Requirements

For this project, as a student I have a good understanding of what I would want from an app marketed to graduating students. However, it is both good to get the opinion of other students as well as staff as this app is marketed towards to both students and staff. I also thought it was important to contact the graduation team as they are experts on graduation day. In order to get the opinions of students and staff I created a custom questionnaire that gave me the freedom to ask whatever questions I wanted to without being restrained by a tool such as Google Forms. As the for my contact with the graduation team, I arranged a 1 hour meeting with a member of the team during which I was able to get feedback on my ideas as well as talk about their ideas for my app. I have now split my requirements into functional and non-functional requirements and then ordered them using MoSCoW prioritization.

Graduation Gathering Questionnaire

This questionnaire targets students and staff, primarily asking them to rank a list of features from most important to least important. It does also ask about whether the person is a student or member of staff as well as which areas of Portsmouth they would like to become graduation zones, and finally asks for suggestions.

I received 17 responses to my questionnaire, 14 of which from students, 3 from staff.

For question 2, I asked the participants to rank a number features from which are most important to them to least important to them. These features are: Users of the app are verified University of Portsmouth staff or students; You can be selective about which graduation zones you appear in; You can be selective about which graduation zones you can see others in; you can filter which users you can see by their course; you can filter which users you can see by their name; you can filter which users you can see by whether you’ve already met; and finally, a messaging service that allows you to communicate with other users. The messaging service was ranked lowest on 88% of the responses. All the other features were pretty randomly mixed together throughout the responses.

For question 3, which posed 3 possible graduation zones (Guildhall Square, Ravelin Park, and the area between Guildhall Square and Ravelin Park) and asked for each of them whether users would like these areas to be zones or not, every single response said that all 3 of the zones should be zones.

For question 4, I asked as an optional question are there any other areas that the questionnaire taking would like to be designated as a graduation zone. I got 2 responses, one from a student asking the ability to set a larger area of Portsmouth as a zone for example 1 mile outside of the current zones. The other response from a member of staff asking to be able to draw their own zones.

For question 5, I asked as an optional question for any other ideas, for which I got no responses.

Graduation Team Meeting

I had a meeting with Lisa Scott, a member of the graduation team for the University of Portsmouth. During this meeting I showed them the app, as it was at the time, in order to get feedback, they also gave me ideas for future features. The ideas Lisa had include but are not limited to: showing key locations on the map such as photography at Ravelin Sports Centre and the ceremony at the Guildhall; a reminder sent to students before their ceremony reminding them to be at least 10 minutes early and that they cannot be late; a checklist of what students need to do on graduation day such as picking up their gown, attending their ceremony, going to the reception and collecting their certificate; adding a routing feature to help students both navigate to the above mentioned locations but also the other app users that they want to find. Lisa was also able to give me estimates on the number of students on site on a graduation day and so this can be interpreted as the maximum number of simultaneous users of the app, which would be 2000.

Functional

Must Have

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| --- | --- |
| ID | Description |
| 1 | A map that is rendered on screen showing Portsmouth |
| 2 | The user’s current location displayed on the map when the user has location enabled |
| 3 | The ability for other users current locations to be displayed on the map to the user |
| 4 | The ability to manage who has permission to see your current location |
| 5 | The ability to manage who you have permission to see their current location |
| 6 | Users login with their university emails (@myport.ac.uk and @port.ac.uk) by having a code sent to their email that they will then enter into the app |
| 7 | All requests sent to the server encrypted using HTTPS |
| 8 | All requests sent to the server once a user had logged in being authenticated using a JWT(Json web token) generated by the server when the user is logging in |
| 9 | Designated graduation zones to appear on the map, only in which will users locations be shared |

Should Have

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| --- | --- |
| ID | Description |
| 10 | Users locations only being shared on graduation days(8am – 2am the next day) |
| 11 | The ability for users to add their name to their account |
| 12 | The ability for users to add their faculty to their account |
| 13 | The ability for users to add their school to their account |
| 14 | The ability for users to add their course to their account |
| 15 | The account type (Student/Staff) saved to an account based on the email address that they used to login |
| 16 | The ability for users to select which graduation zones they must be in for their location to be shared |
| 17 | The ability to search for other users, when managing location permissions, by their email address |
| 18 | The ability to search for other users, when managing location permissions, by their name |
| 19 | The ability to search for other users, when managing location permissions, by their faculty |
| 20 | The ability to search for other users, when managing location permissions, by their school |
| 21 | The ability to search for other users, when managing location permissions, by their course |
| 22 | The ability to search for other users, when managing location permissions, by their account type |

Could Have

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| --- | --- |
| ID | Description |
| 23 | The ability to tap users you can see on your map to display the information they have added to their profile |
| 24 | The ability to tap users you can see on your map and tick a box to say you have already seen this person and so to stop that user from continuing to display on your map |
| 25 | The ability to filter the users that appear on your map by faculty |
| 26 | The ability to filter the users that appear on your map by school |
| 27 | The ability to filter the users that appear on your map by course |
| 28 | The ability to filter the users that appear on your map by email |
| 29 | The ability to filter the users that appear on your map by name |
| 30 | The ability to filter the users that appear on your map by graduation zones |
| 31 | The ability to filter the users that appear on your map by account type |
| 32 | A checklist of what students need to do on graduation day such as picking up their gown, attending their ceremony, going to the reception and collecting their certificate |
| 33 | Markers on the map showing the key locations for graduation (Guildhall, Ravelin Sports Centre, Gun House Green) |
| 34 | The above mentioned markers clickable to display information about what is happening at these locations |

Will Not Have Right Now

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| --- | --- |
| ID | Description |
| 35 | A routing feature to help users navigate to the above mentioned key locations |
| 36 | A routing feature to help users navigate to other users |
| 37 | The ability to draw your own graduation zones that you can appear in to others |
| 38 | The ability to message other users |
| 39 | The ability to send a push notification to another user to let them know that you’re trying to find them |

Non-Functional

Must Have

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| --- | --- |
| ID | Description |
| 40 | The ability to run on the latest version of Android(Android 14) |
| 41 | The ability to handle 50 concurrent users without denying any of them service(Returning Service Unavailable when a user’s client calls an endpoint on the server) |
| 42 | A users location update on other users devices at most 30 seconds after the users client get an update of its own location (assuming all users have a good connection to the internet) |
| 43 | The JWTs that are generated by the server for users to login be valid for 24 hours |
| 44 | The login codes sent to users emails should be valid for 5 minutes |

Should Have

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| --- | --- |
| ID | Description |
| 45 | The ability to run on the latest version of iOS(iOS 17) |
| 46 | The ability to handle 500 concurrent users without denying any of them service(Returning Service Unavailable when a user’s client calls an endpoint on the server) |

Could Have

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| --- | --- |
| ID | Description |
| 47 | The ability to handle 2000 concurrent users without denying any of them service(Returning Service Unavailable when a user’s client calls an endpoint on the server) |