Mid-Term Delivery Documentation

Dublin City University - School of Computing
B.Sc. in Enterprise Computing
CA472 - Enterprise Computing Team Project
Mid Term Delivery Documentation
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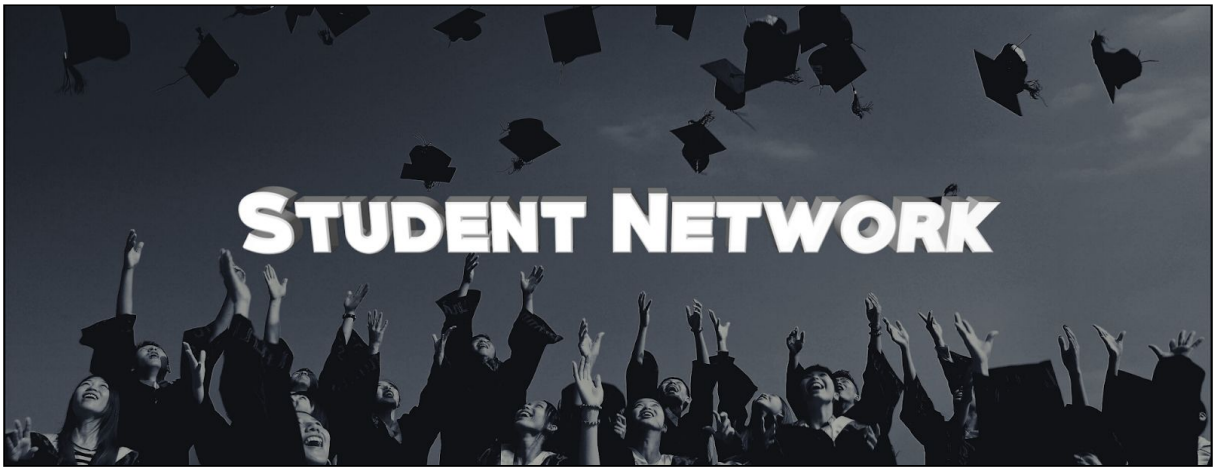


Project Team:

Student Name	Student Number
Michael Walsh	17428926
Karl Hannigan	17435332

Supervisor
Gareth Jones

Table of Contents

Overview

The system we have proposed the design of can be described as a student social networking platform which also provides the users with access to valuable student resources. Users will have the ability to access tutoring services, a student discussion board and a secondhand books marketplace through the use of the system along with being able to connect and interact with other students across the country on the networking section of the site.

The system is being developed with the intentions of allowing students to build valuable connections with others studying in colleges and universities across Ireland with a focus on them actually becoming friends in real life. They will have the ability to add and connect with other users, create and customize their own profiles, share and interact with posts and message each other directly through the platform. Modern social networking platforms have too much focus on being attractive to all users in the world and diminishes the feeling of having a close connection with other users. Our intentions of building this niche demographic of users, who have similar uses and intentions through the platform, greatly improve the chances of a student being able to build an actual valuable connection with another user. We believe that this is one of the most beneficial uses of the platform as it is much more important to build a close relationship with 20 others than to have 1,000 ‘friends’ on a modern day social networking platform and in reality only having 5 close friends in real life.

Students can avail of tutoring services through the site where they will be able to access one to one tutoring in a module / topic that they may be struggling in or want to improve their performance in. Tutors will apply through the site by filling out a form which will then be sent directly to us for review. If the tutor’s application is approved they are assigned an account which they can customize and will become listed on the site. Students will be able to view a list of tutors offering services in their relevant field of study and directly message them through the platform. There will also be a review system in place allowing students to rate the services provided by tutors.

Students will also have access to a student discussion board and a second hand books marketplace. The student discussion board will be split up by faculty, for example School of Business and then further separated into subsections of different topics within that faculty. This allows students to discuss different topics with other students and they can ask or answer questions in relation to said topic. The second hand books marketplace allows students to list books that they currently own and intend to sell on the site. Students will be able to interact with each other if they are seeking to buy a book and we will have no association with any of these sales. Reading material for third level students tends to be very expensive and providing students the ability to buy these second hand will be very beneficial for students.

1) Initial Business Model Summary

1.1) Business Model Overview

The tutoring aspect of the platform acts as our main revenue stream which is the basis of our business model. Tutors listed on the site choose their own hourly rate and students pay this directly to us before receiving their tutoring. We take 15% commission on this rate and pay all tutors once every 2 weeks for the services they have provided over this time period. We intend to maintain a close ongoing relationship with each of the tutors listed on the platform in order to gain trust and to ensure that the tutoring system operates as planned. We also believe that there is potential to generate revenue through advertising on the platform in the future when we have an established customer base but we don't consider advertising to be relevant as a revenue stream during the early stages of the business. The platform gives advertisers access to a student only market which allows for direct targeted advertising. This would be highly beneficial to many businesses such as nightclubs, takeaways and companies offering graduate programmes etc. The platform would also help these businesses to minimize wasted resources on advertising elsewhere and we believe this would attract many businesses to advertise on our platform.

1.2) Customer Segments & Value Propositions

Our two customer segments on the platform will be students and advertisers. Students gain their value through having the ability to build a student network and access valuable student resources. The review system which we will implement onto the platform will allow students to ensure they are being provided the highest quality tutoring services available, allowing them to perform better in college. Advertisers gain their value through direct access to our user base. This gives them the opportunity to increase their revenue through this on site advertising. We do not believe that advertisers will become a customer segment until we have an established customer base.

Although tutors are users of the platform we do not consider them to be a customer as we intend to work closely with them to deliver this service. We believe tutors act as one of our key partners in relation to our business model and for the delivery of value propositions. We have attached our Value Proposition Canvases for each of these customer segments and our overall Business Model Canvas in the appendices at the end of the document. *(1)*

1.3) Market Analysis

1.3.1) Market Size and User Demographic

We have decided to address the market size by defining our overall Target Market (TM). Total Addressable Market (TAM) and Served Available Market (SAM) are also relevant but given that we intend to first launch in Ireland we have decided to cover Target Market here. TAM and SAM will be covered later on in our final project delivery which will become more relevant in the future as we begin to expand.

Target Market

The Higher Education Authority's (HEA) statistics unit publishes reports where they cover key facts and figures in relation to higher education with the most recent one being published in 2018 *(2).* It is noted that there were 231,710 students enrolled in the 2017 / 2018 academic year in HEA funded institutions. We can also see that this has increased at a rate of growth of 16% from 2012 to 2017 which proves our potential target market is increasing in size.

52% of this total number enrolled were female and 48% were male. We can examine the data found in this report in order to gain a better understanding of our target market in order to create market segments. Unfortunately the report has split the age ranges of enrolled students into undergraduate and postgraduate courses so we have compiled the data into our own table to display this appropriately as seen in *Figure 1* below.

