CMP2089M Group Project

Group 39 Project - Social Network

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Project aim

The aim of this project is to create a social network that is built by students, for students. This will allow students to engage with one another academically and leisurely, yet also allowing them to organise and plan their day-to-day academic lives. Additionally, they will be able to discover and learn all in one place and with features such as relevant job opportunities, they could also use the service to find future careers.

This social network will achieve what sites such as Blackboard have tried but could not achieve – making students' lives easier. The social network will compact sites such as Blackboard and have information, the ability to organise and customise, and more in a way that will allow students to make their day-to-day lives easier and not confuse them or cause frustration as they had before. As well as this, the network will allow for communication between users in private one-to-one chat rooms, for personal discussions, or big forum chat rooms, for larger general discussions. Both of these chat options will allow for learning or just general leisurely chats, depending on what is required, however, both will have file sharing abilities. Students will also have their own personal accounts on the site, allowing for customisation to showcase their portfolio – which is good for employability in the future and also interacting with likeminded people on the site itself.

In comparison to Facebook's generalised approach, we will achieve our objectives and aims by supplying students with exactly what is necessary to using our website. Our social network shall not have additional add-ons and features (i.e. such as Facebook's chat box games) that are unneeded in utilising our social network to its fullest. However, similar to facebook, we are using features such as file sharing, user accounts, job boards, etc. These features will be incorporated in a similar fashion to the standard implementation of said features. Allowing for users to get up and running easier without having to learn new techniques to perform similar actions.

Aim: To create a social network which allows students to socialise, engage, plan and organise their day-to-day academic life.

Objectives to meet:

1. User accounts
2. Portfolio
3. Enable one-to-one communication
4. Private and public chat rooms
5. Enable Student organisation
6. Jobs board
7. File sharing
8. Engaging and easy to use interface

Academic literature

This section covers some of the literature which will be useful when designing and developing the social network. For example technical knowledge and interface design research.

1. Trust and Privacy Concern Within Social Networking Sites: A Comparison of Facebook and MySpace (Catherine Dwyer Starr et al, 2007).

This literature analyses the effects of trust and privacy issues on social network users. It compares two social networks and discusses the effect of the website architecture on network user behaviour, willingness to communicate with new people and give out personal information. This paper will be useful when designing the website security systems. The paper will help to develop a social network on which users feel safe and secure to communicate.

2. Student engagement in course-based social networks: The impact of instructor credibility and use of communication. (Jehad Imlawi et al, 2015).

This literature discusses the effect of social media on students and learning within education. The paper looks at aspects of social media and relates each aspect to student engagement. These include the media credibility and overall student satisfaction with content delivery. This paper is relevant as we are producing a social network which is based around students and we can therefore use this paper as a reference and guide for producing our content effectively.

3. A Comparison of Server Side Scripting Technologies (Tyler Crawford et al, 2017).

This article compares the options for server side programming. The analysed methods include; Django, NodeJS Javascript, Ruby on Rails and PHP. Our project will require a significant amount of server side programming and this article will be used to aid us with the decision about which language to use for back-end web development. We will be using Vanilla PHP due to it's versatility and ability to be easily incorporated into HTML code.

