

**Link to Questionnaire:**

<https://docs.google.com/forms/d/e/1FAIpQLScLg6uSzeGL8jp0y86d8mvlr10QzlwPJatk8Syd5o1TozOJbQ/viewform?usp=sharing>

**Link to Interview Doc:**

[https://docs.google.com/document/d/1BUd8TaGAvgLnMGSPVoiVCTJHHmT1yM1cG\\_IW2HkwyEA/edit?usp=sharing](https://docs.google.com/document/d/1BUd8TaGAvgLnMGSPVoiVCTJHHmT1yM1cG_IW2HkwyEA/edit?usp=sharing)

**Participant List****Questionnaire Participants List**

Computing ID	Timestamp
bty6sa	9/20/2023 13:41:17
wc3pp	9/20/2023 13:42:26
maj5qq	9/20/2023 13:51:42
vbu3se	9/20/2023 14:04:59
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xst9cb	9/20/2023 21:41:46
Ywa8su	9/20/2023 22:39:17
nmb3ju	9/20/2023 22:49:13
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trs2wd	9/21/2023 1:39:25
dpg4bz	9/21/2023 9:09:46
mnw2ac	9/21/2023 9:31:23
jaf7th	9/21/2023 9:54:36
sre5dq	9/21/2023 10:36:43
amr5dq	9/21/2023 11:43:27
cxz9sj	9/21/2023 12:44:26
Ybf3jw	9/21/2023 15:25:55
btl9zu	9/21/2023 18:04:50
rkk6nx	9/21/2023 23:33:15
fl7dqf	9/22/2023 16:00:45
Xan7xe	9/22/2023 16:25:31
ywv3ze	9/22/2023 16:25:53

#### Interview Participants List

Computing ID	Name	Year	Date
ZKX7ZK	Biswash Prasai	First	9/20/23
SS7UC	Sagar Sapkota	Fourth	9/20/23
TEN4VP	Kayla Nguyen	Third	9/21/23
ANL8RPM	Andrew Lucktong	Second	9/21/23
uym3ut	Bliss Bodawala	Third	9/21/23
jaf7th	Kofi Darfour	Third	9/21/23
gzw2nc	Viet Huynh	First	9/21/23

mvk2uy	Kevin Lam	Third	9/22/23
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### Requirements Elicitation Process

To understand the needs and wants of HoosAround's users, our team decided to use the online questionnaire and personal interview elicitation methodologies. First, we had a team discussion clarifying the basic purpose and functions of our app: an exciting gamified adventure on Grounds which utilizes QR code landmarks to inspire students to explore. Then, we collectively brainstormed questions to ask in the questionnaire and the personal interviews. The questionnaire would help gather qualitative and quantitative data about students' experiences exploring Grounds. The interview would help us gain deeper insights and understandings of the users needs, preferences, and concerns regarding the discovery of new locations. Also, there were basically two user groups we interviewed: first years and upperclassmen.

From a quantitative perspective, it was important for us to understand how much students are involved and how familiar they are with Grounds. We asked a few questions about their community organization involvement and their familiarity with geocaching/location based games. We used likert scales for several of our questions and also asked individuals to rank certain features. We distributed these questions via a Google Form due to the ease of distribution and the data visualization features such as bar graphs and pie charts.

*Table 1: Questionnaire Questions and Reasoning*

	Question	Reason for Asking
1.	Computing ID and Year	To collect data on demographics. Participants were asked for the computing id as an identifying factor and their year to understand the 'on Grounds-experience' of the respondent.
2.	How many community organizations are you involved in?	Higher involvement can suggest a student's broader understanding of Grounds and its myriad locations.
3.	How did you discover the organizations you were involved in?	Determine how students are discovering student organizations, and implicitly, their locations around Grounds.
4.	Have you ever used the database of community interest organizations?	Determine if students use web-based tools to discover UVA organizations (which has implications for UVA locations)
5.	What percent of UVA Grounds do you think you are familiar with?	Gauge how confident the student body is with Grounds and determine if students have a lack of knowledge in locations around Grounds.
6.	On a scale from 1-5 how overwhelming was navigating	Understand if students need assistance in navigating college and exploring Grounds.

