

# MySociety - Agile Portfolio

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**Group 12**

**Agile Development**

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## Introduction

In this document, we will be detailing the methods in which we went about identifying a problem and what we thought was best to solve that problem working in a team using agile development.

## Product Vision

When discussing what kind of app we should create, our first and most pressing priority was choosing an issue that affects students. This way, our app would not only have a clear direction in solving that issue, but would be engaging for our group as the issue would have likely affected us too. Our discussions took us through several problems we had had as students on campus, from checking into lectures to speaking to our ASTs. In the end, we settled on focusing on societies, and how they interact with students.

The main problem we noticed when discussing societies was that information about these societies was often hard to find, and made us as students feel less motivated to join. We all agreed that societies were an important part of university life - as not just sources recreational but social activities too. This brought us to a second issue we saw with the current society system - it doesn't facilitate the different reasons people join societies. There are many reasons a person would join a society, whether it be for academic reasons, to play a sport or even just to have a group of people to go drinking with. We wanted to focus on creating a system that allowed people to view societies in a way that tells them more about what they do, so students can best find societies that they will actually want to participate in. Finally, we felt that finding out information about a society can be especially difficult outside of events such as freshers fairs. Often students will want to join a society midway through a semester, but may find it difficult to join in without keeping up to date with it throughout the year. We wanted to ensure the app we created would not only offer information for society members, but would be transparent for newcomers.

With key issues established, we began to discuss how to solve them. We decided that the best way to make information easily accessible is through a smartphone app, the key part of which would be a society index. Here, a user would have full access to all the societies at the university in a list format. Each society in the list could be expanded to find more information, as well as options to follow, so this information is more easily accessible when the app is loaded up. Our discussions then took us to how users would be able to search these societies based on their intentions. We decided a tag system for societies would best fit this role. Each society can assign themselves tags, and will appear in the searches for those tags, allowing different kinds of students to find appropriate societies. Finally, we considered how societies will communicate with their users. Based on how societies currently communicate, which is usually by announcements on social media, we decided to have an announcement feature on our app. When a society makes an announcement, all following members will see this on their feed.

Furthermore, past announcements could be viewed to allow users to get a better understanding of the society before joining, closing the information gap in the current society system.

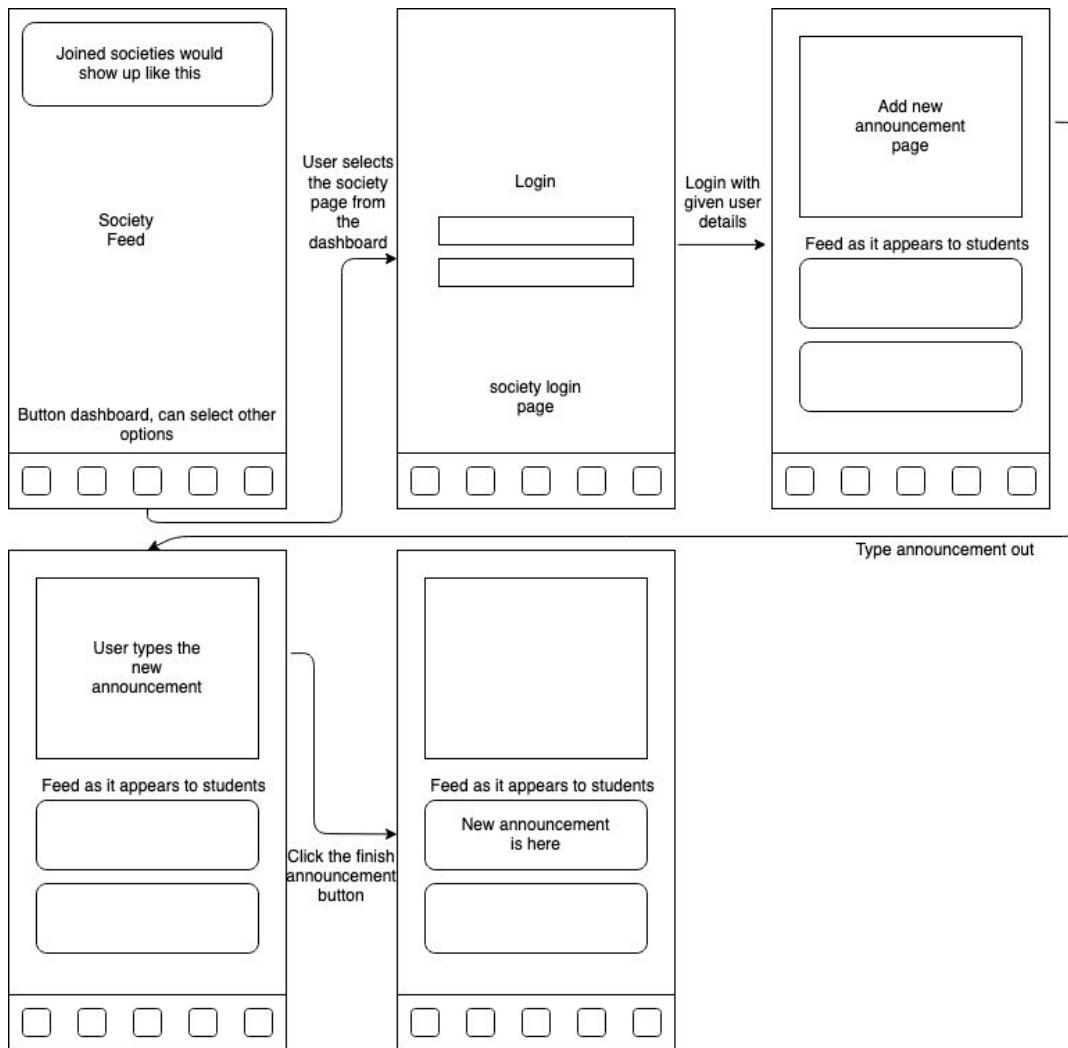
## App Decision Process

Once we had all agreed on the scope of the problem, as a group we started looking at identifying the personas and the user stories to figure out what scenarios would take place when using our app. These personas consisted of us understanding the frustrations of both students and societies, their key motivations and goals when trying to join a society, and to understand what our app can do for both parties. Initially, we started these on a blank sheet of paper as a group and then proceeded to place them on our Trello board. Starting from the perspective of the student, we came up with personas that we felt covered a diverse range of the type of student in the University of Hull. Our personas included the need for students to be able to find any society in the university for reasons such as their need to play sports, to be more sociable or for academic purposes. For each one of these, we made scenarios for them (Appendix 5). We also had personas for the societies themselves. They all came down to the scenario that societies in the university would like to promote themselves and their activities so they can have more members.