Age	Number Enrolled	%
17 and Under	1,956.00	0.87%
18	16,251.00	7.27%
19	33,378.00	14.92%
20	34,771.00	15.55%
21	30,146.00	13.48%
22	19,914.00	8.90%
23	10,822.00	4.84%
24	7,699.00	3.44%
25 - 29	23,236.00	10.39%
30 and Over	45,490.00	20.34%
Total	**223,663.00**	**100.00%**

Figure 1: Ages of students enrolled in part-time and full-time undergraduate and postgraduate courses in Ireland (Some students are missing from the age statistics due to missing data / data not being recorded)

We have outlined above the demographic of the total number of students in Ireland. We also feel that it is important to cover the number of these students which use social networking platforms and also may potentially use tutoring services as this is related to delivering on our revenue streams. We have reviewed a report created by NUI Maynooth's Department of Sociology which covers student social media usage. One of the findings of this report is that 93.89% of students that were surveyed spend a minimum of 1 hour per day on social media. This leaves us with a potential target market of 215,490 for the social networking aspect of the site which delivers on our advertising revenue stream. This report also found that 83% of students use instant messaging platforms to communicate with other students about college work at least weekly. We have created our own chart using the statistics in the report which is outlined in the appendices. *(3)*

We have completed a questionnaire which we have received a number of responses on in relation to the potential use of the platform. One of the questions we asked in the questionnaire was 'Do you think you will ever need grinds or tutoring services during your time in college?'. We found that 40% of students have either used these services before or they stated that they would use them in the future. This gives us a potential market of 92,684 users of the tutoring aspect of the site. This delivers on our commission charges revenue stream. Another 40% of students who responded answered 'Maybe' to this question which could possibly double our potential users of this service. The chart outlining these responses and the questionnaire have been attached to the appendices at the end of the document. *(4)*

1.3.2) Market Segmentation

We believe it is best to target our market in two distinct segments: students just finished secondary school and currently attending college / university generally aged 17 - 22, and a second segment of students covering ages 22+ which are outlined in *Figure 2* below.

Segment	Age Group	Number of Students
1	17 (and under) - 22	136,416
2	22+	87,247
Total	**All Ages**	**223,663**

Figure 2: Outlined chosen market segments and number of students enrolled

We believe it is important to segment the market in this way as the two segments may gain value from using the platform in different ways. The first segment may be more inclined to be interested in the social networking aspect of the platform for example than the second segment.

1.3.3) Competitor Analysis

From the research we have conducted we have found that there are a large number of sites online that offer tutoring services. Out of the six main sites that we have found only four of the sites offer university level tutoring services. Although four of the sites offer university tutoring services they only offer services in a small amount of topics / subjects. Only one of the sites listed in the table below perform Garda vetting on their tutors Three out of the six sites have a review system in place.

Irish Tutoring Services	University Tutoring	Garda Vetting	Review System
FirstTutors.com	Yes	No	Yes
Hometutors.ie	Yes	Yes	Yes
Tutorhub.ie	Yes	No	No
Schooldays.ie	No	No	No
Grindscentre.com	Yes	No	Yes
Classhub.com	No	No	No

Figure 2: Outlined chosen market segments and number of students enrolled

We believe that we are more than capable to compete with this list of competitors due to the fact that we are also a social networking platform. The social networking aspect gives the tutors direct access to a large number of students which would be a huge attraction for potential tutors as they would not have to go searching for their students elsewhere. We think that a review system is crucial for the growth and success of our tutoring services. Garda vetting our tutors is something of huge importance as we intend on offering the highest quality of service to our customers and we want home tutoring to also be available through the site after the COVID-19 pandemic.

As a social networking platform we know there are many other well established social networking platforms out there on the market but we don't actively consider them to be competitors as we are targeting a specific niche demographic of users.

2) Summary of Functional Specification and Technical Description

2.1) General Description

2.1.1) Product / System Function

The preliminary list of product / system functions are outlined below. The Functional Requirements section (Section 2.2) breaks down the systems core functionality. We aim to have the networking and tutoring aspect of the site fully developed for our prototype so only the functionality for these are outlined below. Student functionality is marked with (S), Tutor functionality is marked with (T), and both are marked with (S & T).

User Functionality

Register (S)
In order to access the site students must register using their first name, last name, college / university email, and a chosen username and password.

Apply (T)
In order for tutors to access the site they must apply by filling out a form available on the site which will be sent to us for review.

Login (S & T)
Each user of the platform will log in using their email and password.

Logout (S & T)
Each user will be able to logout of their account on the site.

Customize Profile (S & T)
The user can personalize their profile by updating their first name, last name, bio, university, course, year of study and profile picture.

Search for Users (S)
Users will be able to search for other users on the platform in order to connect with them.

Send Friend Requests (S)
Users will be able to send a friend request to other users of the site.

Accept / Reject Friend Requests (S)
Users will be able to accept or reject friend requests received from other users.

Message Users (S & T)
Users will be able to directly send and receive messages from other users through the platform. This includes messaging tutors on the site.

View Friends List (S)
Users will be able to view their current list of friends.

Create Posts (S)
Users will be able to create posts which will be displayed on their friend's feed.

Interact with Posts (S)
Users will be able to like posts created by other users of the platform. Users should also be able to comment on posts created by other users.

Filter Tutor List (S)
Users will be able to filter the list of tutors based on their subject of choice.

Pay for Tutoring (S)
Users will be able to pay us directly for tutoring services through the site.

Review Tutors(S)

Users will be able to review the tutors that they have attended a tutoring session with.

System Functionality

Website Design
We intend to create a well designed website with a focus on smooth functionality and ease of use. Accessibility will also have a key part to play in this so we intend to ensure screen readers can easily be used on the site. A data policy / collection consent form in relation to General Data Protection Regulation (GDPR) and a privacy notice / statement will also all be considered as a part of this. This will include the use of Django, HyperText Markup Language (HTML), Cascading Style Sheets (CSS), jQuery and Bootstrap in order to develop a clean and interactive user interface (UI).

Display Search Results
When a user searches for another student the system will have to receive the users query and display the relevant results to the user. The system will be able to match the name entered in the search bar to the relevant names in the database. When a user is searching for a tutor they will be able to search for tutors based on their chosen subject / topic by selecting it in a dropdown list. Tutors will have the subjects they teach linked to their accounts.

Friendships
The system will be able to handle sending and receiving friend requests between users. The system will be able to see if the users accept or decline friend requests. The system should be able to add each user to each other's friends list if the friend request is accepted. The system will also provide the user with the ability to view their full list of friends.

Database Connectivity
Connectivity with a database is necessary in order to handle functionality. Django uses a built-in database backends which we will use for local development but when we reach our deployment stage we intend to move to Amazon Relational Databases Service (RDS) where our platform will be hosted on Amazon Web Services (AWS) Elastic Beanstalk.

2.1.2) User Characteristics and Objectives
Our system will be used by two different types of users. The two different types of users are students and tutors. The intended use for students using the platform is to allow them to expand their social network within the college community. They will also have the ability to access a range of valuable student resources allowing them to excel in their chosen degree. The intended use for tutors is to gain direct access to a large pool of students to offer their services to. Giving them access to this community will give them the opportunity to increase their income in a very effective way.

2.1.3) Operational Scenarios
As we have two main users of the system we have split the operational scenarios into students and tutors below.

Students: Before a student can use our system they must register using their first name, last name, university / college email and their chosen username and password. Once the student has logged into the site using their username and password they will then have the ability to customize their profile. First name, last name, bio, university, course, year of study and profile are all fields which can be changed on their profile. Students will also be able to search for other users on the site which they will then be able to send friend requests to.

They will also be able to receive requests from other users which they can choose to accept or reject. Once they have connected they then have the option to direct message these students. Students can then create posts on the site which will benefit from the implementation of gamification allowing them to interact through likes and comments. Through the use of the tutoring section, students can filter the list of tutors by subject / topic and directly message them. When a tutoring session has been scheduled between the tutor and the student the student will pay us directly before taking the tutoring session. The student is also able to log out of the site when needed.