	the college when you were a first-year?	
7.	On a scale from 1-5 how many more resources did you discover during your later years at UVA?	If students are discovering more resources in their later years, the HoosAround app may be able to introduce students to these resources in their earlier years.
8.	Rank these features (1 being the one you would use most and 4 being the one you would use least):	Understand which features are most wanted by users
9.	On a scale from 1-5, how familiar are you with geocaching or other location based games?	Figure out whether our target audience is familiar with location based games which will determine the development of certain features/design of the app
10.	On a scale from 1-5, how willing would you be to mobilize in order to play these games?	Understand how likely users are to actually go to locations and use the features of the app.

On the other hand, interviews limit the amount of people evaluated, but allow for more in-depth and comprehensive feedback. We generated several questions for first years, several for upperclassmen, and a few general questions for both groups. For our team, the information and lessons learned from the interview were critical to generating user stories. The qualitative data from the interviews nicely complemented the qualitative data from the online questionnaire.

First years are the target users of our app, however upperclassmen likely have the benefit of foresight when it comes to hidden locations. We asked questions such as, “What motivates you to explore grounds?” and “What are some frustrations with discovering new places around Grounds?” We also asked questions about sharing locations with friends and gained insights about possible implementable features for the future. This entire process allowed us to take the wants and needs of the users and translate them into user stories. Although the questions for both elicitation techniques were similar, the ability to investigate further helps expand on the feedback received in the questionnaire, so stakeholders who completed the questionnaire were also allowed to be interviewed. Each team member interviewed 1-2 people and recorded the interviewees’ responses in a Google Doc.

*Table 2: Interview Questions and Reasoning*

	Question	Reasoning
1.	What type of locations do you like visiting the most? Cultural	Understand what locations users are most interested in visiting. This will help us add various locations to the database of

	spots, nature spots, food spots, etc.	locations.
2.	How important is it for you to share your location visits with your friends?	Determine the desire for students to share locations with friends which will aid in the decision to add this specific feature.
3.	How much do you walk around grounds, whether it's for class or for fun?	Measure how often students explore the grounds. This can give insights into the potential frequency of use for our platform.
4.	What are some interesting or less-known locations you have come across so far at UVA?	Gather a list of unique spots that could be featured in our project to promote discovery.
5.	How many clubs did you apply to join and how many did you actually join?	Understand the involvement level of students in extracurriculars, which might relate to how they explore and use various campus spots.
6.	What locations / resources on grounds did not find until your later years here at UVA?	Identify commonly missed or overlooked locations that could be highlighted in our project.
7.	What motivates you to explore new locations around Grounds? Follow up: Do you wish that you found out about these new locations sooner? Perhaps during your first-year?	Determine the primary factors that drive exploration, allowing us to tailor our project's features accordingly.
8.	What are some frustrations with discovering new places around Grounds?	Identify pain points in the current exploration process to improve user experience in our project.
9.	How likely are you to fall into routines (being in the same part of Grounds)? Follow up: Do you find yourself performing better when you stay in this routine? Or when you do something new?	Assess how often students stick to familiar grounds versus venturing out to explore new places.

<b>10.</b>	If something great surprised you at UVA, how did you find out about it?	Understand the most common ways students learn about new things, helping guide our project's discovery and notification mechanisms.
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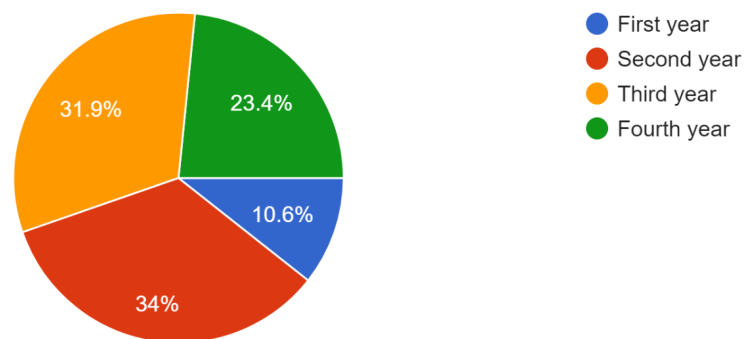
## Requirements Elicitation Results

