decision]
Find inappropriate
Finds appropriate
View Answers
[Make Decision]
Finds appropriate
Click on Mark question as inappropriate
Find inappropriate
Click on Mark question as inappropriate
Question/Answer marked as inappropriate.
[Logged IN]
[Not Logged In]
[Registered User]
Login
[Unregistered User]
Signup

UI/UX Designs (Wireframes) – For the Sprint 3 functionality




HoverSpace
search
Sign up
Login
Username
Password


HoverSpace
search
yXXucXXX
Post a question
Logut
Short Desciption
Long Desciption
Tags

HoverSpace

search

Post a question

Logut

22

img

Bookmark

flag

Question text will appear here. Question text will appear here. Question text will appear here. Question text will appear here.

Posted By : user_name

Posted on : yyyy-mm-dd

22

img

Accepeted

flag

Answer text will appear here. Answer text will appear here. Answer text will appear here. Answer text will appear here. Answer text will appear here. Answer text will appear here. Answer text will appear here. Answer text will appear here. Answer text will appear here.

Posted By : user_name

Posted on : yyyy-mm-dd

22

img

Accepeted

flag

Answer text will appear here. Answer text will appear here. Answer text will appear here. Answer text will appear here. Answer text will appear here. Answer text will appear here. Answer text will appear here. Answer text will appear here. Answer text will appear here.

Posted By : user_name

Posted on : yyyy-mm-dd

write answer here...

HoverSpace

search

username post a question logout

-Tags

- tag1
- tag2
- tag3
- tag4
- tag5
- tag6
- tag7
- tag8
- tag9

Question text will appear here. Question text will appear ...

2 answers posted by: user_name posted on: yyyy-mm-dd

Question text will appear here. Question text will appear ...

2 answers posted by: user_name posted on: yyyy-mm-dd

Question text will appear here. Question text will appear ...

2 answers posted by: user_name posted on: yyyy-mm-dd

Question text will appear here. Question text will appear ...

2 answers posted by: user_name posted on: yyyy-mm-dd

Question text will appear here. Question text will appear ...

2 answers posted by: user_name posted on: yyyy-mm-dd

Top Contributors

Name	Karma
username	223
username	55
username	20

HoverSpace

search

username post a question logout

Question text will appear here. Question text will appear ...

2 answers posted by: user_name posted on: yyyy-mm-dd

Question text will appear here. Question text will appear ...