Tutors: Before a tutor can use our system they must register by filling out an application form which will be sent directly to us for review. If their application is accepted they will be put through an in-depth interview process which will determine whether they are suitable to become listed on our site. Once a tutor is accepted they will be given an account which allows them to login to the site. They can then proceed to customise their profile outlining their relevant qualification and experience. Tutors will only have access to the tutoring section of the site and can only interact with students if a student has enquired about their tutoring services. The tutors also have the ability to log out of the site when necessary.

2.1.4) Constraints

Time

We will have a strict deadline in place for late April / early May which must be met in relation to having the project deliverables completed. Studying for exams and completing assessments for other modules will also be quite time consuming and will reduce the amount of time we have available to work on the project.

Accessibility / Usability

We intend to have a strong focus on accessibility and usability to cater for all users which will act as a constraint. We have worked with a focus on accessibility on simpler websites before but lack experience in this area.

Django & Bootstrap

We have only completed one module using Django which may also act as a constraint. Bootstrap are completely new to us which we have no experience using which will act as a constraint during the development of the platform.

Payment Gateway

We have never implemented a payment processing system into a website before. It will take time to research into this area in order to successfully apply the payment system onto the platform.

Amazon Web Services (AWS) Deployment

Deployment to Amazon Web Services is also something that we have no experience with which will take a substantial amount of external learning in order to complete the deployment effectively and will act as a constraint.

Acquiring Tutors

Acquiring the right tutors will act as a constraint as it will be difficult and time consuming to find highly qualified and experienced tutors to suit the needs of the site.

2.2) Functional Requirements

2.2.1) Register (S)

Description

This is the primary step a student must take in order to create a profile on the platform. The student will click a register button and they will be prompted with a form. The form will need to be filled in by the student and it will ask for first name, last name, university email, username and password.

Criticality

This is a critical function of the system. The basis of the system is to have students who gain value from using the site. Without this function the site is completely inaccessible by students and they cannot benefit from its overall functionality. Having this function in place also allows us to keep track of user accounts on the site and make improvements.

Technical Issues

Registrations during development the entry will be stored in Django's *db.sqlite3* database. Once our system has been deployed to AWS it will be using AWS Relational Databases Service for database operation and scalability. We must also remember that a student may only register using a college / university email and a verification system will need to be in place in order to ensure this.

Dependencies

This function is not dependent on any other requirements.

2.2.2) Apply (T)

Description

This is the primary step a potential tutor must take in order to become listed on our platform. The tutor will click the apply button on the site and they will be prompted with a tutor registration form. The tutor will fill in the form and it will be sent directly to us via email. This form is then reviewed and if the tutors form is accepted they will be brought forward to the interview process.

Criticality

This is a critical function of the system as without this function we would not have any tutors registered on the site and they would not have access to the platform. This function allows us to identify if the tutors are suitable candidates to be brought forward to the interview process.

Technical Issues

When the tutors apply online the form must be sent directly to us through email. This automatic email system is something that we have not worked with before and it could act as a technical issue in relation to this function.

Dependencies

This function is not dependent on any other requirements.

2.2.3) Login / Logout (S & T)

Description

Login will work by prompting the users for their email and password. This email and password is located in our database so their entries will be retrieved from here. Functionality will be in place which will allow users to reset their password if necessary.

Criticality

Login and logout function is essential for the platform as it is needed for users to access the site's overall functionality.

Technical Issues
Authorization will need to be in place for security in order to ensure that there is no unauthorized access to the site.
Dependencies
This login and logout function is dependent on the registration function for students and the apply function for tutors.

2.2.4) Customize Profile (S & T)
Description
Students and tutors must be able to customize their profile in order to display information about themselves. Students fields will consist of variables such as first name, last name, bio, university, course, year, age, and profile picture. Tutors will consist of first name, last name, bio, areas covered, qualifications and experience, subjects / topics, availability, and hourly rate.
Criticality
It is critical for tutors to be able to customize their profile in order to display the information and pricing of the services that they provide. Students must also be able to customize their profiles given the fact that it is a social networking platform which makes this function an essential one.
Technical Issues
These fields will be included in the tutor and student models in the models.py file. A technical issue we may encounter could be displaying this information on user profiles in a sleek and user friendly way.
Dependencies
This function is dependent on the register and login requirements.

2.2.5) Search For Users (S)
Description
Students must be able to search for other users on the platform in order to find potential friends to add to their network. Students will enter the name of the person they are searching for in the search bar and be returned a list of users with the name they have entered.
Criticality
Searching for users is essential given that the system is a social media platform. Given that we are a social networking platform, the users gain their value from using the site if they can search for potential users to network with.
Technical Issues
We must ensure that our system can match a user's name search (query) with the relevant account in our database in order for this function to work correctly. This may be a challenge.
Dependencies
This function is dependent on the register and login requirements.

2.2.6) Send Friend Requests (S)
Description
Students must be able to send friend requests to other students in order to connect with them. This will be done by clicking an 'Add Friend' button which will most likely be displayed on either the search results, user profile pages or both.
Criticality

Again this functionality is critical as we are a social networking platform. Students must be able to connect with each other on the platform.

Technical Issues

When a friend request is sent we must be able to display this on the receiving users account in order for them to view the request. This may be difficult to set up and could act as a technical issue for this requirement.

Dependencies

This function is dependent on the register and login requirements

2.2.7) Accept / Reject Friend Requests (S)

Description

The students using the platform must have the option to accept or reject the friend requests they receive from other students. When a student accepts a friend request the two users friends lists will have to be updated.

Criticality

This is a critical function of the system as it allows students to decide whether they want to add potential users to their friends list. It is also critical for students to expand their network in order to gain more value from using the platform.

Technical Issues

Ensuring that both users are added to each other's friends list when a friend request is accepted may be challenging which could act as a technical issue for this requirement.

Dependencies

This function is dependent on the register, login, and the send friend requests requirements.

2.2.8) Message Users (S & T)

Description

This functional requirement allows students to message other students and it also allows students and tutors to communicate between each other. Students will be able to message other students on the platform that they are friends with. The messaging function is essential for students who are communicating with tutors as it allows them to schedule tutoring sessions.

Criticality

In order for users to be able to communicate between each other privately they need to use the messaging functionality. It is essential for the users to be able to communicate with each other in order to satisfy the value they see in using the platform. It is also a critical functionality as without it there would be no way to schedule grinds on the platform.

Technical Issues

We will need to develop a messaging system on the platform in which users will be able to type messages, send messages and receive messages. We have never built a messaging system before so issues may arise when trying to implement it onto the platform.

Dependencies

This function is dependent on the users being on each other's friends list (Accepting Friend Requests).

2.2.9) View Friends List (S)

Description

The students using the platform must be able to view their friends list. This allows the users to see if they have friends that they want to remove from their friends list if they no longer want to be friends with a certain person or if they accidentally added someone.

Criticality

In order for users to be able so see if someone is on their friends list they would have to go into each individual profile. The view friends list function is essential for for the users to efficiently view each of the friends in their network.

Technical Issues

When a user accepts a friend's requests we must be able to automatically update each of the users friends list.

Dependencies

This function is dependent on the users accepting friend requests.

2.2.10) Create Posts (S)

Description

The users of the platform will be able to create a post which they will share on their profile and it will also be shared on the news feed for each of their friends to see.

Criticality

This function is critical for the platform as without it there would be no content on the platform for the users to view. It is essential for this platform as it's a social media site and the posts that are created by the users will be able to be interacted with by other users.

Technical Issues

A technical issue we may encounter with this functionality is that all user created posts will have to be stored in a database. We would also have to ensure that the post the user has created is automatically added to the users timeline for their friends to see. We expect this to be a difficult functionality to build.