After receiving 47 responses, our team was able to draw some unique insights from the data. These results aided the development of user stories and requirements for the HoosAround app. The following summarizes some of the key findings from our elicitation techniques:

1. We had quite a diverse student pool with a little less first year students than other years, but we made up for this in the interview elicitation method. Although online questionnaires don't allow for further investigation nor follow-up questions, it allowed us to gather feedback from as many stakeholders as possible to understand general needs and features for the application.

### Year

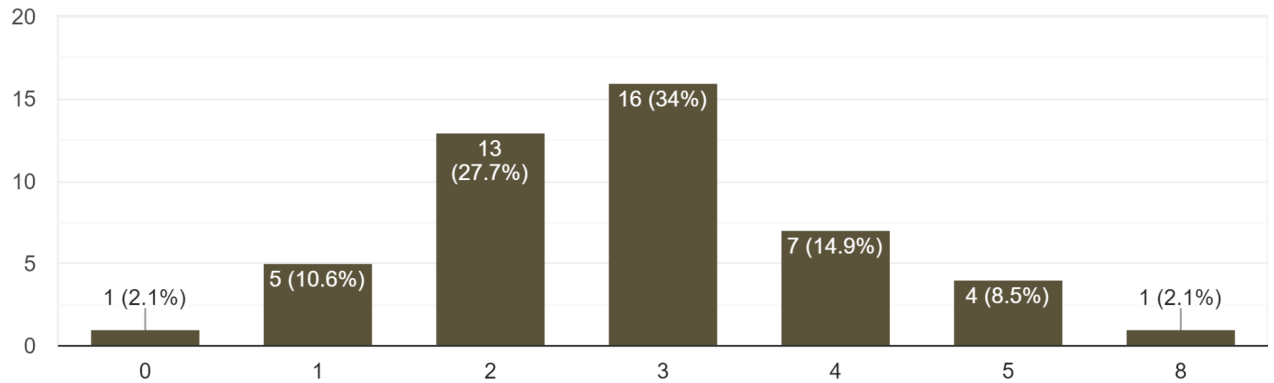
47 responses



2. Participation in community organizations often correlates with the breadth of a student's campus experience. Higher involvement can suggest a student's broader understanding of Grounds and its myriad locations. We wanted to understand how involved students are and how this may relate to their further exploration of Grounds. The majority of students are involved in 2 - 4 organizations.

### How many community organizations are you involved in?

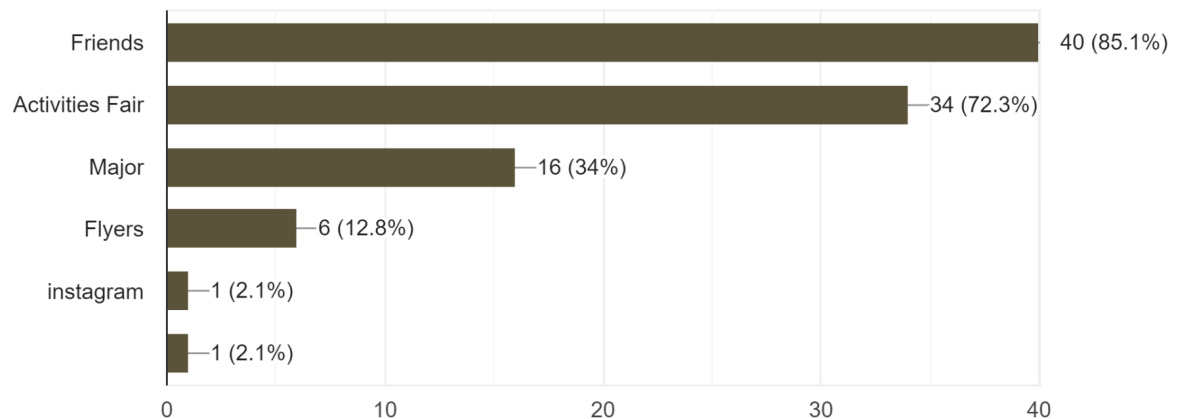
47 responses



3. We recognized a lack of a tool/resource that allows students to discover new locations/organizations. This was determined due to the majority of students discovering organizations through friends and 76.6% of students have never used the database of community interest organizations.

