

## **HCI Locator**

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### **Introduction**

#### Thesis Statement

Visitors and new students have difficulty navigating HCI due to its large campus. Thus we are proposing to design HCI Locator, a clear and GPS-functional map, to assist them.

#### Rationale

To be able to design a map with GPS functions to navigate HCI

#### Focus

Main focus is to guide sec ones and visitors around HCI with an app so that they will not get lost in the large campus. Other levels can also use this app.

#### Scope

Students, Staff, and visitors of HCI. We will only be making the map of HCI, not HCJC or HCIS.

### **Literature Review**

#### Positioning of current study in wider context

The project was inspired by 3D directories in shopping malls that we had seen such as in Changi Airport, The Shoppes At Marina Bay Sands and Velocity. Originally we wanted to make a 3D map, but when we realised that this was not feasible, we were inspired by Google Maps to make a 2D map of HCI but also have a location function in the map which made it stand out.

### **Study and Methodology**

#### Ideation

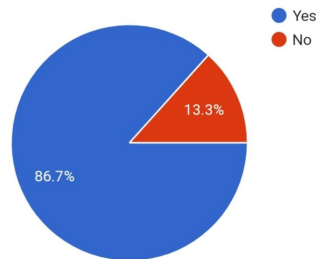
Because we realised that Hwa Chong's campus was one of the biggest in Singapore, we believed that many students and guests would get lost easily. To confirm this hypothesis, we decided to create a survey that will allow us to find out more on this topic.

#### Investigation

We conducted a survey about this application to students in the High School section of Hwa Chong Institution. More than three quarters of respondents were secondary one students while the remaining were from secondary two and secondary four. Unfortunately we were unable to get responses from secondary threes. The respondents were from different classes and consortiums. Below are highlights from the survey responses we collected. For all responses please refer to Appendix A.

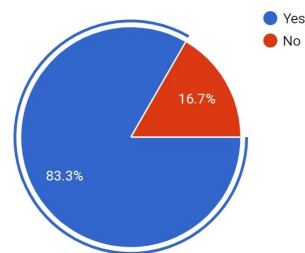
Would you use HCI Locator if we release it on App Store?

15 responses



Have you ever encountered problems locating venues in HCI? If no, skip to the last question.

18 responses



An overwhelming 86.7% stated that they would use HCI Locator if we released it on App Store. In addition, 83.3% of respondents also said that they have had problems locating venues in HCI. Our research hence supports our development of HCI Locator.

Limitations in our survey: because of time restraints, we were only able to distribute the survey to people that we knew well which were mostly sec ones from the same class as us, resulting in nearly 50% of the respondents being from 1I3. Because of this, the survey was not as accurate as we wanted it to be. Also because of time restraints, students from other classes and levels were unable to do our survey and thus we were only able to collect 18 respondents with our limited time.