Dependencies

This function is dependent on the login requirement.

2.2.11) Interact with Posts (S)

Description

The users of the platform will be able to like and comment on users posts through the implementation of gamification on the users posts.

Criticality

This function is critical in order for students to interact with each other through the posts that they have created. Through the use of comments students will be able to discuss what the posts that have been created are about and it may result in many people contributing to the discussion.

Technical Issues

We will have to create a system where posts are able to be interacted with through likes and comments. These likes would have to be constantly counted by the amount of people that have liked a certain post. This implementation of gamification is an area we have no experience in and we will have to do sufficient research in order to successfully implement this functionality onto the platform.

Dependencies

This function is dependent on the login requirement, accepting friend request requirement and the create post requirement.

2.2.12) Filter Tutor List (S)

Description

When searching for a tutor, students will be able to filter the list of tutors available by choosing the subject / topic that they are interested in getting tutored in.

Criticality

This function is critical as without this functionality students would never be able to find a suitable tutor so fulfil their needs. It is also critical for the tutors as without it they would get no students to tutor.

Technical Issues

The subject(s) that the tutors intend on giving tutoring on will be listed on the tutors account. These subjects will have to be linked to the filter list in order to display the relevant tutors for the student that is searching. We may encounter technical issues when developing this functionality.

Dependencies

This function is dependent on login functionality and the apply functionality for tutors.

2.2.13) Pay for Tutoring (S)

Description

When a tutoring session has been scheduled between a tutor and a student the student must pay for the session in advance. This will be done through a payment processing system on the site.

Criticality

This is a critical functionality for the platform as without it there is no guarantee that we would receive the money for the tutoring session.

Technical Issues

In order to have a functioning payment system on the platform we will have to successfully implement it into our code. We have no past experience in this area and this may prove to be a difficult task.

Dependencies

This function is dependent on login functionality, the apply functionality for tutors and the filter tutor list functionality.

2.2.14) Review Tutors (S)

Description

When a student has completed a tutoring session with a tutor they will have the ability to review the tutor. This is a place where students can express their opinions on how beneficial or productive the session is.

Criticality

This is an important function as it ensures that the tutors will provide the best possible tutoring service as they would not want their reputation to be affected by a bad review. It also allows other students and us, the moderators, to see how good a tutor is at their job.

Technical Issues

Technical issues may arise from this functional requirement as when a student leaves a review on a tutor this review will have to be linked to that tutors account. This will involve some time to figure out how to best complete this functionality.

Dependencies

This function is dependent on a student undertaking a tutoring session with a tutor.

2.3) System Architecture

2.3.1) Model-View-Template Architecture

Django uses the Model-View-Template (MVT) *(5)* architecture which acts as the basis of our system architecture. We have created a diagram marked as *Figure 3* below outlining how this works. The system user runs a HTTP request by entering the URL for the requested site page. The urls.py file is then checked for the requested URL. Once the URL has been identified it is matched with the view in the views.py file. In order to decide on which function to trigger. The views.py file then interacts with the relevant template in order to render the view and will also interact with the models.py file in relation to the carrying of data. The models.py file directly interacts with our database in order to complete this. HTML pages are kept in our templates folder. Once the views.py file has finished its interaction with the relevant template and the models.py file the response is then returned to the users browser.

