Own Idea - Computer Science Forum - Project Plan

Group No. 2 - Screw you Gary, we'll call it what we want.

February 19, 2016

1 Project goals and objectives

1.1 Background

The project was our own idea to do, hence doesnt have the same context as other projects. We are aiming to create an online forum for computer science students of Trinity College Dublin to contribute to and benefit from, hence we are treating our course-mates as our clients, and will ensure that they are happy with the final product.

Catering for computer science students, we will have to keep their various activities in mind, and build a forum that suits their needs in regards to these activities. For example, we need to be able to segment the forum into different groupings based on year group, so that students can easily seek out their peers. We also need to keep subject lists in mind, and create sub-forums for each so that again students can seek out exactly what they need as soon as possible.

1.2 Objectives

Successful completion of the project should lead to increased communication amongst computer science students, and hopefully an increased understanding of their course, assignments and subject matter. The hope is that students will use the forum to aid each other and contribute to meaningful discussions about their real world studies.

1.3 Goals

1. A specialised online message board for computer science students of Trinity College Dublin to contribute questions, answers and discussions about their course.

2. Separated sub-forums per year grouping, which is further broken down into sub-forums for each topic and module.

3. Unique information for each user and post. For example, unique user names, unique post dates, etc.

4. Moderator tools to maintain the forum, help prevent spam and edit currently existing posts.

5. Best Response System, where the original poster of a topic can highlight a response that they thought was best/gained the most knowledge from so that other users in a similar position can easily get the same benefits.

2 Project scope

2.1 Project deliverables

1. Source code for front-end (PHP/HTML).
2. Source code for back-end (SQL).
3. Full documentation of database (entity relationship, relational schema, functional dependency diagrams etc).
4. All documentation required by the module (i.e. weekly meeting minutes, project plan etc.)

2.2 Project Boundaries

2.2.1 In scope

1. Unique user names.
2. Trinity e-mail exclusive sign-up.
3. Password protection.
4. Topic creation.
5. Replies to topics

2.2.2 Out of scope

The below items will be attempted, should time permit it.

1. Text editing tools (will attempt to integrate these if possible).
2. Github integration.

3 Project approach

3.1 Initial schedule

Stage	Description	Start	Finish	Duration (in days)
Team Formation	Met as a team, broadly outlined goals and tasks for the project ahead	19th Jan	25th Jan	7
Research and self education	Researched and self taught languages and techniques required.	25th Jan	8th Feb	14
Project Work	2nd years developing front end, 3rd years working on the back end	8th Feb	4th April	56
Reflection	Review project and note successes and failures for future use	4th April	11th April	7

3.2 Milestones

1. First front end implementation - 15th February.
2. Back end specification - 22nd February.
3. First back end implementation 29th February.
4. First working prototype - 14th March.
5. Security - 21st March.
6. Polished product - 4th April.

3.3 Gantt chart and work breakdown structure

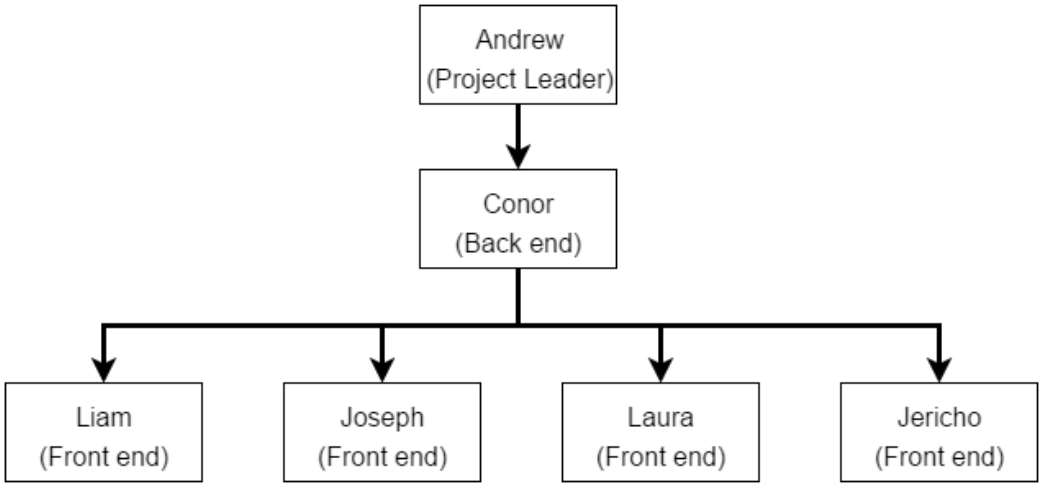
The gantt chart can be found appended to this document, as including it here would involve scaling the image at a factor such that the original image would be incomprehensible