2 answers posted by: user_name posted on: yyyy-mm-dd

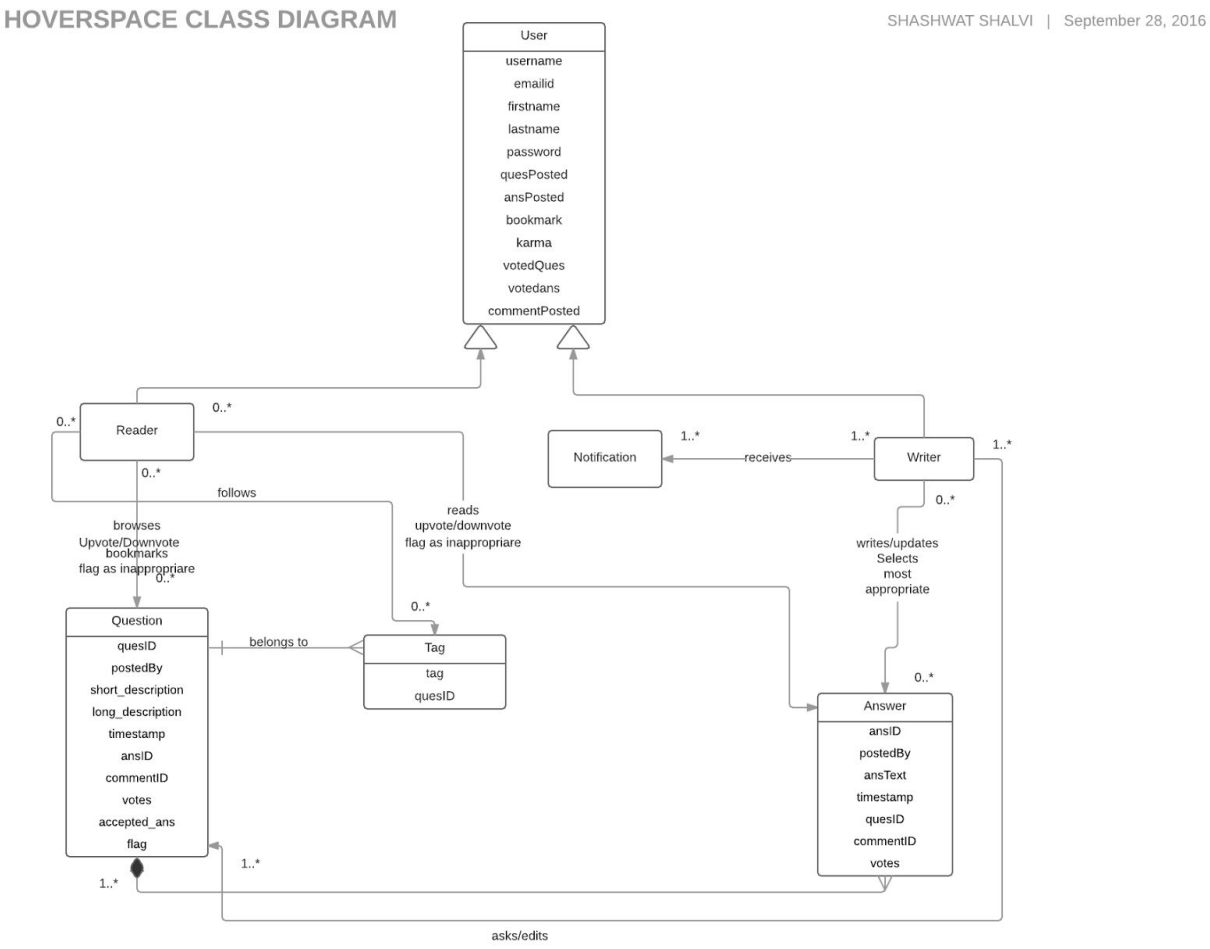
username

FULL NAME

Email@address.com

karma points : X

Class diagram – Revised and Extended



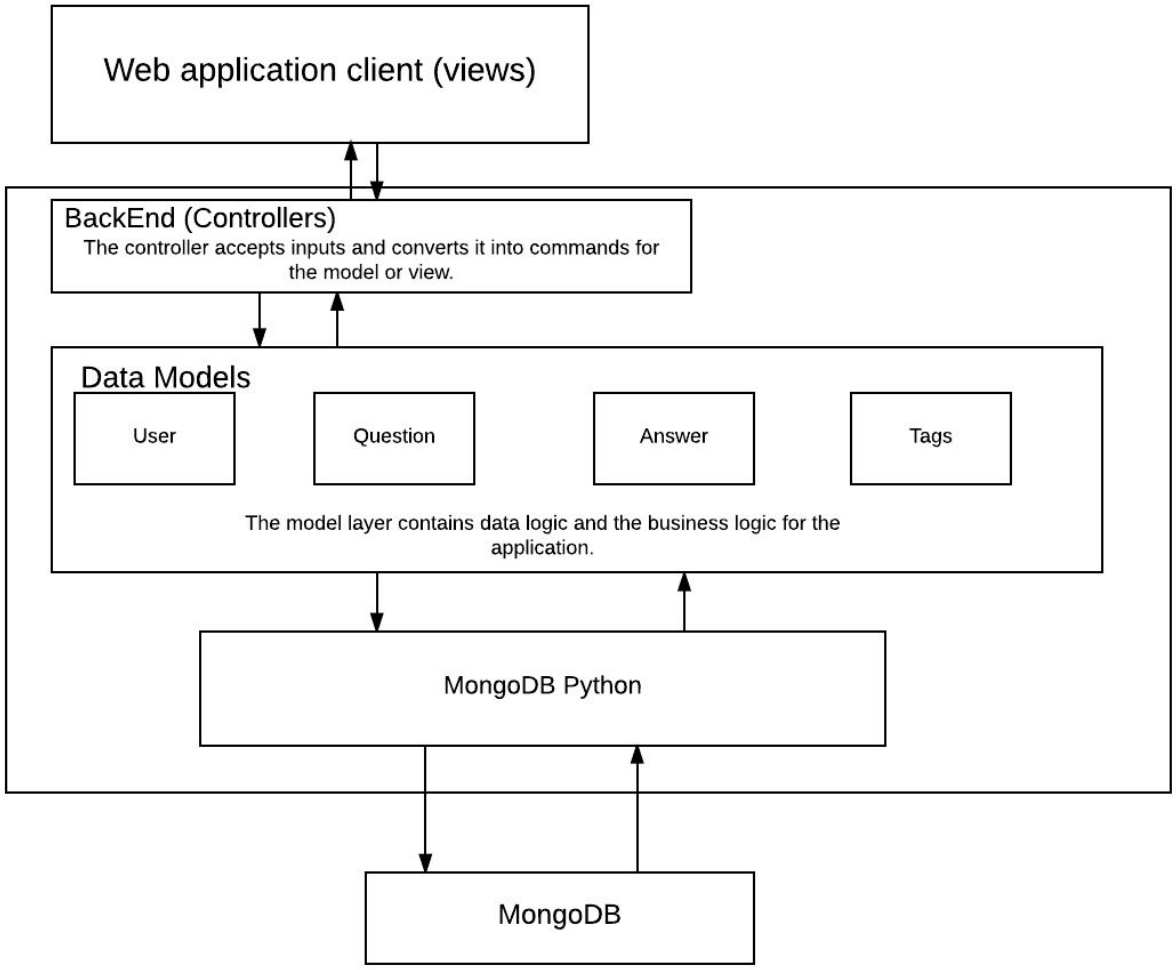
<add notes about 2 or 3 design patterns used in this class diagram>

Design Pattern :

1. PlayerRole as we have multiple type of users such as reader, writer and content manager.
2. MVC design as we have followed the Layered Structure Architecture.

System Architecture Diagram

Layered architecture



Scrum Minutes of the Meeting (Two entries per week for each team member)

Sprint 3 – Week 1

Team member	Work completed	Work planned	Impediments
Mohit kumar	Designed the wireframe diagram for userprofile page and changed the previous wire frame diagram and UI according to new changes.	Wireframe diagrams for the user profile page and reviewing the previous wireframe design, improving the UI/UX of website.	None.
Prashant Sharma	Changed the UI of the website to be more user friendly as per the suggestions given in the peer review.	Improve the UI as per the wireframes .	None.
Shubham Gupta	Implement voting feature (upvote/Downvote) on both question and answer. Also calculated karma points.	Improve the Upvote/Downvote feature of the website .	Faced difficulty while working with AJAX.
Shashwat Shalvi	Worked on implementing “Edit answer and Edit question” and improved the bookmark feature.	Implement the feature of editing user’s own question or answers and improve connect the bookmark feature to database.	Had difficulty implementing the front end design for Editing question and answer.
Vidhan Jain	Worked on implementing the search feature.	Implement the search feature of the webapp.	None.