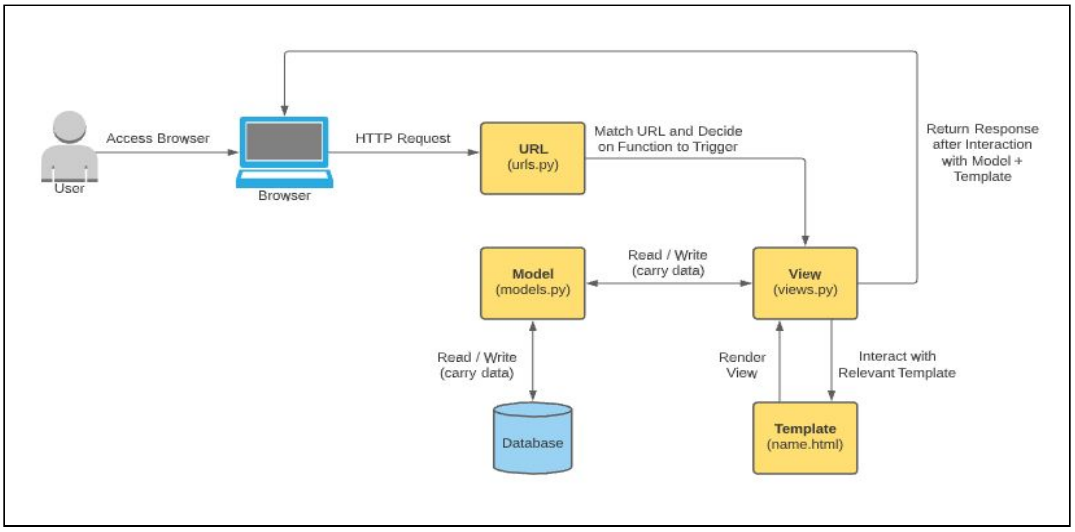


Figure 4: Model-View-Template Architecture

2.4) High-Level Design

2.4.1) Functional Layout

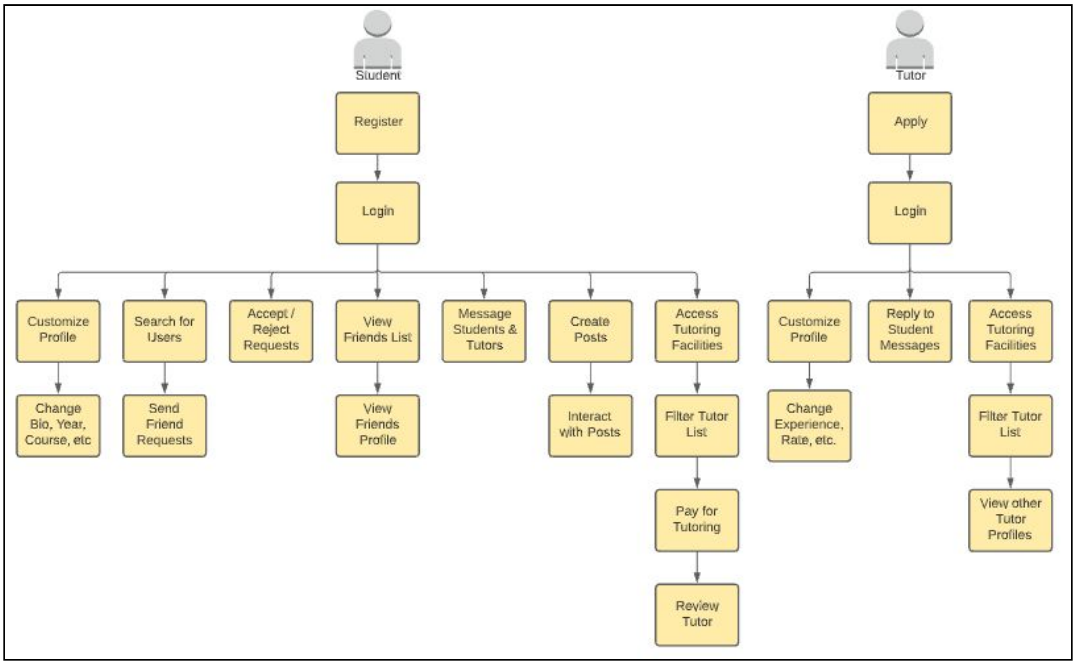


Figure 5: Student and Tutor Functional Layout

2.4.2) Data Flow Diagram

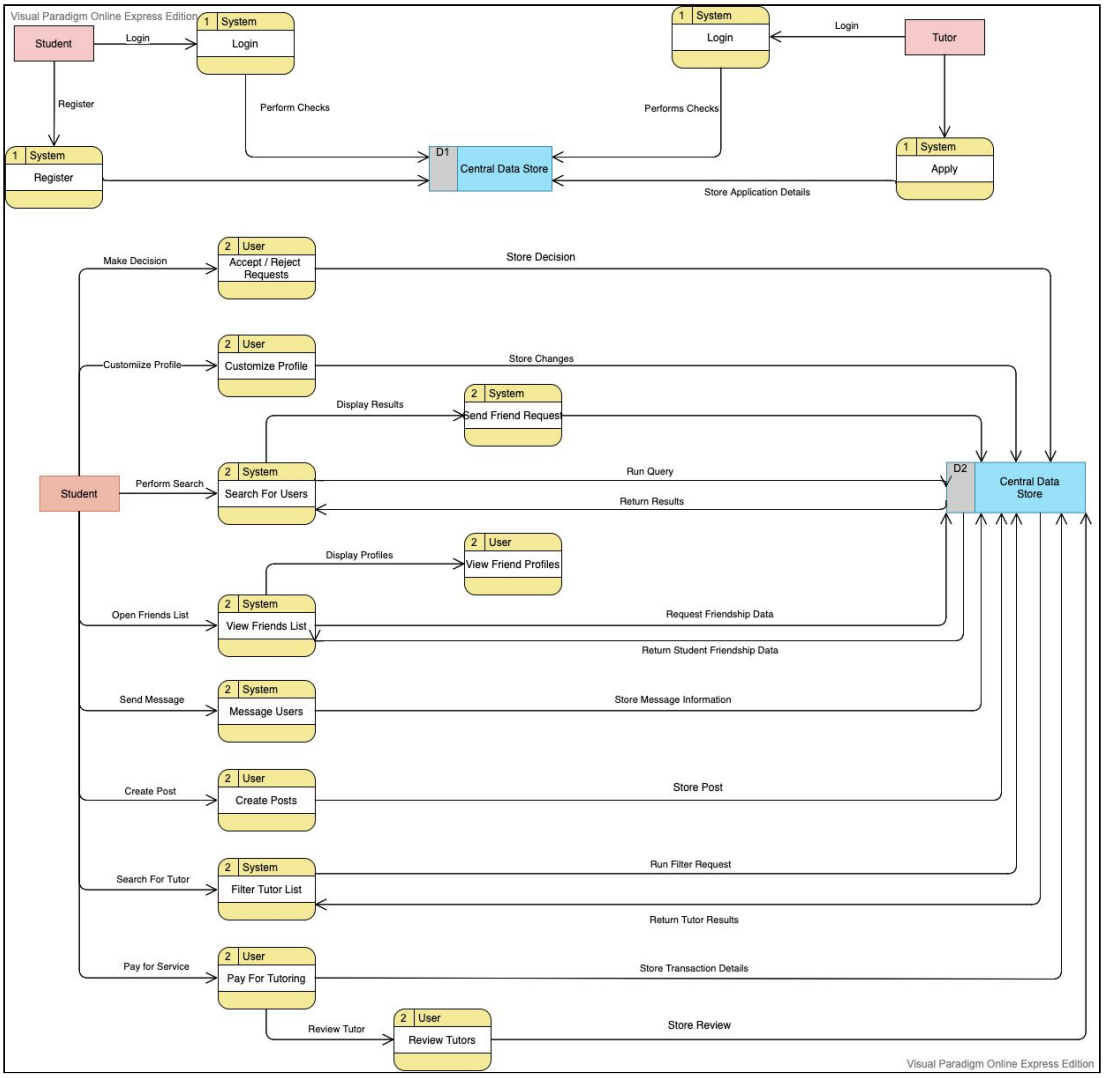


Figure 6: Data Flow Diagram

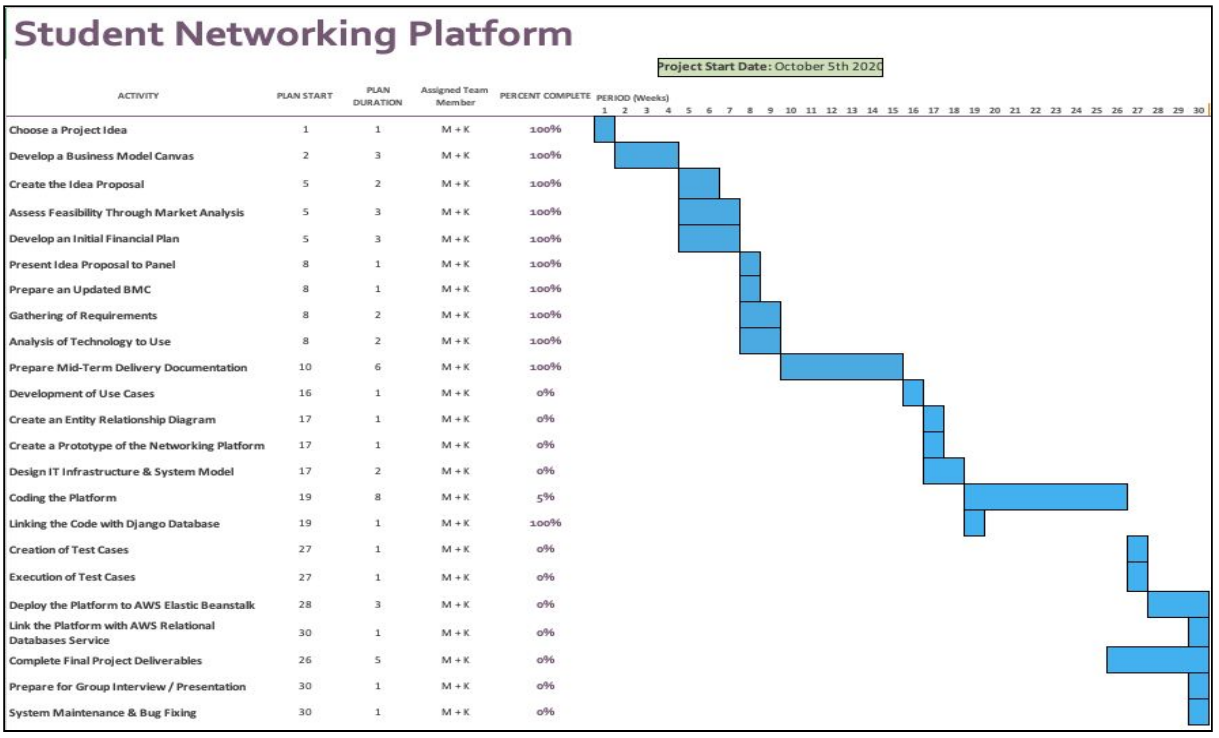
3) Project Timeline

We have completed two Gantt charts as seen on the page below. The first chart covers the overall timeline broadly outlining each activity in relation to the project. This covers a 30 week period covering the full college year starting on October 5th 2020 and finishing at the end of April. We have assigned all of the tasks in the overall timeline to both of ourselves as each activity outlined covers a range of tasks. We feel that it is important to work collaboratively in order to complete these tasks effectively. We have assigned what we believe to be adequate time for each activity in order to complete them to a high standard. Given that the development, testing and deployment stages of the project involve completing a large amount of tasks we have decided to complete a second Gantt chart covering these in order for us to stay on track during the completion of these tasks which we have outlined below.