4 Project organisation

4.1 Roles and responsibilities

Role	Group member	Responsibilities
Project leader/Back end	Andrius Buinovskij	Allocating tasks, back end programming.
Second in command/Back end	Conor McKenna	Taking minutes, writing documentation, back end programming.
Front end	Joseph Fitzpatrick	Programming front end
Front end	Laura Young	Programming front end
Front end	Liam Farrelly	Programming front end
Front end	Jerico Alcaras	Programming front end

4.2 Staffing chart



5 Risk analysis

5.1 Risk analysis

Risk element	Impact (1 to 5)	Likelihood (1 to 5)	Risk factor (I*L)
SQL Injection	5	4	20
Inappropriate content	1	5	5

5.2 Risk mitigation

5.2.1 SQL Injection

SQL Injections will be dealt with in the manner standard within industry standard practices such as input sanitization and seperation of user input and actual SQL commends.

5.2.2 Inappropriate conent

Inappropriate content is sure to arise, although hopefully in a jovial manner. Mitigation is left up to moderators and the users themselves.

6 Project Controls

6.1 Scope

Project leaders set out the basic scope of the project from the first week. This includes all the basic features of a forum, the things to store in the SQL database and an overview of what the front end design would be like. To keep from being too overly ambitious in our approach, we agreed we would finish what we set out to achieve in the basics first, before adding more to the scope of the project.

6.2 Quality

All quality factors will be regulated via simple candid evaluation. A forum is a standard and simple concept, and our implementation will strive to simply adhere to the standard already widely prevalent.

6.3 Schedule

We set moderately strict deadlines for this project. After meeting on a Monday, we would delegate ourselves work to have done for next week. The deadlines were met so far, however we would set them in a way that if they werent met we would still be ahead of schedule enough that it would be easy to keep or progress on track for the final submission.

7 Communications

7.1 Client communications

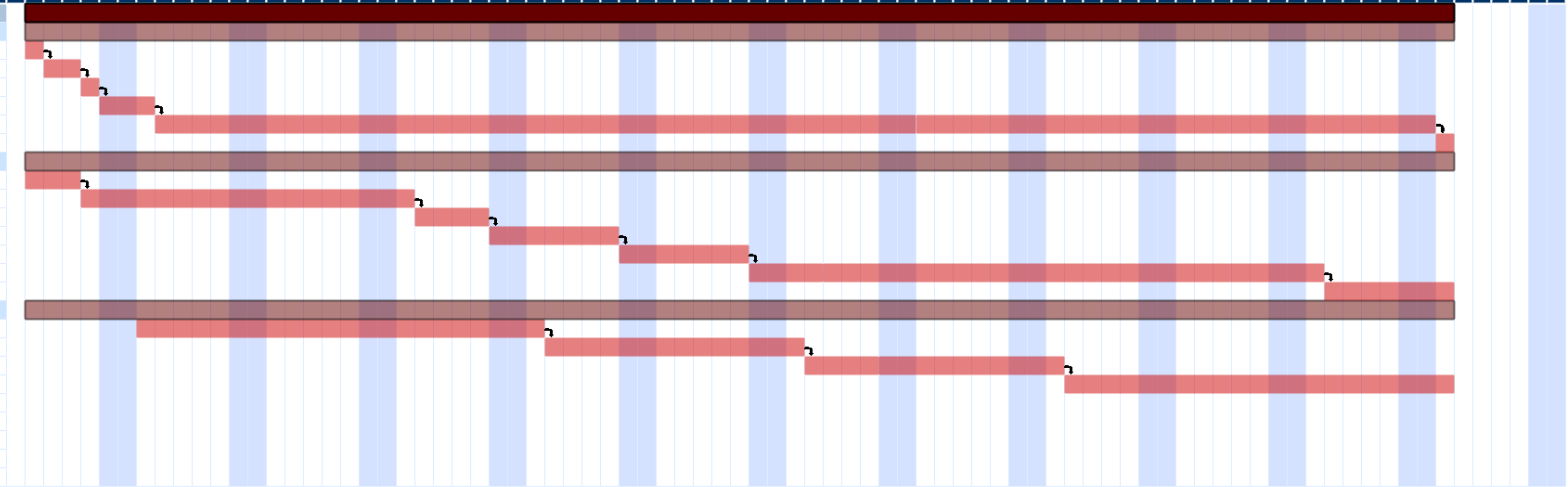
Meetings	Date	Purpose
Initial meeting	22nd Jan	Discuss features students would want to implemented in a CS forum.
Post reading week meeting	7th Mar	Check up on the desired features implementation.
Final meeting	28th Mar	Final review of the website with the