### Members Job Distributions

Xiao Jing Da: main programmer

Gareth Lim: Creating project database and slides

Keagan Njoman: In charge of locations and debugging and slides

Jonas Lim: Project leader, slide designer, survey response collector

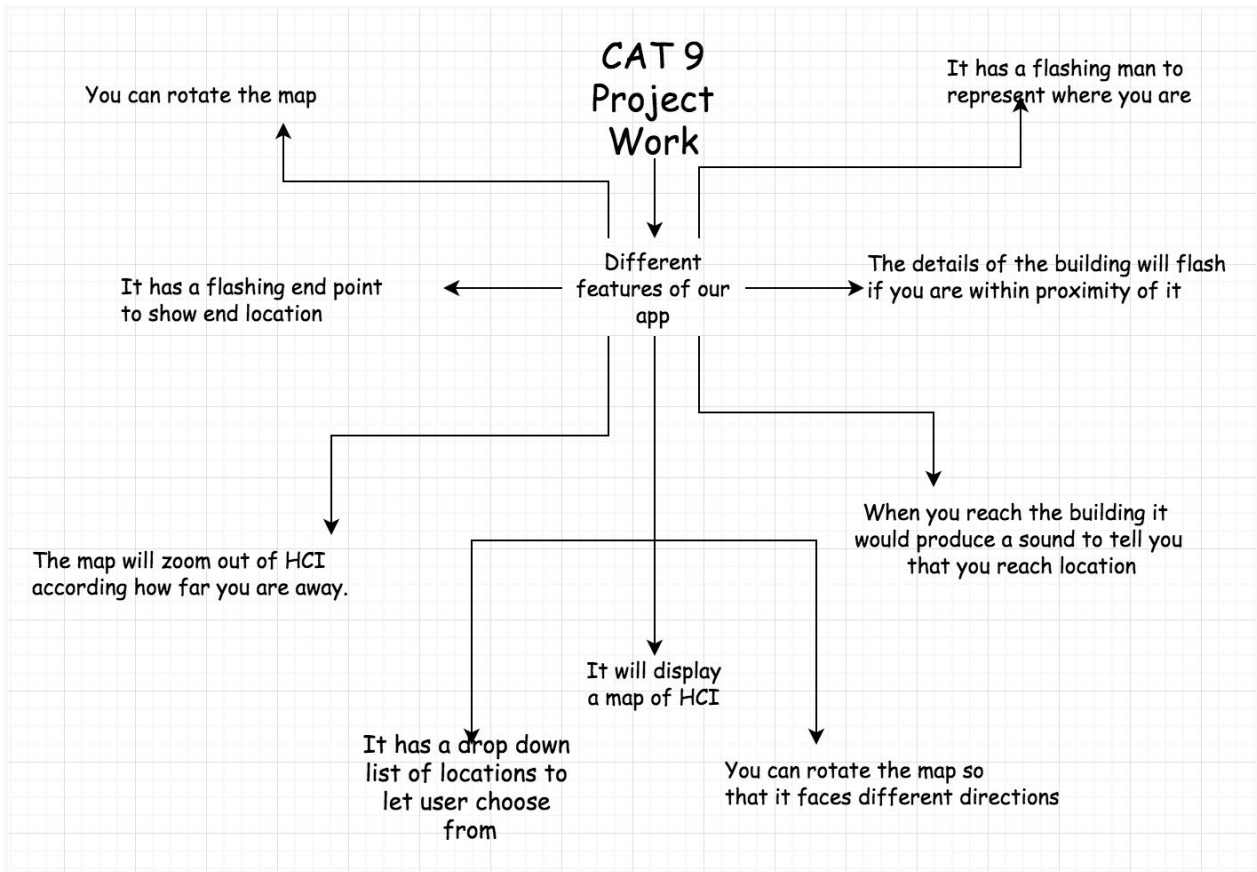
### Project timeline

By 17 July: Finish the coding of the map

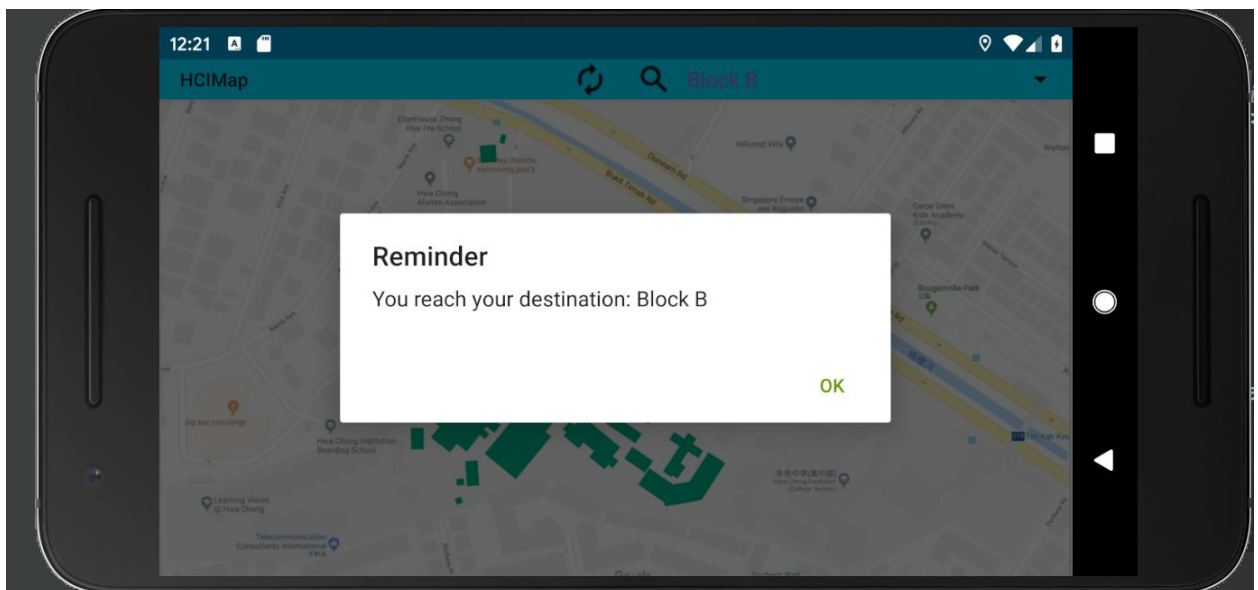
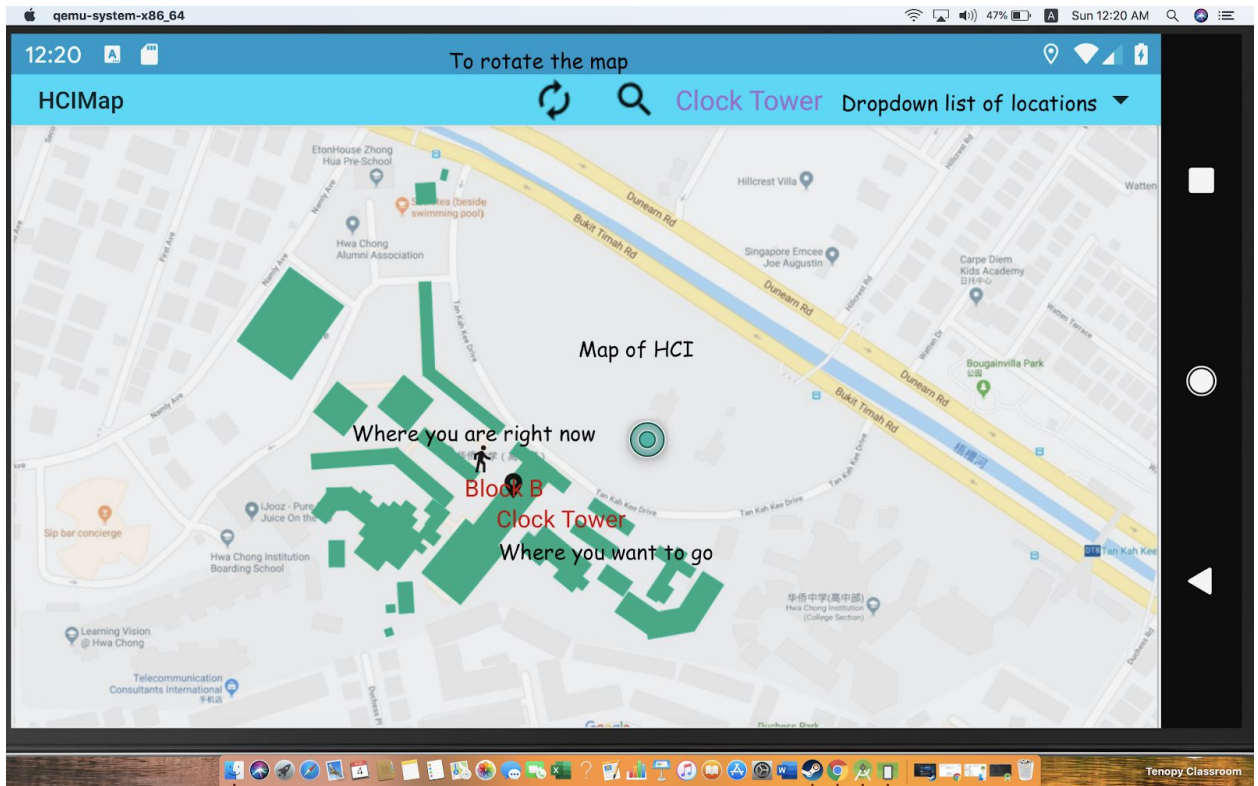
By 2 August: Finish debugging, inputting the dropdown list and finalising map

### **Outcomes**

#### Flowchart



#### Screenshots and Purpose



## Implications

### Improvements and possible extensions

We originally wanted to input a map for all the buildings internally but because of time restraints we were unable to make the map. Similarly, we were also unable to make an algorithm to plan

routes while also avoiding obstacles within HCI because of time restraints. In the future, if we have enough time, we might consider adding a timetable when users sign in with their HCI account (only available for students) so we can recommend them places to go and direct them to their own classroom or locations within the school with the map.