We have taken the functional requirements defined in *Section 2* and broken them down into smaller individual tasks and allocated an adequate period of time for their completion in a second Gantt chart. The second Gantt chart outlines the tasks involved in the development,

testing and deployment stages of the project. This chart covers the entirety of Semester 2 (January 18th 2021 until the end of April). The tasks involved have been assigned both individually and collaboratively. We believe that it is important for some tasks to be worked on collaboratively due to their importance and complexity in relation to delivering the final prototype.

3.1) Overall Project Timeline



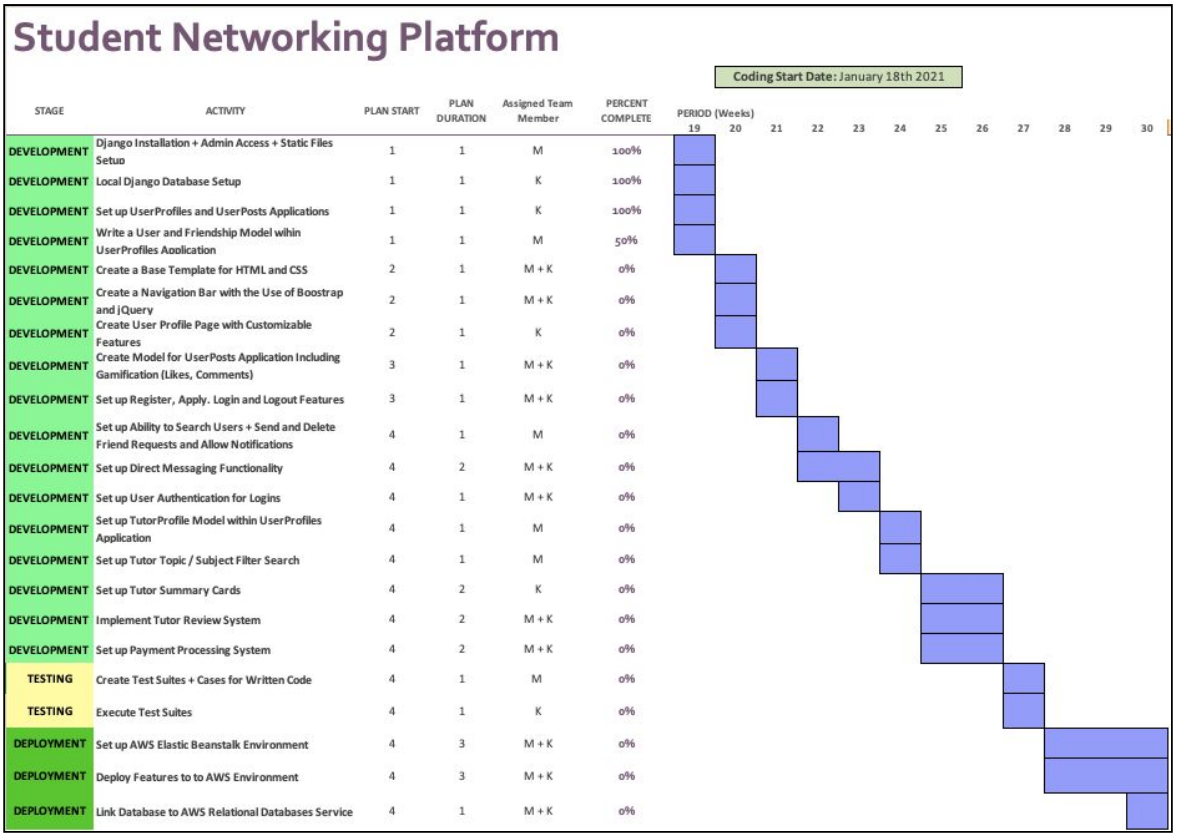
Student Networking Platform

Project Start Date: October 5th 2020

ACTIVITY	PLAN START	PLAN DURATION	Assigned Team Member	PERCENT COMPLETE
Choose a Project Idea	1	1	M + K	100%
Develop a Business Model Canvas	2	3	M + K	100%
Create the Idea Proposal	5	2	M + K	100%
Assess Feasibility Through Market Analysis	5	3	M + K	100%
Develop an Initial Financial Plan	5	3	M + K	100%
Present Idea Proposal to Panel	8	1	M + K	100%
Prepare an Updated BMC	8	1	M + K	100%
Gathering of Requirements	8	2	M + K	100%
Analysis of Technology to Use	8	2	M + K	100%
Prepare Mid-Term Delivery Documentation	10	6	M + K	100%
Development of Use Cases	16	1	M + K	0%
Create an Entity Relationship Diagram	17	1	M + K	0%
Create a Prototype of the Networking Platform	17	1	M + K	0%
Design IT Infrastructure & System Model	17	2	M + K	0%
Coding the Platform	19	8	M + K	5%
Linking the Code with Django Database	19	1	M + K	100%
Creation of Test Cases	27	1	M + K	0%
Execution of Test Cases	27	1	M + K	0%
Deploy the Platform to AWS Elastic Beanstalk	28	3	M + K	0%
Link the Platform with AWS Relational Databases Service	30	1	M + K	0%
Complete Final Project Deliverables	26	5	M + K	0%
Prepare for Group Interview / Presentation	30	1	M + K	0%
System Maintenance & Bug Fixing	30	1	M + K	0%

PERIOD (Weeks): 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3.2) Software Development, Testing & Deployment Timeline