8 Appendix

8.1 Content

1. Gantt chart.
2. Requirements document.
3. Change log (void, no changes have taken place).
4. Compiled minutes.

	Task Name
1	Complete project execution
2	Team organsization
3	Project examination
4	Project specification
5	Client meeting
6	Allocating Roles
7	Weekly and Demonstrator Meetings
8	Project submission
9	Presentations and Paperwork
10	Project Pitch
11	Requirements Presentation
12	Requirements Document
13	Project Plan
14	Software Design Specification Document
15	Final Presentation
16	Development Report
17	Project work
18	Front end implementation draft
19	Back end implementation draft
20	Front end implementation
21	Back end implementation



Requirements Documentation for SCSS Student Forum

Group 2 - Screw you Gary, we'll call it what we want.

February 11, 2016

1 Introduction

1.1 Overview

- Our project aims to create a forum for students of Computer Science to use to be able to discuss different topics and matters regarding to the course, and to be able to give and receive help from their course mates.
- Currently, a platform suitable for discussion of computer science coursework is conspicuously missing. If a student is confused about an assignment, they may contact the tutor or the professor, or their course friends, all of whom may not be able or willing to help at all. We propose a better solution, one where you can gather more responses from your course mates, and are able to contribute to others who face similar problems and can achieve them together, A Computer Science dedicated forum.

1.2 Scope

- We wish to have a single forum that encompasses all modules for all year groups across Integrated Computer Science, Computer Science and Business, and Computer Science and a Language. Users should be able to:
  - Post new topics in each module page.
  - Reply to existing topic threads.
  - Choose best response to the current thread.

- The forum should only be accessible to students, demonstrators, teaching assistants and lecturers with a valid @tcd.ie email address.

1.3 Objectives and Success Criteria

- To complete the forum by Week 10 of Hilary Term.
- To host the forum on the Trinity KDEG servers, which we have been given access to. The forum should handle multiple users at a time and should accept each valid email to sign up.
- To program the front end in HTML/PHP and design a back end SQL database.
- To communicate with our expected user base, which are the student body associated with SCSS, in order to ensure that the forum meets their expectations, and to guarantee the forum would be something they would use once it is made available.

1.4 Definitions, Abbreviations

- SCSS - School of Computer Science and Statistics.
- CS - Computer Science.
- CSB - Computer Science and Business.
- CSL - Computer Science and a Language.
- HTML - HyperText Markup Language.
  - Used as standard markup language in creating websites.
- PHP - Personal Home Page.
  - Used for web design and also as a general purpose programming language.
- Forum - An online discussion site where people can hold conversations in the form of posted messages.
- UI - User Interface.

1.5 References

- http://www.vbulletin.com/forum/help?faq=vb3_board_usage#faq_vb3_forums_threads_posts
- http://php.net/manual/en/preface.php

2 Proposed System

2.1 Overview

- An online forum where students of CS, CSB, and CSL can discuss course topics and trade opinions, ideas and feedback. The forum will allow users to create new topic threads, reply to existing topics and choose the best response to the topic they created.
- The moderators of the forum will be given tools to manage the overall forum. They will be able to delete threads they deem inappropriate, remove spam/derogatory posts and remove users. This will all be manageable using SQL permissions.

2.2 Functional Requirements

- The forum in its final state should:
  - Store unique usernames
    - Each user should have a unique username based off of their Trinity email.
  - Allow creation of new threads
    - Each user should have permission to create a new topic of discussion.
    - Users should be able to create replies to this discussion.
  - Choose best response to a topic
    - Users that create topics should be able to highlight the reply that they received the most help or information from in general so other users with similar complaints can also see it.