## Planning Poker

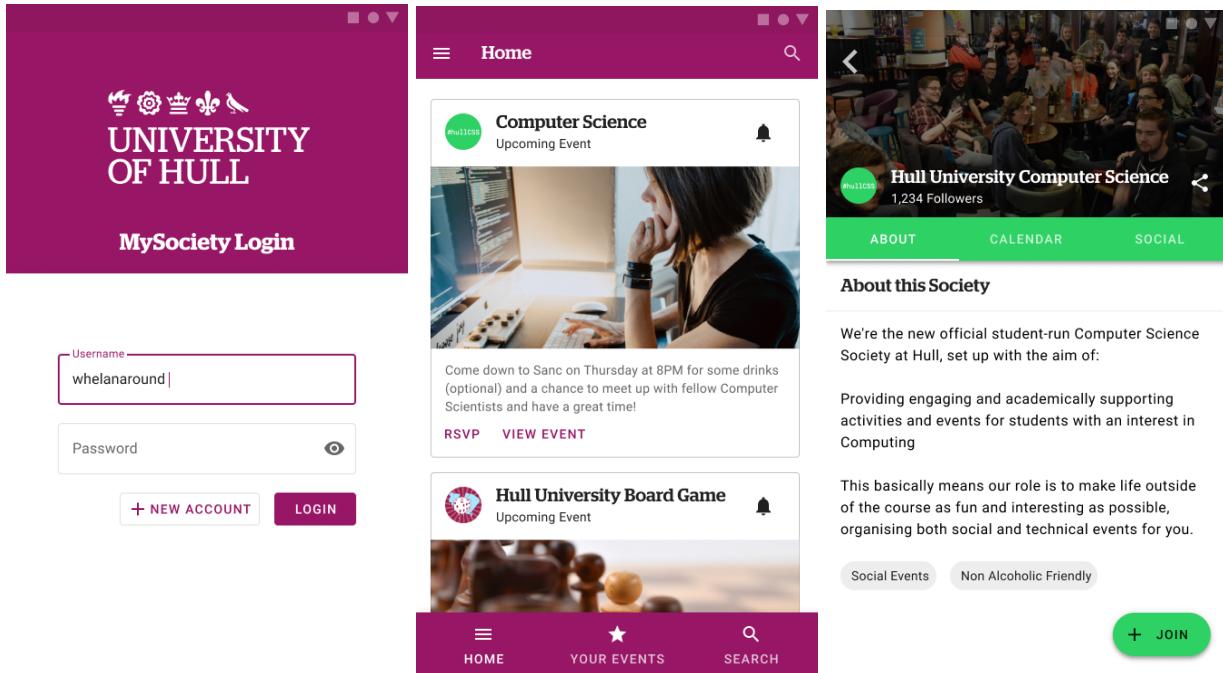
Once the personas and scenarios were complete, prioritisation was the next step we took in order to help us determine what features and personas would be more important and need to be looked at first. To do this we used a method known as planning poker. For each scenario, each member of our group rated on a scale of very high to low what we thought that scenario was. Then as a group, we came together to come to a final decision of what we thought scenario priority would be.

# Wireframes & Prototyping



**Figure 1: Wireframe**

Once the prioritisation was complete. We began using wireframes to try and visualise how the key features of our app are going to look like. Using the same process as the planning poker, each member of the group created wireframes containing some of the key features that would be needed for the app. This consisted of, how the home page would look like, how students would search for societies, how navigating through the app would be as well as what posts would look like if societies created them. When each member had created their own versions of wireframes, we then came together as a group to decide what features worked and what features to take out. We repeated this process again in order to cover the rest of the features that we didn't do at the time.



**Figure 2:** Interactive Prototype

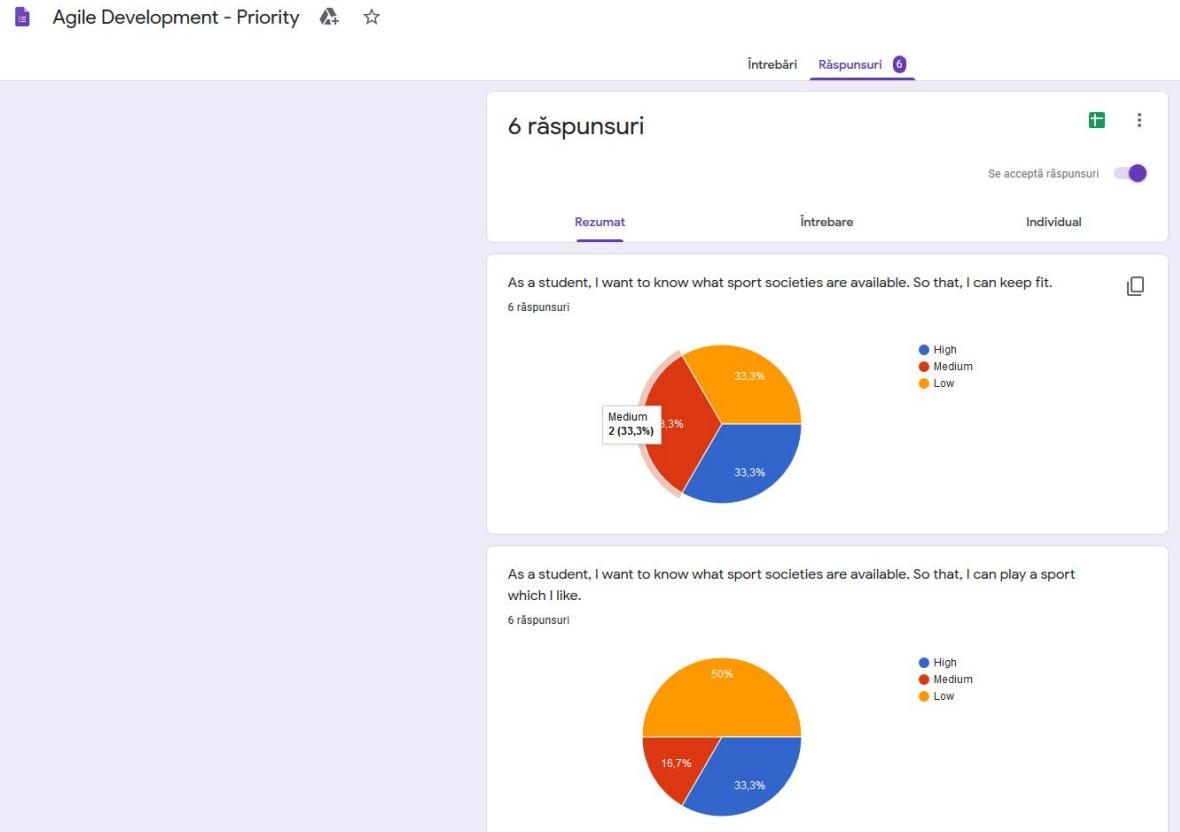
Once we clarified the functionality by wireframing the interactivity within the system, we then started a process of creating an interactive prototype of the application (Figure 2). By creating a prototype of the application, we were able to visualise how the program will function and appear on a smartphone interface. This helped us during the development of the application, as we already had a basis of how the user interface should appear.

