

# **Written report of the annual project work**

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## **Introduction**

Our main aim and goal for this infocomm project (known as HC companion) is to create one united website for the many queries and questions that many people may want to know. Not only that, this also serves as an automated staff for problems that people may face. As we all know, our school still relies on manual FAQ staff to reply to student's queries, this has one major problem which is that the staff may not answer those questions in time and most of them may be urgent questions. Furthermore, if a student has an urgent question at night, it is not likely for the staff to stay up that long for a reply. Hence, we feel that putting in automation to our school is a beneficial idea in this case since this serves as a staff that is free to answer the queries of students at any time and at any place.

## **Background and explanation**

We have been originally inspired by the Artificial intelligence that we see online these days such as Google Assistant, Siri and also Cortana. These artificial intelligence mostly serve as a question answerer and assists people in Solving their problems. Hwa Chong, being a school that attracts many primary school students' attention. There Will surely be many visitors during our open house. With many

visitors, it is of no doubt that there will be many questions raised by them. By answering these questions, we are able to show to the visitors that we can nurture quality students, this will encourage them to join our Hwa chong family.

The HC companion works similarly like other AI assistants. It basically has a storage of pre-written questions and answers that is put in by us. When a person speaks the question, the AI will scan through the question and check which one in its archive is the closest to the appropriate question, after that, it will put out the answer that we have already put in for the question. This works similarly when the user chooses to choose the question from a list.

#### Detailed contributions (by members)

Zihan: assists in the programming of the speech to text part of the project. Helped to brainstorm the frequently asked questions of audiences and has come up with answers to them. Also write a document on how to use this application should newcomers do not know how it operates

Link to the manual: [guide for HC companion](#)

Ryan: Leader of the group, helped to brainstorm ideas and was mainly contributing towards the user interface and fixing bugs. Also helped to create more questions and answers for our HC companion

James: did the buttons UI and also helped to fix bugs

Weeshen: main creator of all the questions we have put in the archive and also made small support with bug fixing

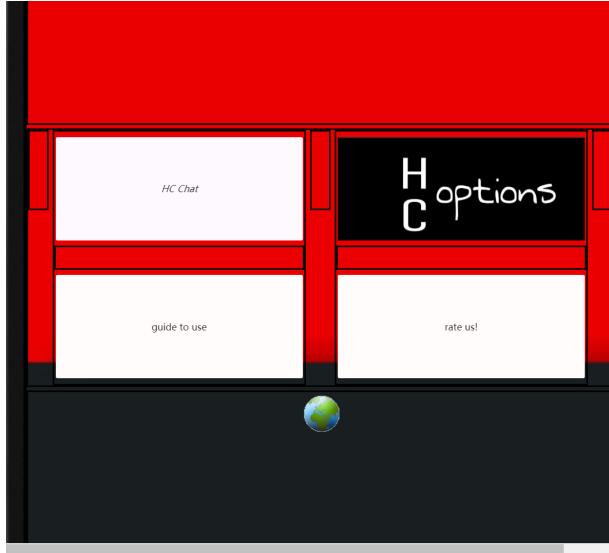
#### Opinions

Although we feel that this application is beneficial and is well made in many ways. I think that there are a few serious drawbacks that we need to address

Firstly, due to technological limitations. It is not possible to capture almost every type of accent or the speeches. For example, we have coded the AI to respond with "hello there! What can I do for you?" when the AI detects the word "hello" or "hi". However, if someone were to say "how are you?" the AI would not be able to respond, hence, the limited number of answers we have can cause some troubles as the AI companion would not be able to recognise them.

### Our outcome of the project

In the end, we have created a HC companion that has the ability to recognise the speech and respond with a proper answer. There are a few photos we have taken from the application