Student Networking Platform

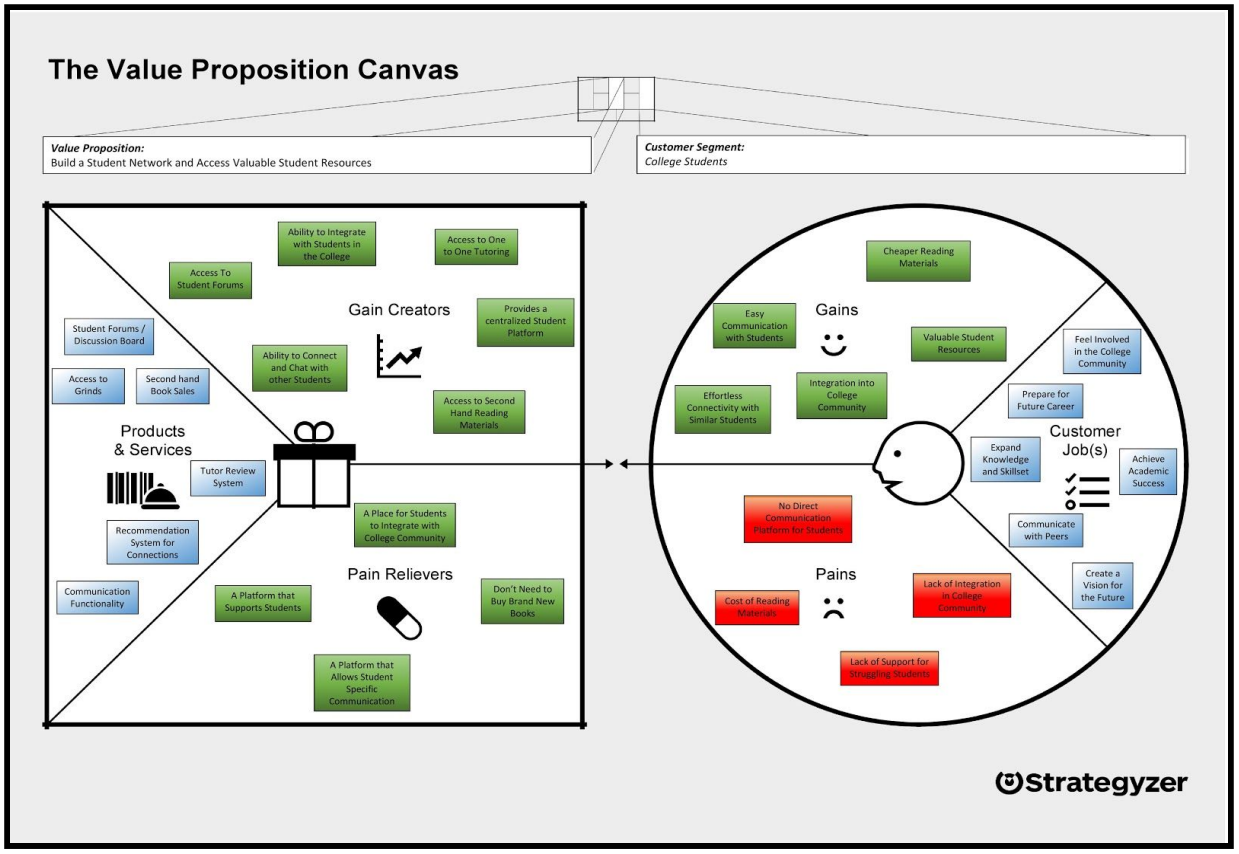
Coding Start Date: January 18th 2021

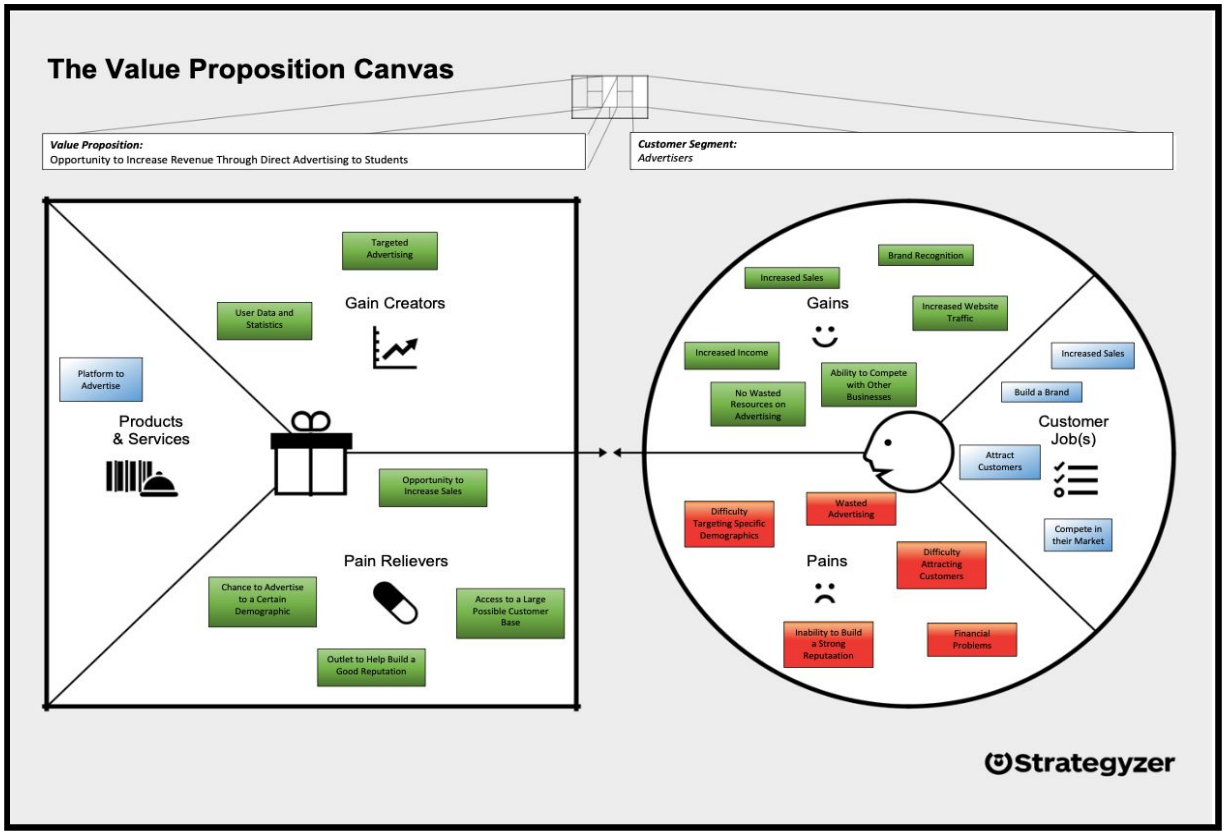
STAGE	ACTIVITY	PLAN START	PLAN DURATION	Assigned Team Member	PERCENT COMPLETE
DEVELOPMENT	Django Installation + Admin Access + Static Files Setup	1	1	M	100%
DEVELOPMENT	Local Django Database Setup	1	1	K	100%
DEVELOPMENT	Set up UserProfiles and UserPosts Applications	1	1	K	100%
DEVELOPMENT	Write a User and Friendship Model wihin UserProfiles Application	1	1	M	50%
DEVELOPMENT	Create a Base Template for HTML and CSS	2	1	M + K	0%
DEVELOPMENT	Create a Navigation Bar with the Use of Boostrap and jQuery	2	1	M + K	0%
DEVELOPMENT	Create User Profile Page with Customizable Features	2	1	K	0%
DEVELOPMENT	Create Model for UserPosts Application Including Gamification (Likes, Comments)	3	1	M + K	0%
DEVELOPMENT	Set up Register, Apply. Login and Logout Features	3	1	M + K	0%
DEVELOPMENT	Set up Ability to Search Users + Send and Delete Friend Requests and Allow Notifications	4	1	M	0%
DEVELOPMENT	Set up Direct Messaging Functionality	4	2	M + K	0%
DEVELOPMENT	Set up User Authentication for Logins	4	1	M + K	0%
DEVELOPMENT	Set up TutorProfile Model within UserProfiles Application	4	1	M	0%
DEVELOPMENT	Set up Tutor Topic / Subject Filter Search	4	1	M	0%
DEVELOPMENT	Set up Tutor Summary Cards	4	2	K	0%
DEVELOPMENT	Implement Tutor Review System	4	2	M + K	0%
DEVELOPMENT	Set up Payment Processing System	4	2	M + K	0%
TESTING	Create Test Suites + Cases for Written Code	4	1	M	0%
TESTING	Execute Test Suites	4	1	K	0%
DEPLOYMENT	Set up AWS Elastic Beanstalk Environment	4	3	M + K	0%
DEPLOYMENT	Deploy Features to to AWS Environment	4	3	M + K	0%
DEPLOYMENT	Link Database to AWS Relational Databases Service	4	1	M + K	0%