## Ranking

The 'Ranking' discussion started on 9th of March and it was wrongly focused, having different outcomes from the real ones. To see each member's opinion, without influences, we used anonymous google forms. To decide the outcome we discussed it telling each other the reason for our vote.

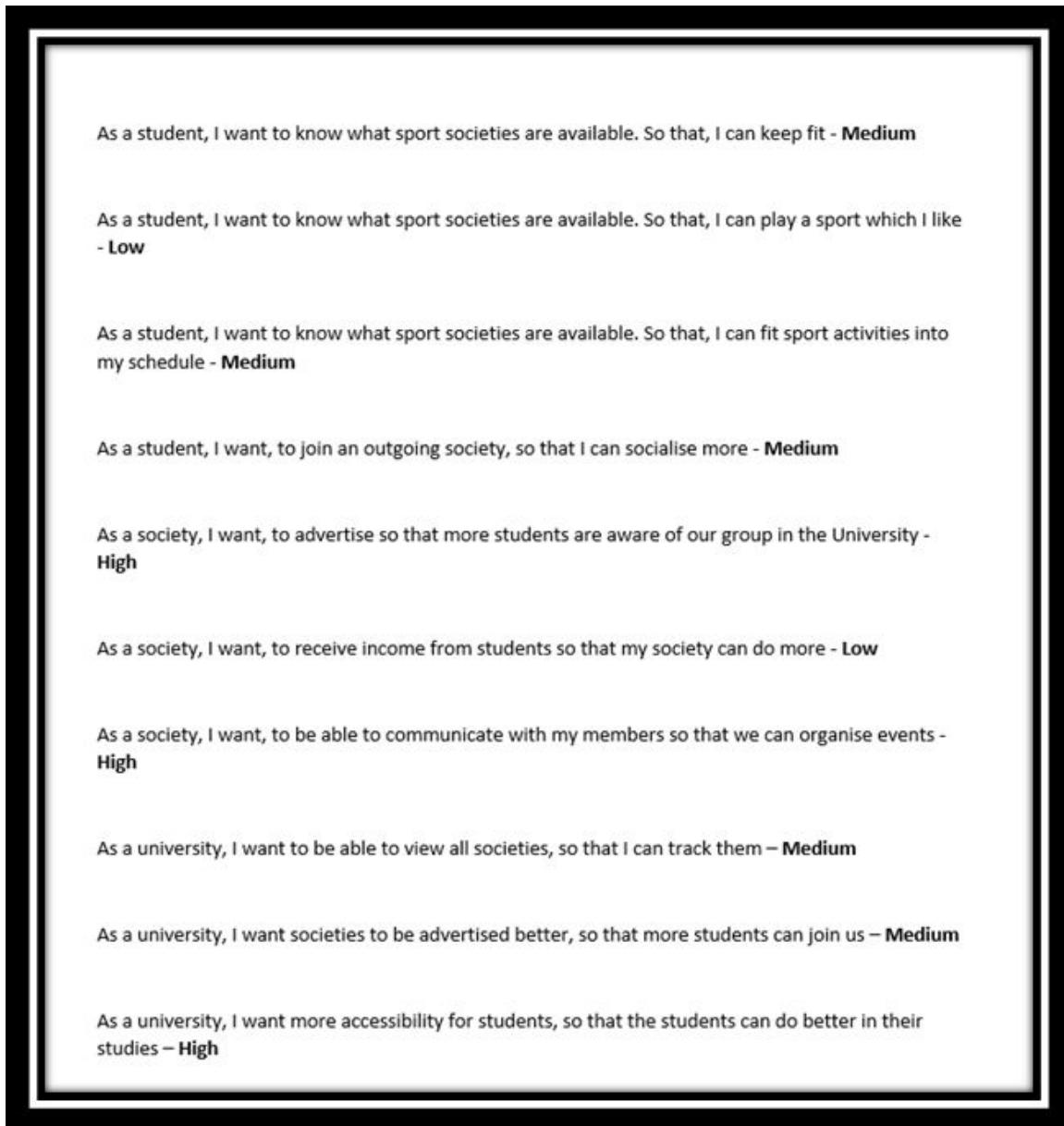
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**Figure 3:** First Ranking Form

After the fact that we were wrong focused was brought to our attention, one of the core subjects of our next sprint on 16th of March was the prioritisation, this time the outcome being different and final. The process to the outcome was similar and not identical, as the structure of our forms and the levels of priority changed(Fig 4). The final outcome can be seen in Figure 5.



**Figure 5:** Outcome

## Project Progress

### Stakeholders

We established that our stakeholders who are involved in the process of the project, or will simply be affected by our application were the following groups.

1. University of Hull - Management

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- a. The management of the University will be involved with the project's progress as the application will be delivering business value by means of improving student engagement and marketing.
2. Student's Union - Board / Management
  - a. The Student's Union will be involved with the project's progress as they manage and fund societies at the University of Hull.
3. University Societies
  - a. The Societies are a key stakeholder of the application as the application will enable them to promote their societies to students at the University.
4. University Students
  - a. Students will be the main users of the application, and as such are key stakeholders in the usability and relevance of the app.