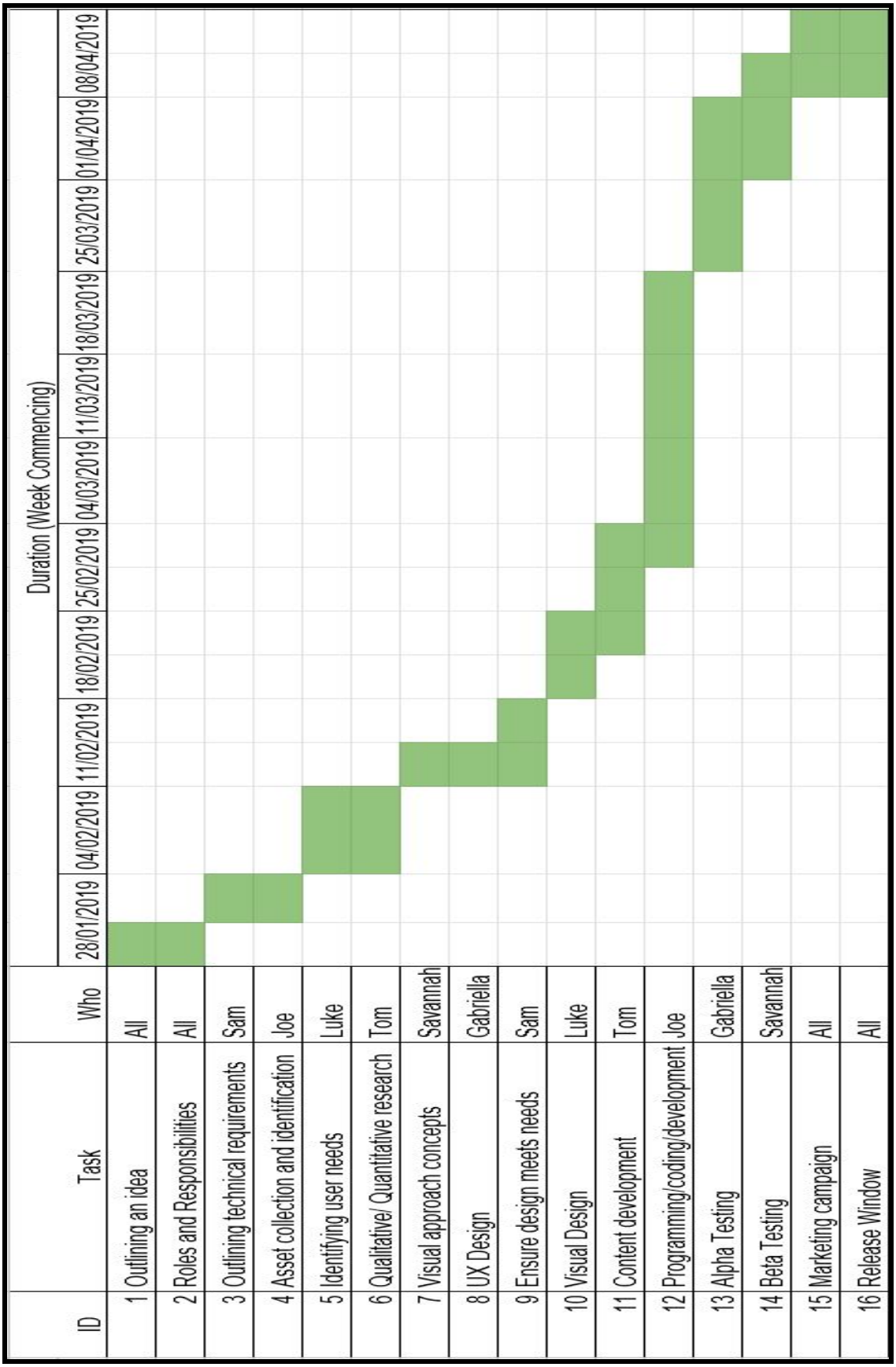
4. THE NEEDS–AFFORDANCES–FEATURES PERSPECTIVE FOR THE USE OF SOCIAL MEDIA (Karahanna et al., 2018)

This article explores how an individual's psychological needs motivate their use of social media and the extent to which these applications provide affordances to satisfy user needs. Since we will be implementing web interface development, it is important to identify users' needs in order to produce a highly usable and accessible system. We will be referring to this article throughout our design process and consider its findings to ensure our product will be well equipped with necessary and desired features.

5. Social Media as a Learning Technology for University Students
(Hussain et al, 2018).

This paper demonstrates the role of social media as a learning technology for students and highlights the problems associated with its use. Our network will focus on students, therefore it is important to explore existing findings related to social media as a learning tool. This study demonstrated that social media plays a significant role as a learning technology and that correct use can improve virtual interaction and access to information. We will use the findings of this study to improve our design by maximising points of success and avoiding previous failures.