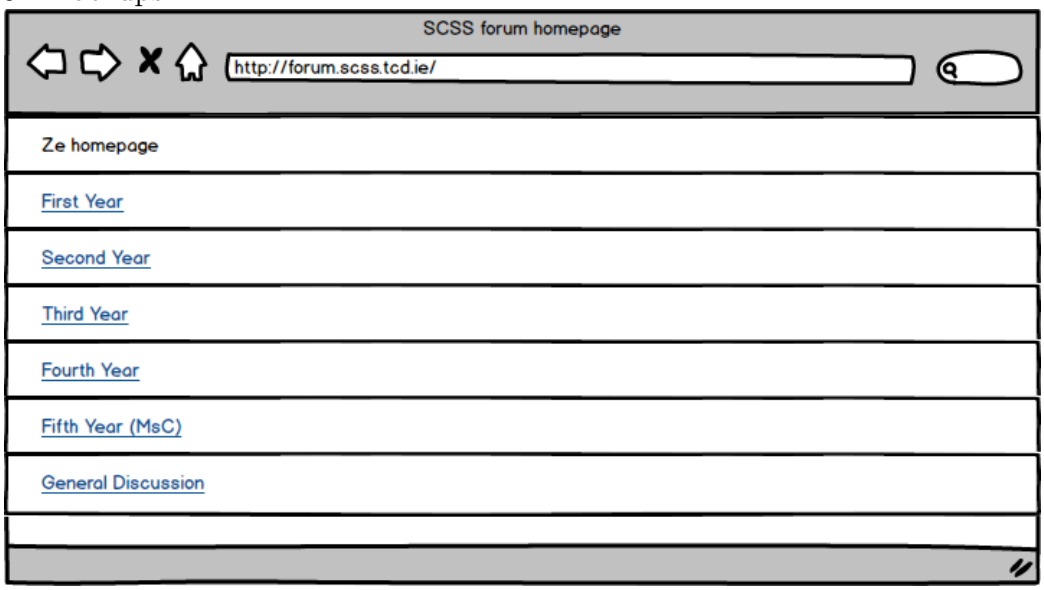
2.3 Non-functional Requirements

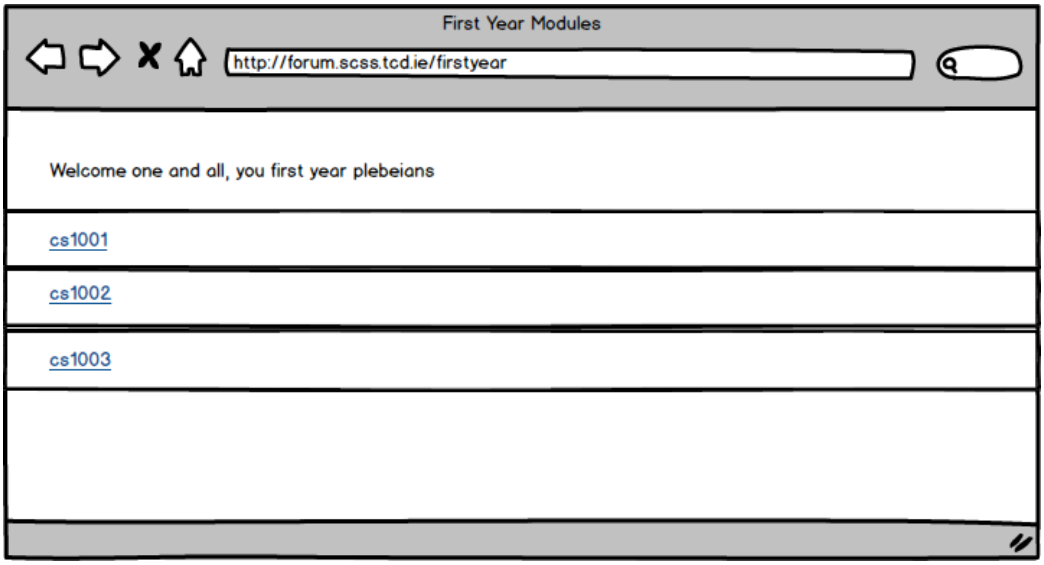
- The forum should prioritize:
  - Scalability
    - The forum should remain efficient and swift regardless of number of threads and users.
  - Efficiency