## Scrum Process

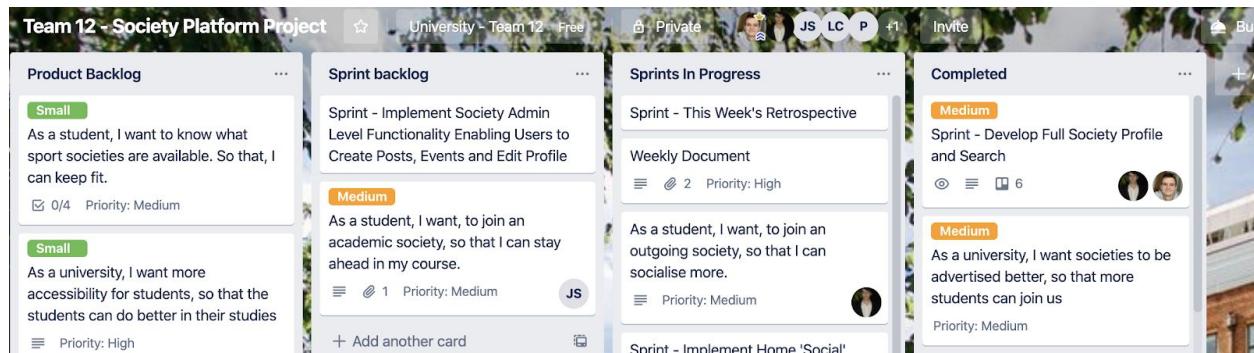


Figure 6 Scrum Board

At the start of the project we adopted the Scrum framework for managing our Agile project which we started by breaking down our User Stories into a "Product Backlog". We then managed this backlog by meeting at the start of each week to review the progress which was made in the previous week to discover any problem which has arisen during development, verify completed tasks and review what items from our backlog can be completed in the next week. Once this has been decided, the goal would be created in our "Sprint Backlog" which we would then assign to someone to complete.

## Project Progress

### Development

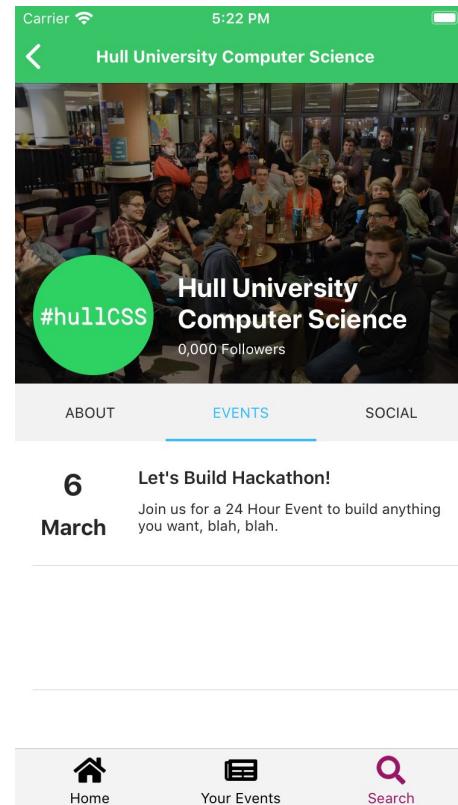
We began the development of the application in Snapshot 1 after completing our implementation discussion in the previous week. The mobile application would be built using a development framework called NativeScript, this enabled us to build a mobile application for both Android and iOS using a single code base with XML and JavaScript. This framework was chosen as all members of the team were already familiar with web-development, so by using this framework, it would enable us to use shared common knowledge to ensure the project's completion without requiring time to invest in researching, and learning a new unfamiliar platform. Furthermore, our GitHub code repository included a README file containing thorough documentation for all team members to get involved in the development process.

We started by developing a mobile application which we could demonstrate to stakeholders with functionality of the society searching and the society profiles. And by the end of the first snapshot, we were able to accomplish this and had a working prototype which showed this functionality running on an iPhone.

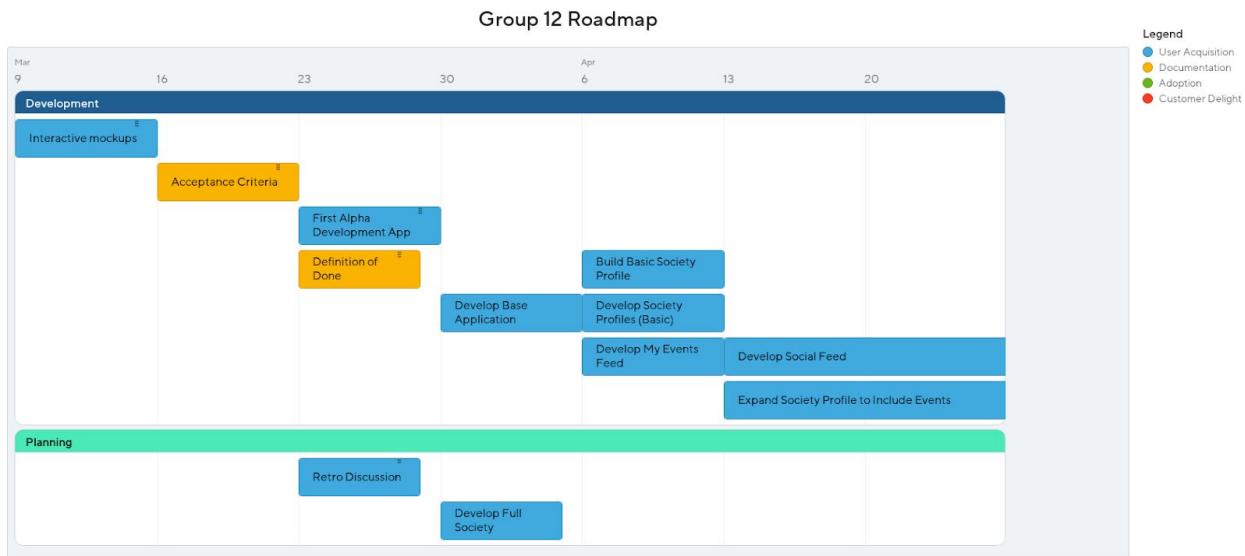
We then continued to build features using the Stories from our Product Backlog, before proceeding to testing and verify the functionality.

### Software Testing & Verification

By the 2nd Snapshot, we began testing the functionality which we were building within the application. This was done by assigning someone to check the functionality on their smartphone and verify if the functionality worked, and confirm if the functionality meets the Acceptance Criteria which was set on the Scrum Board. If the application was successful during this stage, we could then confirm the functionality was done, otherwise we would review the functionality at our virtual scrum stand-up meeting to review it, get help and then re-assign it for the next coming week.



## Roadmap



**Figure 7: Project Roadmap**

A roadmap was developed in our first Snapshot to reflect the deliverables which we were aiming to deliver during the timeline of the project's life cycle e.g from the start of the project until the end of the project when we delivered the solution. This roadmap was then reviewed each week at our Scrum meeting to visualize where we were at that time in the project, and what was coming up.

## Definition of Done

The first form of our definition of done was created by putting together different definitions of done made by each member in our team within the timeframe of a sprint(23rd - 27th March).