Project plan and projected implementation



The first section of the project plan is the discovery stage. The time allocated to this stage will allow decisions to be made on what the overall product is going to be. This stage includes the outlining of the idea to build a basic plan of what is going to be implemented, as well as the team's roles and responsibilities. It is important to delegate roles and responsibilities fairly so that each member is pulling their weight and can express their skills in the most successful way possible. During this stage, time is also set aside to define technical requirements and collect assets. It is crucial that the technical requirements are stated so that the solution can be worked towards following the requirements. Planning this is important as overall it will make the journey much simpler. By defining the requirements and how they will be met early on, we can build an idea of how the final product can be implemented and be successful.

Following this section is the definition stage, which involves defining the idea, and the needs which motivate the idea. This stage includes carrying out research in order to build an image of the user's needs. This is important because the user needs can be used as a set of goals which the final solution must meet. If the solution has met the user needs which have been defined, then it shows that the implemented version is successful. This stage also includes designing the solution through methods such as wireframes. Visual designing creates an understanding of what the final solution should look like, giving the developers a visual representation of what to implement.

The final section of the project plan is the development stage. This stage includes one of the most important parts - the actual development and implementation of the code to create the product. The most time is delegated to this section as it is crucial that the code is fully polished before release. This section also includes alpha and beta testing. Alpha testing involves people close to the project testing the site. This can seem biased, however, it is important to alpha test since it allows people with a background in development to test the product and try and find any technical bugs which need fixing. On the other hand, beta testing involves inviting a selection of university students, who are the target market, to come and test the main features of the system. This is important as it will show us how the actual users use and interact with the system and allow us to find any issues with the interface that need fixing as well as attempt to make the user interface easier to use if it is causing concerns to the team. The final stages in this development section include the marketing of the product and its actual release. Once released, the success of the project can be measured by the extent to which the product meets the requirements defined.

Risks and risk matrix

Risks

- Hate speech - Public chat rooms could be used to spread hate speech and racism by a select few individuals. This has the potential to upset and offend many people as well as painting the service in a very bad light, possibly causing the service to shut down
- Cyberbullying - It could be possible to use both private and public chat rooms to cyber bully users. This will create a toxic environment for users and deter them from using the service. Again, it will also put a bad name on the service
- Privacy - User information (date of birth, email address, home address etc) may be obtainable to be used for malicious purposes. If personal information is not protected any user could find out a lot of personal information about any other user. This would result in a huge breach of privacy and potentially put the user in jeopardy
- Security breach - Malicious attacks on the user database could lead to sensitive information being obtained
- Sensitive media - Users posting either sexual or violent media that some users may find upsetting or disturbing
- Loss of user data - It is possible that database tables containing user data may be altered/removed resulting in the loss of user data
- Money of services - As the social network expands costs of hosting and servers will increase, has the possibility to increase higher than what is budgeted
- Poor testing - poor testing can result in an incomplete service that does either not work correctly or at all
- Interface problems (one thing not compatible with another) - During development different code files/languages may not incorporate well with one another. One developer may have written code in a different language to another, resulting in some compatibility issues and a loss of functionality

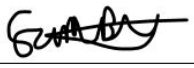
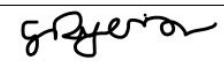
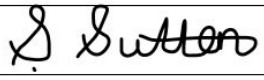
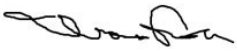
Risk matrix

Key: L = Likelihood, C = Consequence. 1 means a low likelihood/consequence, 5 means a high likelihood/consequence

Risk	Detail	Solution
Hate speech L: 2 C: 5	Public chat rooms could be used to spread hate speech and racism by a select few individuals	Moderators could routinely check chat rooms for the presence of any hate speech. They can then remove it and ban the user that posted it. A 'report' button could also be implemented for users to report any hate speech themselves
Cyberbullying L: 3 C: 4	It could be possible to use both private and public chat rooms to cyber bully users.	Include a 'report for bullying' button that allows users to report any instances of cyberbullying. An administrator could then ban/punish the bully account
Privacy L: 2 C: 4	User information (date of birth, email address, home address etc) may be obtainable to be used for malicious purposes.	Have visible and easy to use privacy options that allow the user to show as little/as much information as they wish
Security Breach L: 1 C: 5	Malicious attacks on the user database could lead to sensitive information being obtained	Encrypt the database information and place passwords/security measures on the database
Sensitive media L: 3 C: 3	Users posting either sexual or violent media that other users may find upsetting or disturbing	Similar to hate speech, moderators could check chat rooms for any sensitive material and remove it if needed
Loss of user data	It is possible that database tables containing user data	Take regular backups of the database to allow recoveries and set permissions so only