### How did you discover the organizations you were involved in?

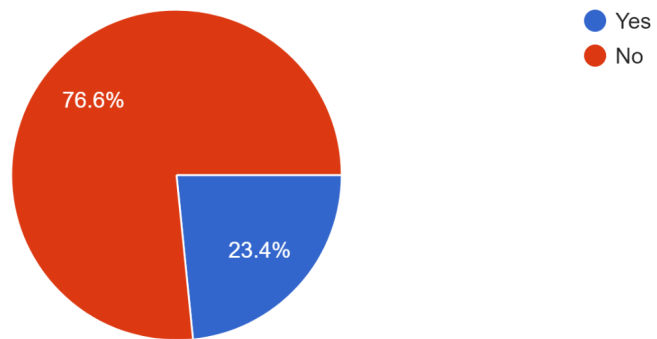
47 responses





Have you ever used the database of community interest organizations?

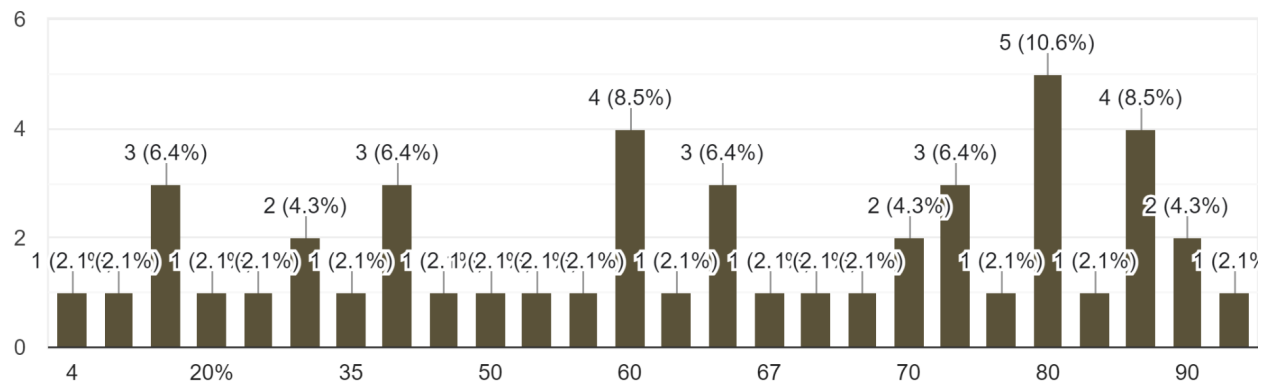
47 responses



- Most students believed they were familiar with a high percentage of Grounds and that they didn't find more resources until their later years at UVA. 76.6% of students also rated 3 or above for how overwhelming they felt navigating their college experience as a first-year. This gamified location discovery app should help encourage students to explore more of Grounds early and often and address these matters.