The final form was finished in the next consecutive sprint, and after a feedback we decided to finish it by making it even more general, the final form looking as below:

### Quality of Application:

- The Client application builds without any compilation errors
- Unit tests covering 80% of the code base all pass without any errors
- All Acceptance Criteria is met within the program's functionality
- The code committed, checked in, and is available on the GitHub repository

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- All major bugs at the current point in time are reported on the issue tracker on GitHub get resolved for the first production build
- The application can run on an Android and iPhone and comparability testing has been completed on a range of devices.
- The product owners (e.g John Wheelan) have given their approval.

## Overall Reflection

We found that by using this process we were able to adapt to changes quickly through the weekly stand-up (virtual) meetings and retrospective discussions (Appendix 2). These tools enabled us to discover problems in the project which we could aim to address in the following week - however, this is only possible through Agile's value of enabling all team members to have equal say and gaining feedback on a regular basis from stakeholders, and from our peers.

However, in the future we would have improved our Agile process by undertaking Daily Standup meetings instead of the weekly equivalents we undertook. The delays between taking these meetings hindered the Agile process as we were unable to adapt to changes & problems immediately.

## Team Member Reflections

### Philip Agbo

Initially as our group took part in the agile process, we were able to have regular meetings to discuss our weekly sprints. Prior to the quarantine period we were able to use the planning poker to work out our prioritisation list of features. With updates on the trello board and the roadmap, we were able to track our progress. The difficulty of course came when we were unable to meet up. We did our best to discuss weekly snapshots and sprints but the lack of contact time with each other made the process take longer than it would have if circumstances weren't what they were. That being said, what I have taken away from this experience is the different methods that go into successfully executing a task as an agile team. If given the chance to do this again under normal circumstances, I believe we as a team would be able to maintain having weekly meetings to see how well we accomplished each sprint.

### Luke Arran

The Agile process which we undertook was engaging and interesting as it enabled us to gain an insight in the process of software development projects where all parties of the project were equally involved, and changes would be frequent during the project lifecycle. Furthermore, under the unusual circumstances which we found ourselves in, we continued to be able to deliver an

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application on time. In future, if we undertook this process again in normal circumstances, I would have liked to follow the Standup Meetings on a Daily basis due to the delays between our meetings preventing us from reacting to problems and changes, and enabling closer collaboration between peers.

## Usman Baba Usman

Despite the challenges we've had this semester, i.e working from home due to the ongoing crisis which was counterproductive to the agile development process. I believe we handled this project really well, as we managed to get both the documentation and the application to a good level. This was all due to the fact that we maintained good contact and had regular meetings using various resources at our disposal like zoom, whatsapp and trello.

The Agile process itself was interesting and enabled me to gain experience on how development is carried out in industries. In summary, I enjoyed this process although it could have been a lot better if the circumstances were a bit better. If i was to redo this project under better circumstances i would have preferred faster feedback and more meetings so it would be easier to keep track of achievements and difficulties.

## Luana Cadete

when we started our project we tried to group our ideas and it was something that worked very well, we really started doing and doing the agile process even because we had regular meetings and we had the opportunity to have a good start and discuss our sprints as a group, despite the difficult and unusual period that we are experiencing during that semester, we tried to continue our project and kept in touch through whatsapp and zoom, which were essential tools to get in touch in order to finish our project.

To say that it was a good experience and that I liked that I liked getting in touch with the agile process and if we had the opportunity to have the project done in better conditions we would not have a better experience without any setbacks.

## Alexandru Ionut Baloiu

The Agile process was different, interesting and very engaging and with it we were able to gain more insight on how development is carried out in industries. With the challenges that this semester brought to us halfway through, we found ourselves in a need to adapt our agile process thus we were able to deliver our final product on time. We moved our meetings in an online environment, they were not as often as the physical ones, but they were more effective thanks to everyone being focused on their end and with a constant degree of communication between us.

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Overall, I enjoyed the process although in case that we undertook the process again I would like to see the differences, the difficulties and the benefits that could appear working in different environments / teams / approaching a different agile method.

## Jamie Smith

Given the circumstances of this semester, there was a large risk of any group project becoming derailed, especially an Agile based project, given how Agile depends on a cohesive team structure. However, thanks to everyone in the group remaining in contact and work being done despite the challenges of remote working, our project remained on target. The app really fits the vision we all set out to achieve, and the way our group adapted to using Zoom and Whatsapp as our primary form of communication makes me quite satisfied with the way the project came out in the end.

In hindsight, our meetings could have been in a more regular schedule, but since the app came out well built and well documented, it is a minor concern. Overall, this project has been smooth and engaging despite the unexpected circumstances it was worked on in.

## Conclusion

This document outlines the project which we undertook in an Agile method.

## Appendix

### Appendix 1 - Acceptance Criteria

Features of Application for students:

- Students should be able to login to their profile
- Students will be able to click a follow button to be updated on a society's post and new events on their homepage.
- Students will be able to use the search engine to search for societies through a selection of tags that will be assigned to each society
- create a new society, change the society's profile and assign "society leadership".
- The index page will sub categorise societies into "academic, sports and other"
- A student is able to go to any society's page and scroll down to see what type of events they have

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- When any society creates a post and it displays in the index page for students to see regardless of whether they follow the society or not.

### Features of Application for Societies:

- When a society administrators should be able to log in to their page
- Societies should be able to post events in the form of an image or a video with a captioned description at the bottom of the post so students can view on their feed.
- Society administrators can create a new society, change society's profile and assign "society leadership".
- Societies should be able to see how many people are coming, unsure or not coming to an event they have posted from students clicking on a smiley face, straight face or sad face.
- This will be considered done by adding a payment system for the membership for the society

## Appendix 2 - Retrospectives

### Sprint W/C 16th March

At the start of this Sprint, we were intending to resolve a few missing elements in our project's progress so far. Primarily, it was made clear with our meeting with stakeholders at the start of the sprint, that we have not made a great deal of progress with development. We wanted to resolve this by holding a meeting to discuss the implementation and roadmap.

However, due to unavailability, we were unable to have these meetings scheduled. So as a group we decided to delay our current sprints on the board to the following week.

Metric	Value
Velocity (Number of Backlog Items Completed in Sprint)	0
Completed Success Rate (Percentage of Backlog Items which were successfully completed in the sprint)	0%
Release Progress (Business Value)	0

## Sprint W/C 23rd March

In this Sprint, we focused on catching up on completing the Sprints which were not finished in the previous work. To achieve this, we held two video call meetings, one at the start of the week (Monday) and another at the end of the week (Friday). This improved communication and work output - as each member of the team knew what their task was at the start of the week, and what they needed to achieve by the end of the week when we reviewed the outstanding work again and updated our board to reflect the progress which was made.