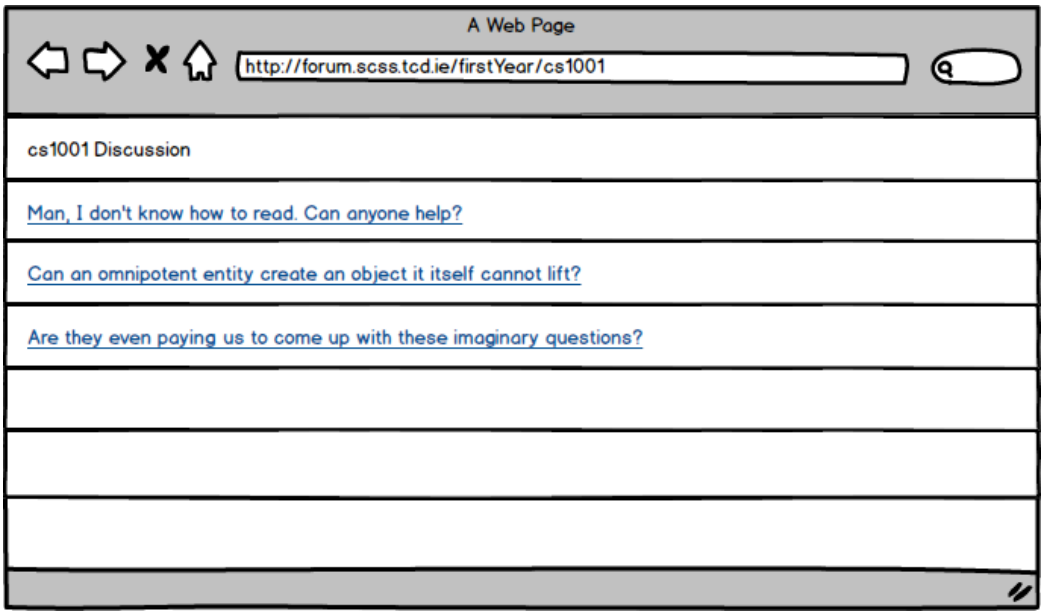
    - The forum should be efficient and responsive i.e a forum post should appear immediately, pages should load instantaneously etc.
  - Security
    - The forum will keep user information secure via passwords and unique IDs.