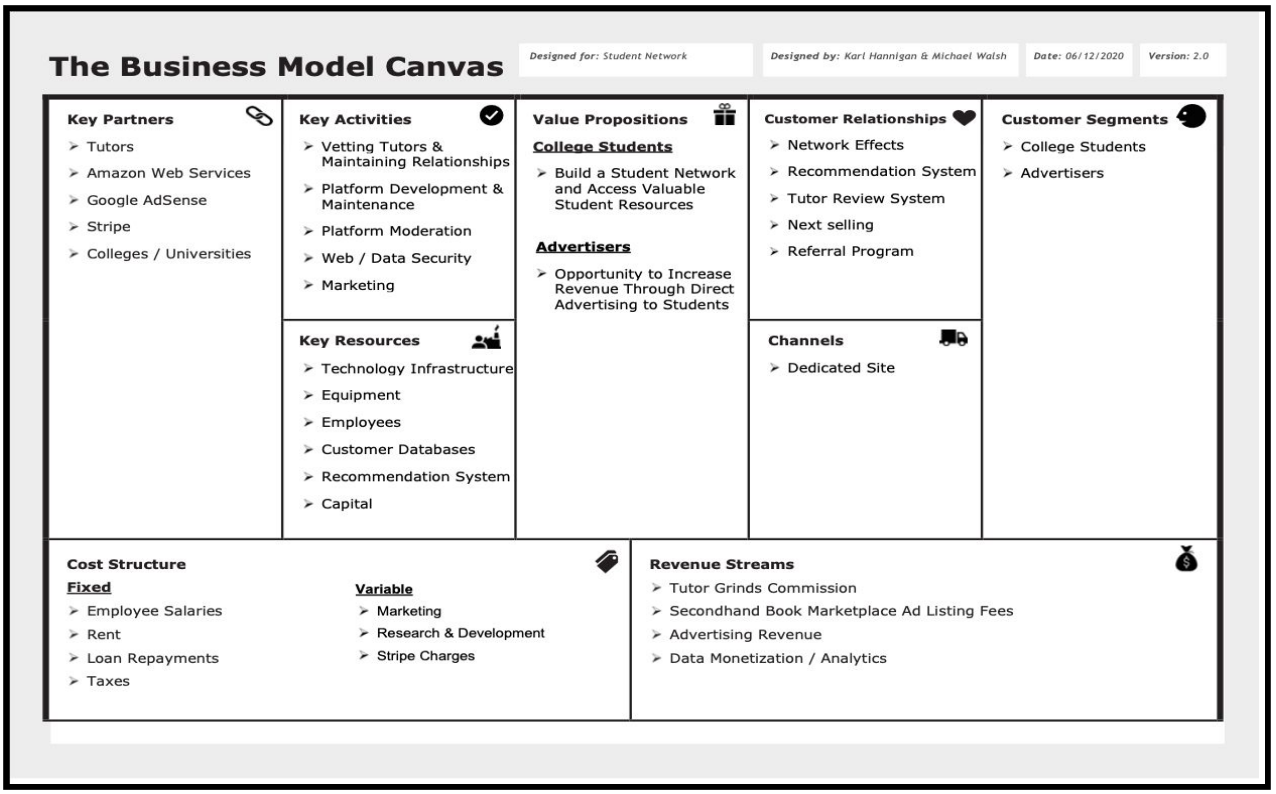
PERIOD (Weeks): 19 20 21 22 23 24 25 26 27 28 29 30

4) Appendices

(1)

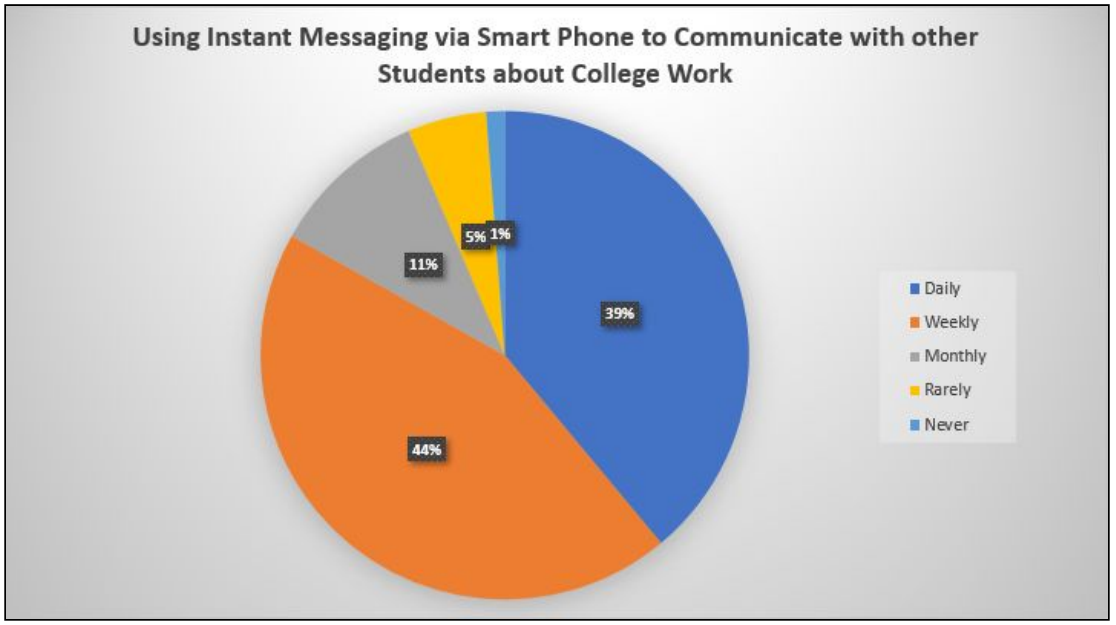




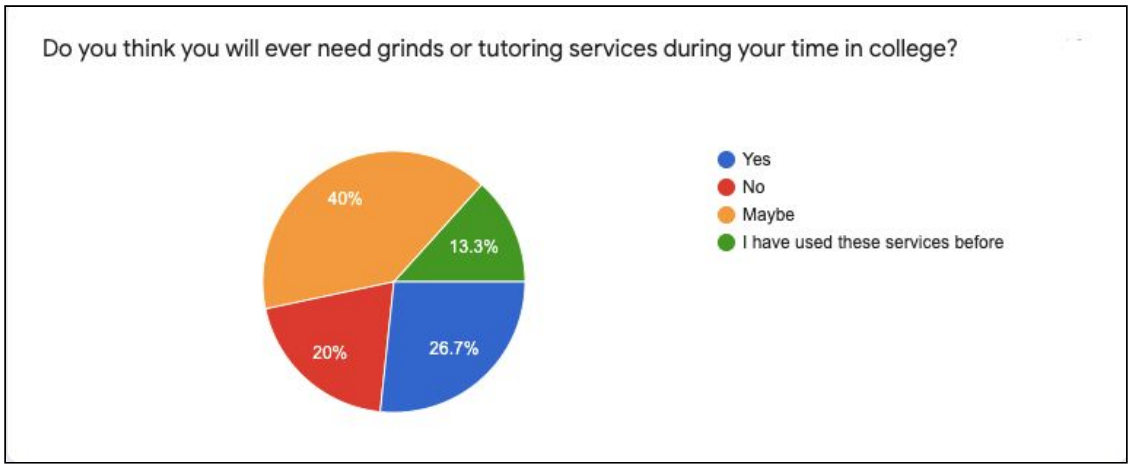


(2) Higher Education Authority - Key Facts and Figures 2017/2018
https://hea.ie/assets/uploads/2019/01/Higher-Education-Authority-Key-Facts-Figures-2017-18.pdf

(3)
https://www.maynoothuniversity.ie/sites/default/files/assets/document/SOCIAL%20MEDIA%20SURVEY%20FINALV_1.pdf



(4)



Student Network Questionnaire:
https://docs.google.com/forms/d/e/1FAIpQLSfcq59zjKHYnfp7jwsRdwKujp6NVAStoIKvntvsyF8pfPFQCQ/viewform?usp=sf_link

(5) https://djangobook.com/mdj2-django-structure/