Metric	Value
Velocity (Number of Backlog Items Completed in Sprint)	2
Completed Success Rate (Percentage of Backlog Items which were successfully completed in the sprint)	100% (2 Done)
Release Progress (Business Value)	2 Large

## Sprint W/C 13th April

We continued to make progress with the development of the project, by completing several stories from our Board's Product Backlog - however some stories were unable to be completed as they did not meet the Acceptance Criteria set against them. However the development for these stories is almost complete and we highly expect to complete them by the next sprint.

Metric	Value
Velocity (Number of Backlog Items Completed in Sprint)	5
Completed Success Rate (Percentage of Backlog Items which were successfully completed in the sprint)	50% (5 Completed, 5 Still In Progress)
Release Progress (Business Value)	3 Medium, 2 Large

## Appendix 3 - Minutes

Meeting on 09/03/2020

### Topics of Discussion

1. Decide which Sprints to do next
2. Agree on the UML mock ups and check if there are any changes
3. Presentation for John of the wireframes and interface
4. Get Feedback

### Actionable Items

1. Feedback from John and Demonstrator
2. Weekly Scrum

### Meeting Minutes

1. Decide on what sprints to next begins
  - Decided to do the implementation discussion
2. Presentation for John begins
3. Feedback Begins
  - Spoke about prioritisation
  - What does it mean for a story to be done- Acceptance criteria
  - Re-estimation after each sprint
  - Roadmap
  - Weekly Scrum meetings
  - Monitoring sprints

Prioritisation

Meeting on 16/03/2020

### Topics of Discussion

- Acceptance criteria
- Prioritisation
- Weekly Scrum Meetings
- RoadMap discussion
- Presentation and Feedback.

### Actionable Items

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Meeting for Implementation and DB discussion, need to make a retro discussion, start the weekly cycle, Roadmap

## **Meeting Minutes**

- Acceptance Criteria was completed
- Prioritisation was completed
- Roadmap was Started
- A meeting for implementation and database discussion was set
- Presentation Started
- Feedback started
  1. Acceptance criteria needs to be worked on
  2. Redo the weekly sprints concept - PLAN, CHECK IN, RETRO / DONE
  3. Get a retros - look back
  4. Make a DONE definition - Define DONE in a task
  5. Make a retro discussion
  6. Don't just discuss and start actually working - Start the cycle
  7. Working Examples

Meeting on 27/03/2020

### **Topics of Discussion**

- Completion of tasks from last week
- Deliverables for submission on monday

### **Actionable Items**

- Uploaded the base program to the github repository,
- Completed the definition of done,
- Completed the Retrospectives,
- Adjusted the Acceptance criteria based on the feedback given,
- Started the SCRUM cycle.

### **Meeting Minutes**

- Decided and Merged all our separate definitions of done
- Started and finished on the roadmap
- Shared access to the application repository
- Started on the implementation and databases meeting
- Decided on who was making the audio for the submission deadline on monday
- Assigned tasks to every individual for the next meeting.

Meeting on 17/04/2020

Topics of Discussion

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- Task assignment in the various parts of the submission file
- Discussion on feedback
- Retrospectives
- Metrics

## Actionable Items

Retrospective document, roadmap for weekly activities, snapshot for this week, product plan, video tutorial of application, updated the retrospectives with the metrics

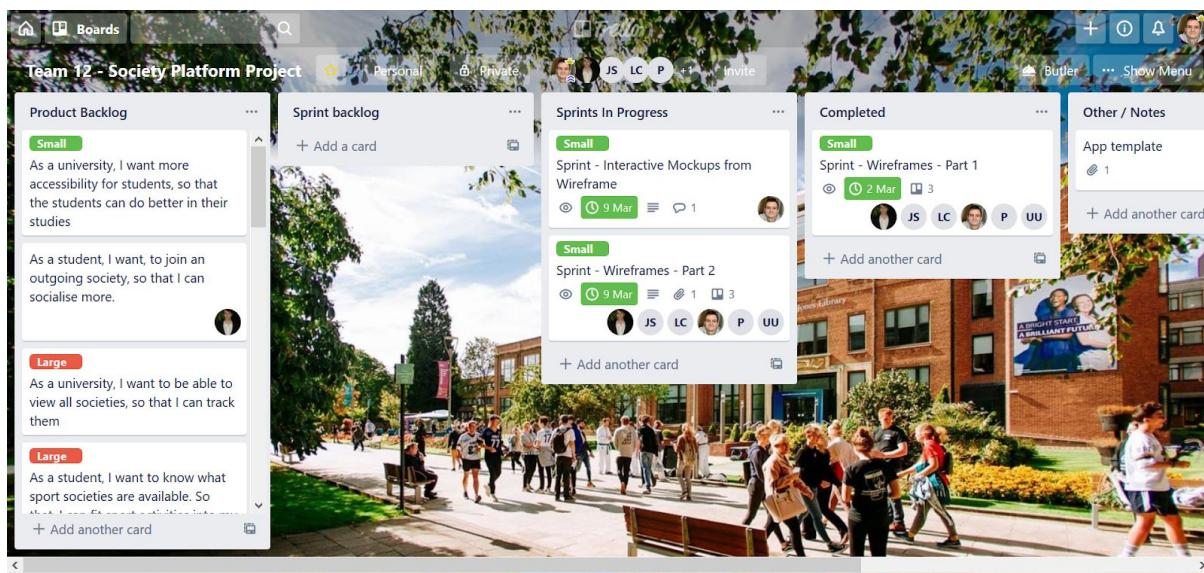
### Meeting minutes

- Discussed the feedback and allocated tasks for everyone based on the feedback
- Decided on when we would submit the final snapshot and who was in charge of handing it in
- Spoke on the development of the application
- Discussed how to improve the retrospectives