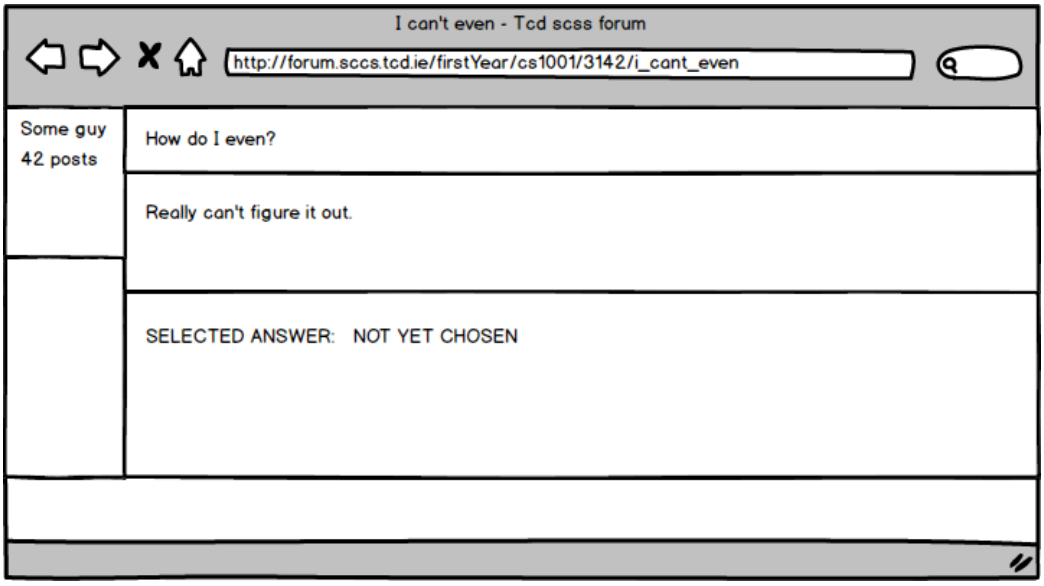
2.4 System Prototype

- UI Mockups

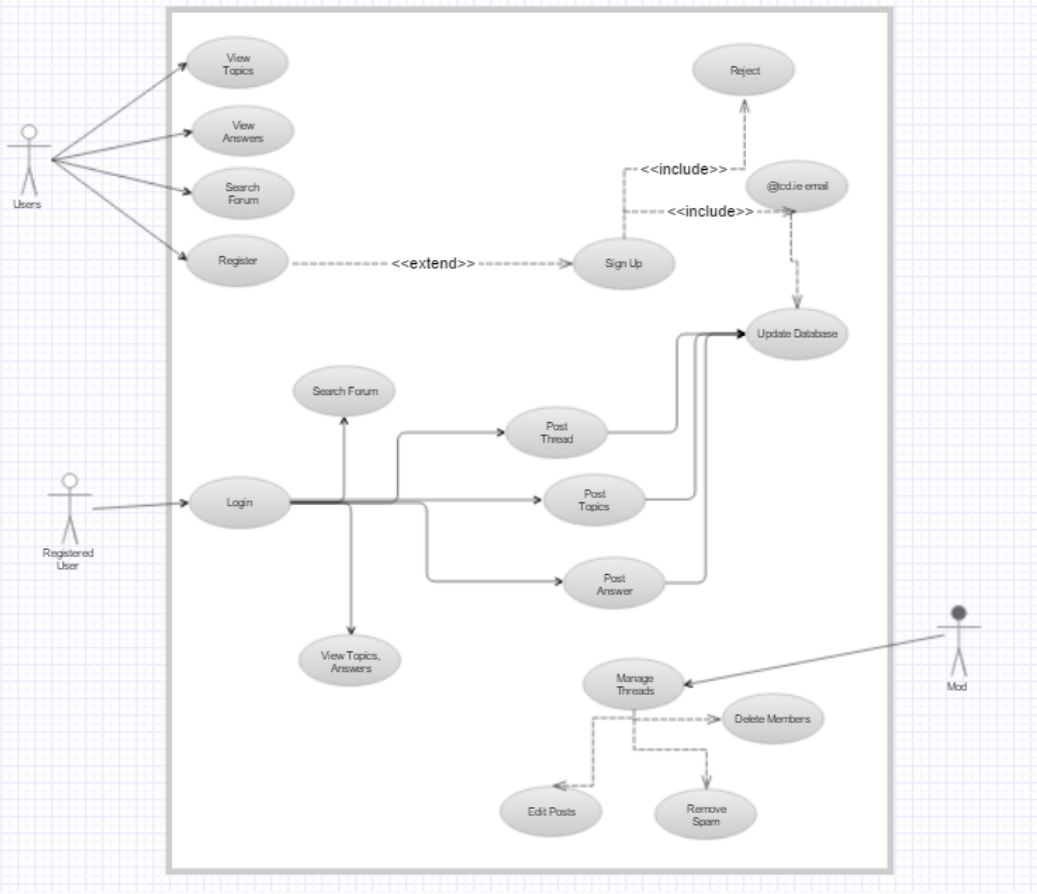



First Year Modules
http://forum.scss.tcd.ie/firstyear
Welcome one and all, you first year plebeians
cs1001
cs1002
cs1003


A Web Page
http://forum.scss.tcd.ie/firstYear/cs1001
cs1001 Discussion
Man, I don't know how to read. Can anyone help?
Can an omnipotent entity create an object it itself cannot lift?
Are they even paying us to come up with these imaginary questions?


I can't even - Tcd scss forum
http://forum.sccs.tcd.ie/firstYear/cs1001/3142/i_cant_even
Some guy
42 posts
How do I even?
Really can't figure it out.
SELECTED ANSWER: NOT YET CHOSEN

- UML Use Case Diagram



Week 1 Minutes

Group No. 2

January 19, 2016, SCSS Glass Room No. 2

1 Attendance:

1. Andrius Buinovskij: ..... Present
2. Conor McKenna: ..... Present
3. Jerico Alcaras ..... Present
4. Joseph Fitzpatrick ..... Present
5. Liam Farrelly ..... Present
6. Laura Young ..... Present

2 Agenda:

1. Team introductions.
2. Discussion of project choices (were narrowed down to D, G, M, Z, AB, AE, AF, AH, Own Idea #1 CS forum, Own Idea #2 Phone profile scheduling app.
3. Weekly meeting time and location setup (each Monday at 15:00 at the glass rooms).
4. Decision whether we are open to new technologies (yes).