Sprint 3 – Week 2

Team member	Work completed	Work planned	Impediments
Mohit khatri	Changed the frontend design of question page adding buttons for upvote/downvote bookmark and mark as flag.	Change the front end design of some pages to add more features and improve the UI	None
Prashant Sharma	Worked on front end development of user profile page and implemented the changes on the home page to show the top 10 contributors.	Implement the user Profile page. Implement the changes as per new features in the home page.	Faced a lot of issues while working with JQuery/AJAX
Shashwat Shalvi	Designed the class Diagram and System Architecture Diagram. Did the testing of the web application. Implemented Calculating karma points of users.	Design the class diagram and System Architecture Diagram. Responsible for testing of application and to all the acceptance criteria from sprint 1 to 3 are fulfilled. Designed the algorithm to find the karma points of user.	Had difficulty deciding which class design patterns to follow and which architecture to follow for the application. Had issues while checking authentication of the emailid.
Shubham Gupta	Worked on flagging feature. Implemented select most appropriate answer.Implement feature to search question by tags. Reviewed uses sessions. Helped in designing user profile page.	Implement flagging system to report inappropriate content . Implement front end design of comment . implement user sessions acceptance criteria. Implement “select most appropriate answer”	Had issues implementing front end designs.
Vidhan Jain	Implemented tagging system & search algorithm. Integrated the smart feature of suggesting similar questions prior to posting question.	Implement the tagging system. Review the posting question feature with the help of advanced search develop it as a smart feature of application.	Faced difficulty designing a smart algorithm for implementing search.

Sprint 3 Summary

Link to Screencast-o-matic youtube video: https://youtu.be/gQIRMB_thr4

Link to Website: http://hoverspace.herokuapp.com/

Review Summary (about the product)

1	The application now has a new search feature which helps the user search through the database for a particular question or even through important keywords in question.
2	The application now has a new “Edit question”, “Edit Answer” feature which enables users to update their questions or answers after being posted.
3	The application also has a feature of “Flag as Inappropriate” for both questions and answers so that any inappropriate content on website could be reported. If the content is found inappropriate by content manager the content is taken down and the karma points of the user who posted is reduced.
4	Bookmark, HoverUp/HoverDown features integrated with backend.
5	User Profile page developed which tells the questions asked ,answers posted and the karma points of the user.

Retrospective Summary (about the process)

1	Designing the algorithm for searching database in an efficient way took the most time as we wanted it to be the smart feature of our application. Search algorithm was implemented using Rabin-Karp String searching algorithm. Algorithm implemented is not smart enough as we were looking to develop.
2	UI had to be changed after seeing the peer reviews. Every Member of the team gave inputs on how to improve the UI. Mohit and Prashant implemented the UI which still has scope of improvement.
3	The tagging system and flagging developed is manual which takes tags input from writers, due to lack of developer with machine learning experiences we could not automate the tagging system.
4	Edit Question and Edit answer features have issue with implementation as we were not able to provide the feature on same page as question.

Overall Project Summary

This Project was taken up to learn the industrial process of developing a software. We used Agile methodology to develop our project called HoverSpace. HoverSpace is an online portal developed for the college community keeping in mind the needs of student, professor and staff. Any registered user can post any question related to academics or daily life on the website and fellow users can answer it. In this way a user can also socialise with people and also get something meaningful out of their socialisation. The users can read the question, answers to them , upvote or downvote them and can also mark a question as bookmark. We also try to maintains a healthy environment for discussions so any inappropriate or vulgar content is flagged by users and is immediately taken down.

The main reason behind developing HoverSpace was to learn the methodology behind developing such projects. Development of the project up till now has been done in three sprints. Each sprint comprised of 2 meet ups, 1 meetup per week. Features to be developed in each sprint was decided before the first sprint planned using Usecase diagrams and user stories. Tasks were distributed in every meet up and scrum master of that particular sprint was responsible for management of tasks. We used github for project management, telegram to communicate within the team, heruko to host Hoverspace and TravisCI continuous integration and testing as well as automated deployment.

The main take away from the project was working in the team together to develop the project. We learned designing System Architecture, designing class diagrams . We also learned project management and saw the responsibilities as a product owner and scrum masters. Learned designing wireframes , making simple and user friendly front end designs.

Future changes to HoverSpace to make it even better for use.
Edit option in profile,implementing comments on questions and answers, implementing auto tagging and flagging using natural language processing. Formatting options for answers like adding images ,links etc.