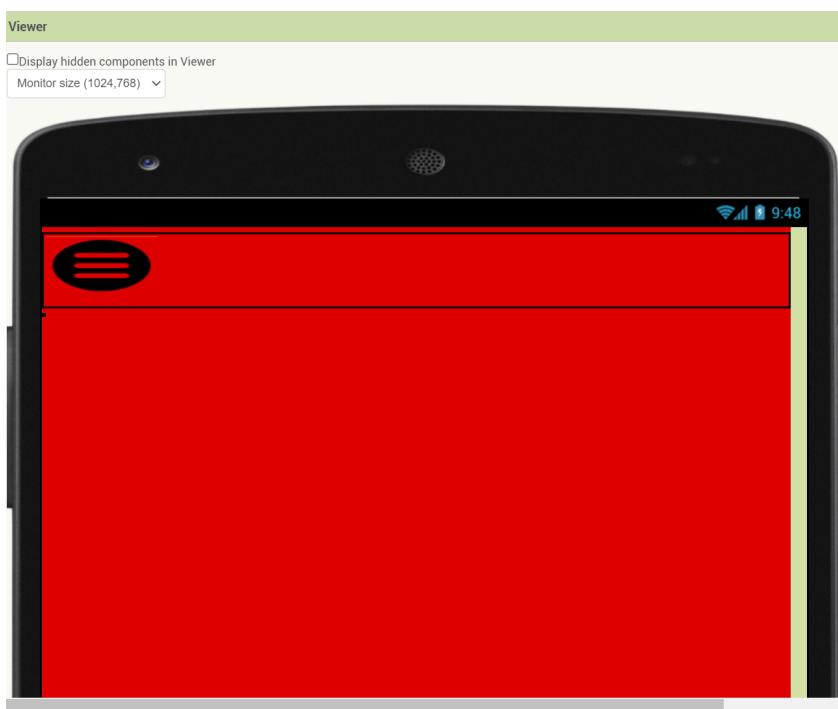
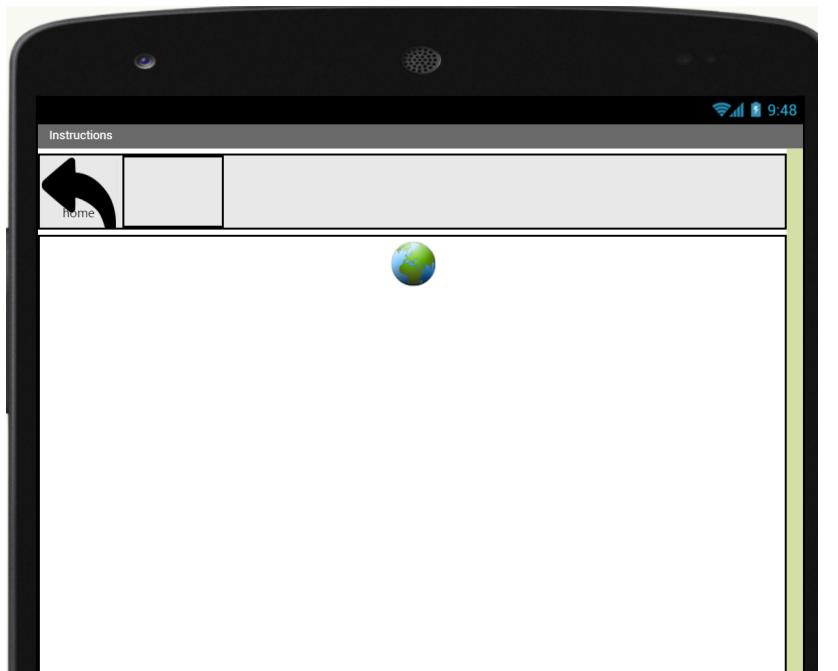


This is the home page of the Application, here, you can see the four buttons that associate with each different purposes. HC chat is used for speech recognition, HC options is used for choosing a variety of FAQs (frequently asked questions), the "guide to use" simply leads us to the instruction manual(link above in the "detailed contributions"

section). “Rate us!” leads you to our google form where you can put in some comments about our applications where we can improve if needed. However the developer page is unable to fully show the final product.

Important Websites	
IEMB	ISP
Useful Links	
Math Google Site	Science Google Site
Historical Investigation	Project Work
School Portal	Hwa Chong Website
Moodle	Student Learning Space (SLS)
PE	
Know more about Hwa Chong!	
Tan Kah Kee	Hwa Chong's History
Core Values	
Hwa Chong Wikipedia	Hwa Chong Heritage
School Song	School Principal
School Location	School Map
Others	
Cultural Groups	Cultural Groups and Descriptions

Here, we see the page after the user presses the “HC options”, as you can see, there is a variety of options of the frequently asked questions which the user can choose from. All these options are actually questions that we have thought up in which we think the user may have.



These two photos depict the page of "how to use" and "rate us!" However, these two pages must be left blank as both these pages will direct us to our review form and the google document on how to use our application

## |ntroduction

Hello! Users of his application, this guide will be able to show you how to effectively use this application and how it can help you learn more about the school.

### Section 1 (purpose)

The purpose of this application is to allow newcomers and visitors of the school to familiarise themselves with the surroundings so that they can have a better understanding of this school. This application is used mainly for answering your question about the school and also provide more information about the general matters in Hwa Chong

### Section 2 (introduction to the sectors of this application)

This application has four buttons, they are 'HC chat' 'HC options' 'guide to use' and the 'rate us!'. We will now go through their functions one by one

#### Section 2A (speaking function)

HC chat: this button will show you a series of FAQs (frequently asked questions). Your query may be answered here, this place also provides websites to other websites such as our IE&MB and ISP.

**our manual looks like**

**this is a showcase of how**

## Reflection and conclusion

In our perspective, I think that this project allowed us to experience new things, although not all of them may be perfect, we think that each of these new tryouts is a very fresh experience for us such as coding an app for an actual usage to the public. Although we know there may be some imperfections in our project, we still feel proud of it as it is all done with all our efforts. Not only that, we have also learnt how to cooperate with one another and get the work done quickly and efficiently.