3 Assigned tasks:

1. Vote on project choice via online survey.
2. Discuss chosen project with another group.
3. Document minutes and project proposal (if own project).

4 Date and location of next meeting:

15:00, January 25th, Glass Rooms.

Week 2 Minutes

Group No. 2

January 25, 2016

1 Attendance:

1. Andrius Buinovskij: ..... Present
2. Conor McKenna: ..... Present
3. Jerico Alcaras ..... Present
4. Joseph Fitzpatrick ..... Present
5. Liam Farrelly ..... Present
6. Laura Young ..... Present

2 Agenda:

1. Decide on front-end and back-end roles for the team.
   1.1. Conor and Andrew: Back-end - SQL.
   1.2. Jerico, Joseph, Laura and Liam: Front-End - As of yet undecided.
2. Proposed ideas for front end language to be voted upon by the front-end team are: Javascript, Java, Ruby, D, HTML/CSS, PHP.
3. Decided group leader: Andrius Buinovskij.
4. Proposed features for implementation in the forum.
   4.1. Highlighting best response to question.
   4.2. User run polls.
   4.3. Text editing support (e.g. code boxes).

3 Assigned tasks:

1. Spend time researching different languages to use in implementing front-end of the project.
2. Provide learning and research resources for the languages suggested.
3. Set up a Github repository for the group.

4 Date and location of next meeting:

15:00, February 1st, Glass Rooms.

Week 3 Minutes

Group No. 2

February 1, 2016

1 Attendance:

1. Andrius Buinovskij: ..... Present
2. Conor McKenna: ..... Present
3. Jerico Alcaras ..... Present
4. Joseph Fitzpatrick ..... Present
5. Liam Farrelly ..... Absent
6. Laura Young ..... Present

2 Agenda:

1. Choose frontend language.
   1.1. HTML and PHP.
2. Review wireframes (made via Balsamiq)

3 Assigned tasks:

1. Tasks for front end team.
   1.1. Learn to write html code containing embedded SQL.
   1.2. Learn to host a dummy website on localhost (for testing purposes).
   1.3. Add all learning resources used to github repository.

2. Tasks for back end team.

    2.1. Prepare requirements presentation before dry-run on February 8th.

    2.2. Learn to host a dummy website on localhost (for testing purposes).

    2.3. Add members to github repo.

4 Date and location of next meeting:

15:00, February 8th, Glass Rooms.

Week 4 Minutes

Group No. 2 - Screw you Gary, we'll call it what we want.

February 8, 2016

1 Attendance:

1. Andrius Buinovskij: ..... Present
2. Conor McKenna: ..... Present
3. Jerico Alcaras ..... Present
4. Joseph Fitzpatrick ..... Present
5. Liam Farrelly ..... Present
6. Laura Young ..... Present

2 Agenda:

1. Members are sufficiently proficient in HTML to begin working.
   1.1. Will also study PHP.
2. Decided on moderator functionality
   2.1. Deletion and editing of posts and threads.
   2.2. Contain moderation tools within thread view.

3 Assigned tasks:

1. Tasks for front end team.
    1.1. Headers and footers - as a team.
    1.2. Supply database requirements to back end team - as a team.
    1.3. Log in screen - Laura.
    1.4. Home page - Joseph.
    1.5. Year group page - Liam.
    1.6. Sub-year modules - Jerico
2. Tasks for back end team.
    2.1. Prepare requirements document.
    2.2. Design back-end SQL database.

4 Date and location of next meeting:

15:00, February 15th, Glass Rooms.

Week 5 Minutes

Group No. 2 - Screw you Gary, we'll call it what we want.

February 15, 2016

1 Attendance:

1. Andrius Buinovskij: ..... Present
2. Conor McKenna: ..... Present
3. Jerico Alcaras ..... Present
4. Joseph Fitzpatrick ..... Present
5. Liam Farrelly ..... Present
6. Laura Young ..... Present

2 Agenda:

1. Check progress and "touch base".
    1.1. Everyone's doing splendidly, work thus far publically visible on git repository.
2. Concurred that current front-end aesthetic

3 Assigned tasks:

1. Tasks for front end team.

    1.1. Deliver database requirements to back end team - as a team.

2. Tasks for back end team.

    2.1. Prepare project plan - as a team.

4 Date and location of next meeting:

15:00, February 22nd, Glass Rooms.