L: 2 C: 5	may be altered/removed resulting in the loss of user data	certain people can manipulate tables
Money of servers L: 1 C: 2	As the social network expands the costs of hosting and servers will increase, has the possibility to increase higher than what is budgeted	Make sure a detailed budget is in place that accounts for rapid growth and expansion
Interface problems L: 1 C: 4	One developer may have written code in a different language to another, resulting in some compatibility issues and a loss of functionality	Ensure a language/languages are agreed upon before development starts to ensure compatibility.
Poor testing L: 2 C: 3	Poor testing can result in an incomplete service that does not work correctly or at all	Select a wide range of individuals to test the data multiple times. Have a solid test plan and goal set before testing begins

Contribution

Name	Student ID	Contribution	Signature
Sam Byford	15620782	16.6666666667	
Joe Pearson	14587506	16.6666666667	
Luke Powell	16634291	16.6666666667	
Gabriella Di Gregorio	15624188	16.6666666667	
Savannah Sutton	15565166	16.6666666667	
Tom Fox	17661465	16.6666666667	

For this assignment we split the whole report down into sections and gave everyone an equal number/length of sections to complete

Sam
Sam was assigned the risk analysis section which included identifying risks, there consequences and any resolutions we could put in place to prevent or nullify them. Sam then worked on the smaller appendix and contribution sections.

Joe
Joe worked on the introduction section, defining the project aim and its objectives. He also Identified the key features of the project and how it will benefit the desired target audience. As well as this he defined how we could go about meeting our objectives.

Tom
Worked on the research team to identify valuable source material that can be used to help design and develop the social network. Tom then helped to make sure all references were cited correctly and in line with the harvard referencing standard.

Gabriella
Due to the high level of involvement of the section, Gabriella also worked alongside Tom to help identify and analyse appropriate academic literature that will be beneficial for the project. Gabriella also made sure all references were cited within the style of harvard referencing .

Luke
Worked with Savannah to create an outline for the project plan. Came up with a detailed Gantt chart and description that explained the steps our team would go through to complete the objectives and create the finished artefact. Also provided a detailed explanation of the importance of the targets set out.

Savannah
Savannah worked with luke to create the project plan and description. Savannah created a Gantt chart that, when combined with Lukes, provided extra detail and information that will be pivotal to allow a smooth design process.

References

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Appendix

Attendance

- 31/01/19 - Everyone in attendance
- 06/02/19 (Wenting) - Sam, Tom, Joe, Gabriella and Luke in attendance
- 13/02/19- Sam, Joe, Gabriella, Luke and Savannah in attendance
- 20/02/19 - Sam, Joe, Luke, Tom and Savannah in attendance

Decisions/Task allocation

- 31/01/19
    - Decided on overall aim and objectives for the project
    - Sorted out the 'needs' of the user
    - Split tasks in assignment 1 accordingly
        - Joe = Aim
        - Tom and Gabby = Literature
        - Sam = Risk matrix
        - Savannah and Luke = Project Plan
- 06/02/19 (Wenting)
    - Set a deadline for Assignment 1 draft
    - Discussed meeting with a tutor
    - Techniques and languages we may use for the project have been defined
    - Clarified aims
- 13/02/19
    - Looked over the draft, suggested improvements
    - Tom and Gabby assigned to do references
    - Sorted out the contribution form
- 20/02/19
    - Finalising Assignment 1
    - Improving document based on feedback with tutor
    - Submitting document

Progress

- 31/01/19
    - Initial creation of Aim and delegation of tasks for assignment 1
- 06/02/19 (Wenting)
    - Started to write a report
    - Some research has been done into technologies
- 13/02/19
    - First draft complete
    - Decided on the correct project plan
    - Finalised aim/objectives
    - Finished contribution form
- 20/02/19
    - Submitted final document
    - Began work on project