## Appendix 4 - Snapshots

09/03/2020 - Monday, 12PM

### Board Snapshot



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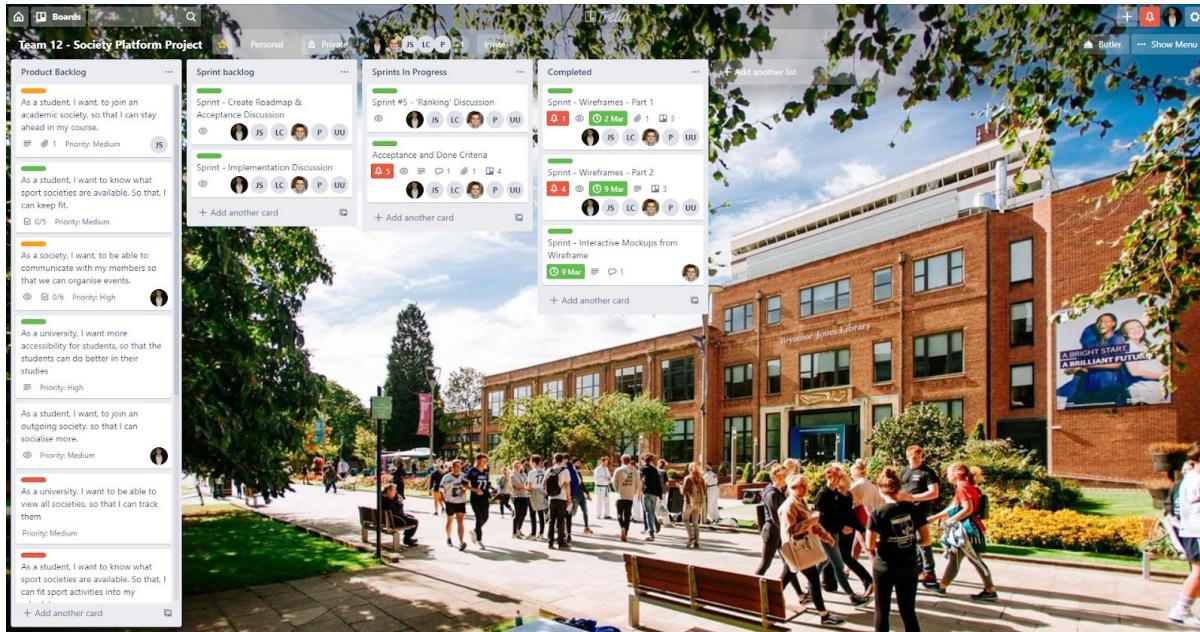
16/03/2020 - Monday, 12PM