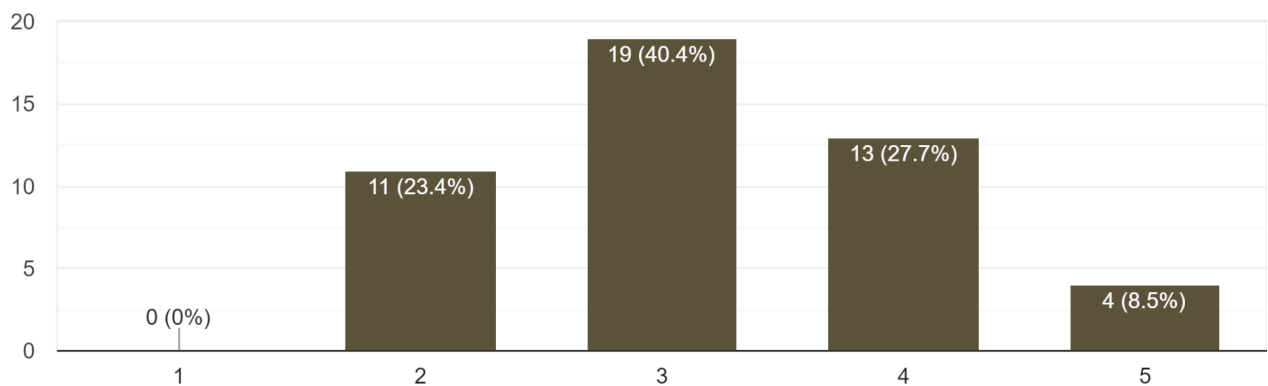
What percent of UVA grounds do you think you are familiar with? (answer number only, example: 79)

47 responses



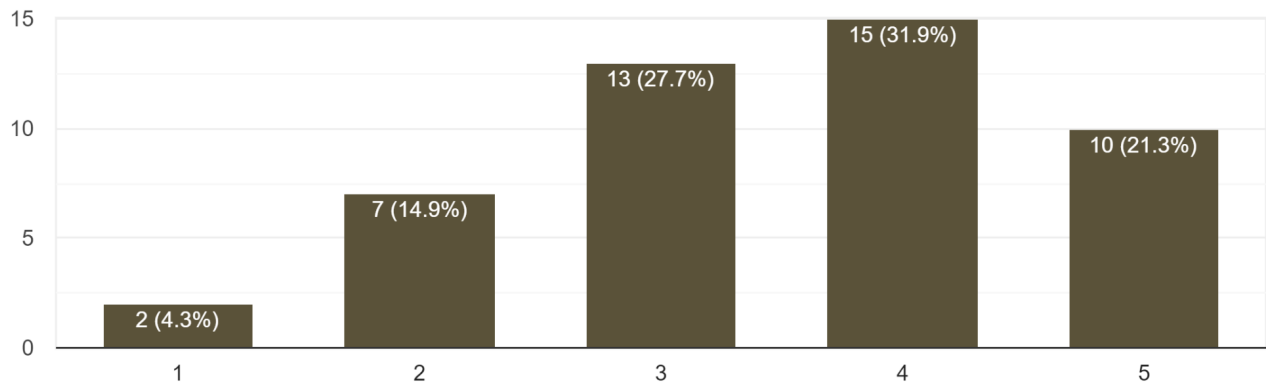
On a scale from 1-5 how overwhelming was navigating the college when you were a first-year?

47 responses



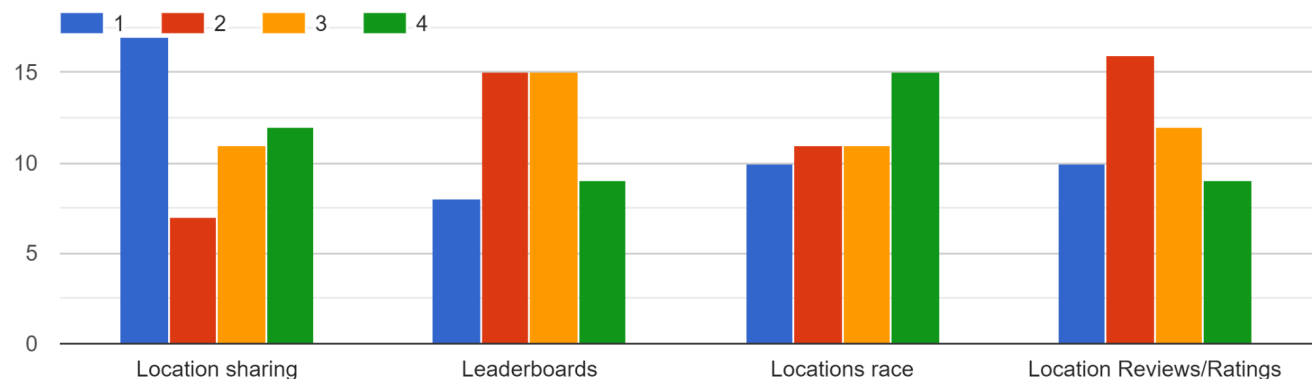
On a scale from 1-5 how many more resources did you discover during your later years at UVA?