## **Conclusion**

### Reflections

Jonas: I have learnt a lot more because being the leader of this project was difficult. There were many bugs in the code and monitoring the progress was not easy. Also, because we started late and I did not take into account exams in term 3, my schedule became very tight and I hardly had enough time to revise for exams or do well for mid-term evaluation. From then I have now learnt to plan further ahead to take into account other possible problems that might occur and plan my time accordingly. I also have learnt the responsibilities of a leader and how important facilitating and helping every member finish their task at hand.

Gareth: Being a member of this project, I found the project schedule very tight, as we had underestimated the time required to finish the project. Having a personal goal to excel in studies, I thus devoted too little time for project work, which was a mistake on my part. The other members of the group were also very stressed about the schedule, so we did not do well for the mid-term evaluation. Another problem we faced was that there was a lack of cooperation in the group, as some members did not really contribute much to the project. We also faced many conflicting schedules, limiting the time we had to meet up to discuss our project. Our group made the fatal mistake of procrastinating, as we had more important personal things to do. This led to an error in the code during the mid-term evaluation. In the process of making this project, I have learnt to plan r ahead and take into account other possible problems that might occur and plan my time accordingly. I also have learnt the importance of following the leader's instructions so that the project can be carried out smoothly.

Jing Da: As the main programmer of this project, I had to work everyday for four hours to learn android studios and to code all the programmes and to analyse every example that is useful and bring into my project. The one part I struggled with is the main menu of android studios as I did

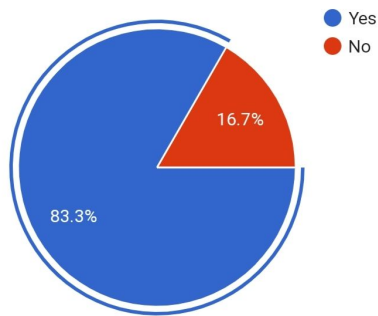
not know at the start what each button did and had to take 2 months to actually start programming. Then when I started to do the programming, we changed the idea on how the project was supposed to be designed, thus I had to work overtime to try and find new examples to match the renewed idea of us. Eventually I got the basics and went at bullet train speed to complete it as for the mid term evaluation. It was a rush but I think we still made it despite the hardships and should be able to finish our project.

## **Appendix A**

Have you ever encountered problems locating venues in HCI? If no, skip to the last question.

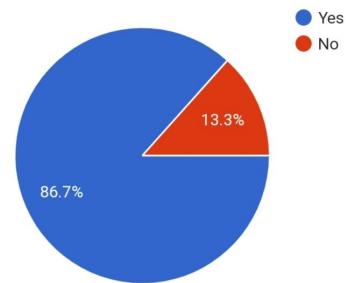


18 responses



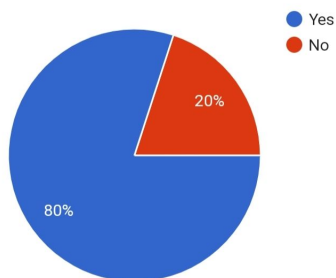
Would you use HCI Locator if we release it on App Store?

15 responses



Do you think HCI Locator will be able to help you get to your destination faster?

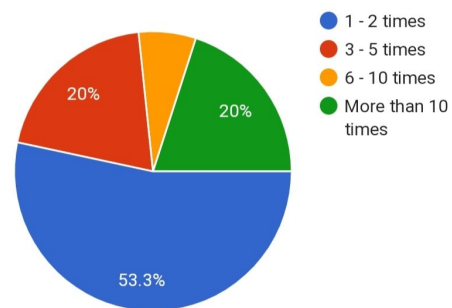
15 responses



If yes, how many times have you gotten lost in HCI before?

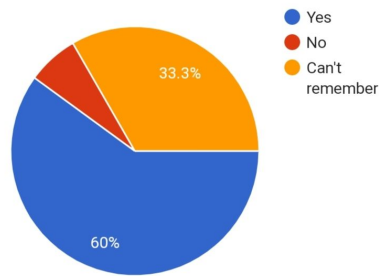


15 responses



If you were a guest to HCI before (e.g. Open House before you were a student of HCI), have you gotten lost? (if you have never been a guest ignore this question)

15 responses



Do you think HCI Locator will be effective during school events such as Open House and SOO? (we can ask students and guests to download the app on their phones)

15 responses