#### Board Snapshot



24/03/2020 - Tuesday

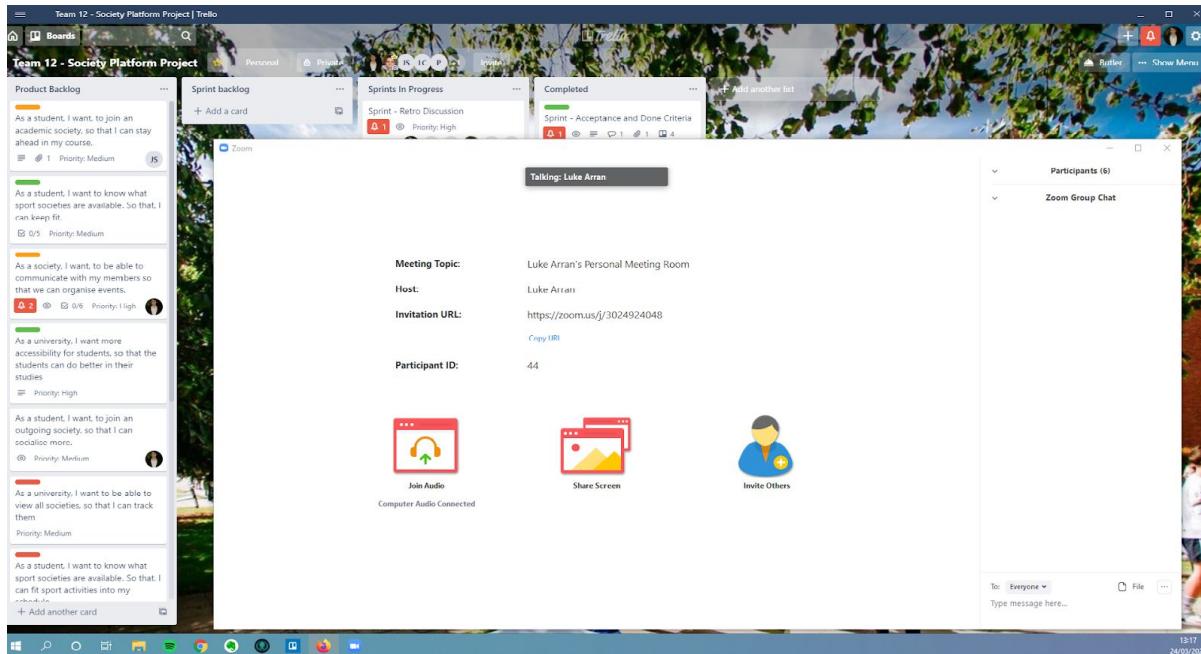
#### Board Snapshot



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## Proof Meeting

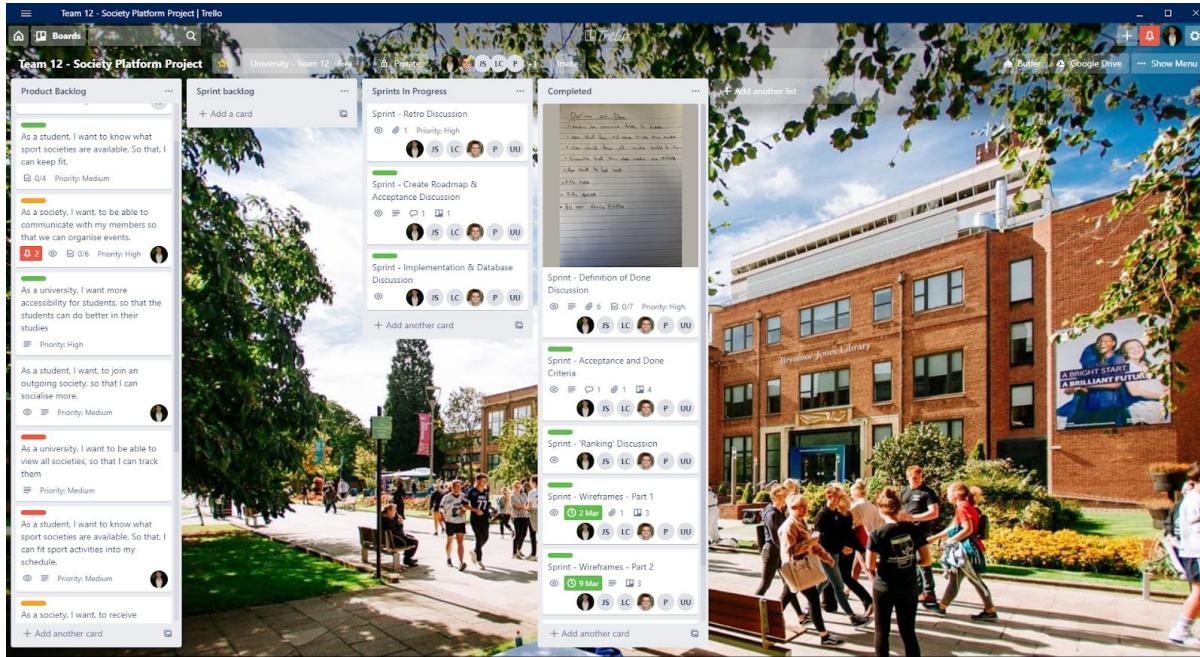


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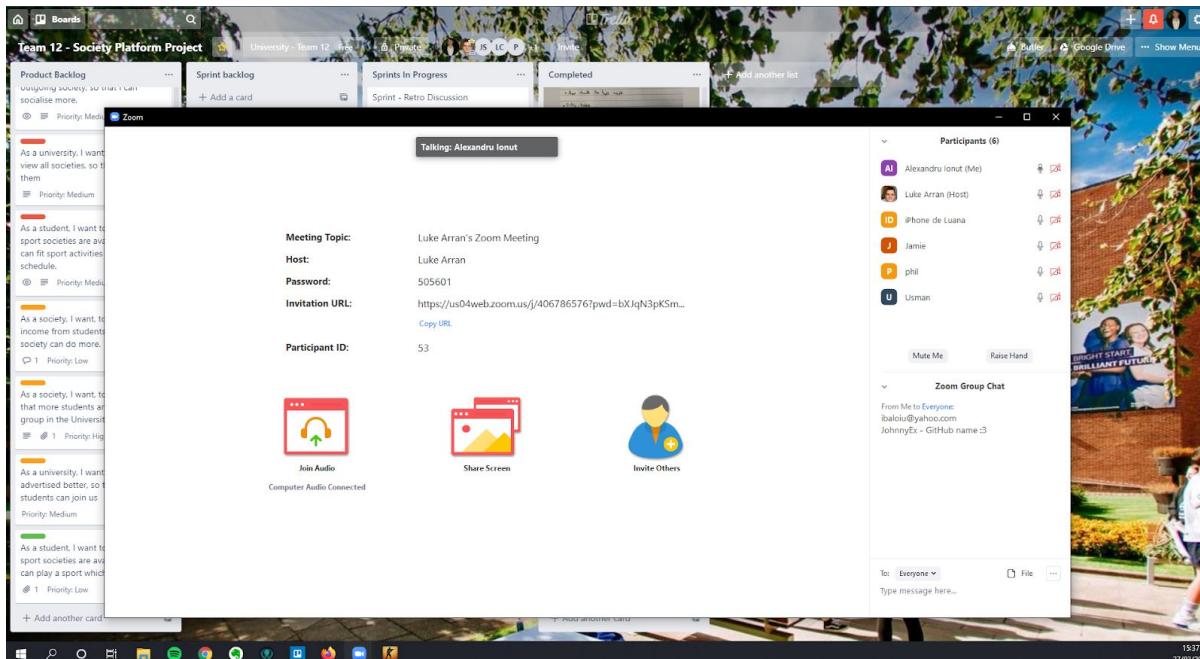
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27/03/2020 - Friday

#### Board Snapshot

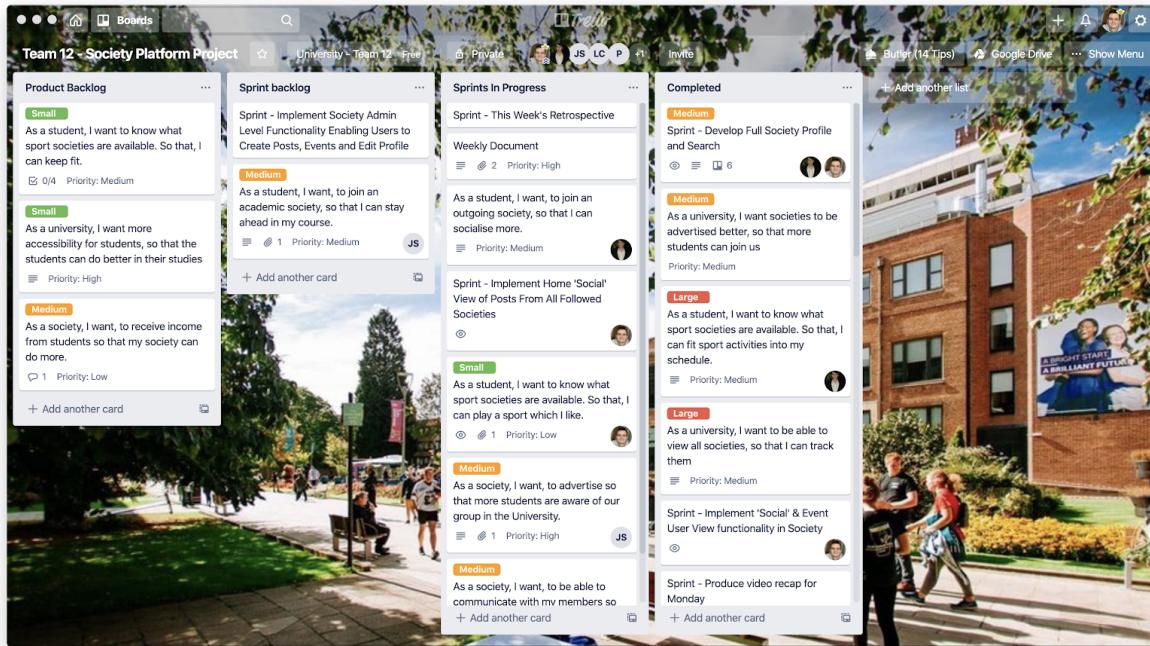


#### Proof Meeting



19th April 2020

### Board Snapshot



### Appendix 5 - Scenarios

- As a student, I want to know what sport societies are available. So that, I can keep fit.
- As a student, I want to know what sport societies are available. So that, I can play a sport which I like.
- As a student, I want to know what sport societies are available. So that, I can fit sport activities into my schedule.
- As a student, I want, to join an outgoing society, so that I can socialise more.
- As a society, I want, to advertise so that more students are aware of our group in the University.
- As a society, I want, to receive income from students so that my society can do more.
- As a society, I want, to be able to communicate with my members so that we can organise events.
- As a university, I want to be able to view all societies, so that I can track them
- As a university, I want societies to be advertised better, so that more students can join us
- As a university, I want more accessibility for students, so that the students can do better in their studies