47 responses



5. We also learned that “Location Sharing” is the most desired feature out of our provided feature options. The ability to share the locations you’ve visited with friends and on social media is important to UVA students. This is why HoosAround will allow users to share locations with friends.

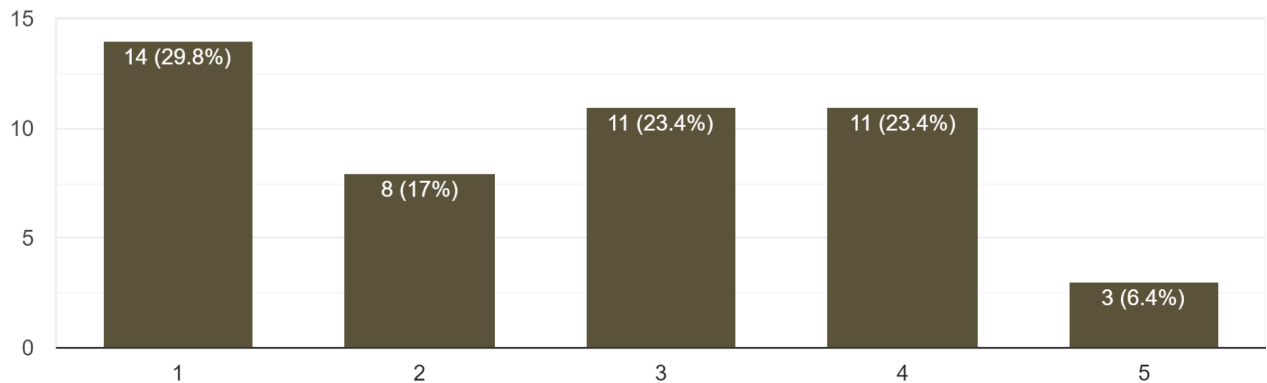
Rank these features (1 being the one you would use most and 4 being the one you would use least):



6. Most people are unfamiliar with geocaching/other location based games and are for the most part willing to mobilize in order to play the game. 63.8% of respondents rated 3 and above for the following question:

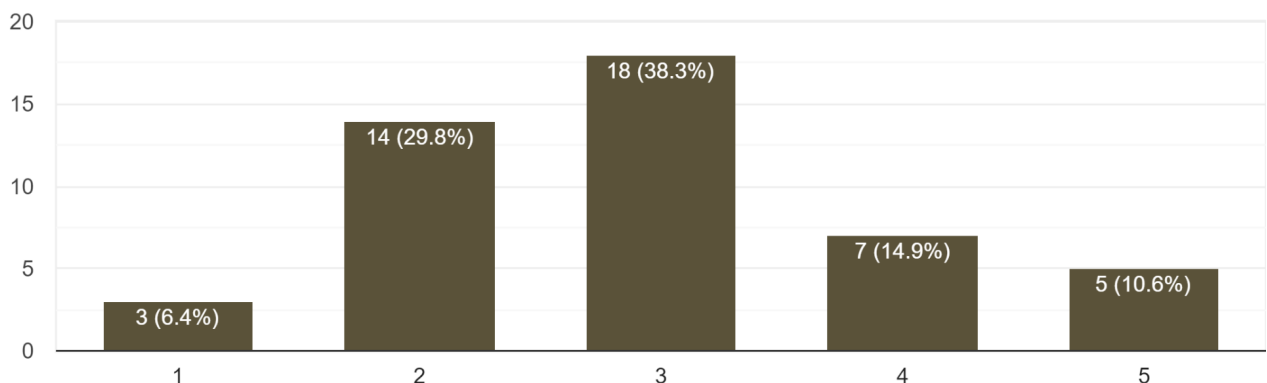
On a scale from 1-5, how familiar are you with geocaching or other location based games?

47 responses



On a scale from 1-5, how willing would you be to mobilize in order to play these games?

47 responses



After interviewing a mix of first years and upperclassmen, we found that students want to explore locations that are tailored to their interests. For example, some students prefer cultural locations over sports locations, and some students prefer food locations over nature locations. Additionally, when locations are suggested to users, users want information about that location in order to decide whether or not it is worth visiting. Example information could include ratings for popularity, quietness, etc. Finally, Users also want to be able to earn prizes for visiting locations and share them with friends, as most UVA students are social and active online. A more document regarding our interview data can be found here:

[https://docs.google.com/document/d/1BUd8TaGAvqLnMGSPVoiVCTJHHmT1yM1cG\\_IW2HkwyEA/edit?usp=sharing](https://docs.google.com/document/d/1BUd8TaGAvqLnMGSPVoiVCTJHHmT1yM1cG_IW2HkwyEA/edit?usp=sharing)



Overall, the responses from the questionnaire and interview gave valuable insights to the advantages and student wants of a gamified, location-based app that uses QR codes to track/share locations. Stakeholders value being informed about unknown locations, shareability, and rewards/gamification.

The information gleaned from the questionnaire and personal interviews were then translated into user stories to be implemented in future development stages.

#### User Stories

User Story ID	As a/an...	I want to / the system shall....	so that...	Story Point Value
1	CIO (user)	<b>Add key points of interest/way points</b>	I can spread the word to the student population	8
2	Student (user)	<b>Scan QR codes at locations</b>	I can complete a mission to go to a location	5
3	User	<b>The system shall keep track of the locations I have visited</b>	I want to see where I've been in the past	5
4	Student (user)	Tailor explorable locations based on my interest through a questionnaire	Explore places that are of interest to me	3
5	Student (user)	Provide meaningful prizes for scanning new locations	I can feel a sense of reward for exploring around grounds	3
6	Student (user)	Provide a set number of locations and show me 2 more new locations every time I visit a location	I don't want to be overwhelmed by a large number of locations	2
7	Student (user)	Provide a leaderboard/events	I can feel like I'm playing a game against other students	2
8	Admin	Be able to approve/deny locations submitted by CIOs or other users	New, explorable locations can be added to the map	3
9	User	I want the system to provide detailed information on the location (ratings such as quietness, popularity, etc.)	So that I can know that if the location is worth visiting	5
10	User	Allow me to save progress by logging in and creating a profile	I can keep track of what I have already found	3
11	User	Allow me to share/invite other users to locations	I can show friends/other students cool locations I think they would like	2
12	User	Suggest unknown, unintuitive places	Get to know Grounds better	2
13	Admin	Show location requests in some sort of queue (Ex: getting an email whenever requests come in)	I can better organize requests	2
14	CIO/UVA Admin (user)	I want the system to count how many students visit my location	To keep track of and understand which locations are the most visited	1

The questionnaire and interview methodologies provided valuable insights needed to create these user stories. For example, when interviewing students, we learned that they have a preference for the type of location they like to visit. This led our team to generate User Story 4, “The system shall tailor explorable locations based on my interest through a questionnaire.” We also learned users like the idea of shareability and competition which helped us generate User Stories 5, 7, and 11. Additionally, when students are shown a set of locations, they’d like some information about each location in order to make a decision on which one to visit. This led us to generate User Story 9. *Our team has uploaded all these user stories as issues in our Github.*

In conclusion, the results gathered from the requirements elicitation process helped our team for user stories and requirements for the HoosAround app. The data collected provided valuable insights for future features to include. Moving forward, we are confident that these insights will pave the way for an app that resonates deeply with the UVA community, fostering exploration and connectivity like never before!