ASSIGNMENT 1 FRONT SHEET

Qualification	BTEC Level 5 HND Diploma in Computing		
Unit number and title	Unit 06: Managing a Successful Computing Project		
Submission date		Date Received 1st submission	
Re-submission Date		Date Received 2nd submission	
Student Name	Nguyen Quoc Anh	Student ID	GCH18888
Class	GCH0718	Assessor name	

Student declaration

I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.

	Student's signature	

Grading grid

P1	P2	P3	P4	M1	M2	D1

☐ Summative Feedback:	☐ Resubmission Feedback:

Grade:	Assessor Signature:	Date:
IV Signature:		

Contents

I. Introduction

This report is written about Green Zone. An early warning application for Covid pandemic.
It include development and design process of application. We will also draw conclusions about the impact of the project on a pandemic.

II. SCOPE

COVID-19 is a major pandemic. It's become more dangerous due to the increase of total cases and death case over the world. Vietnam is placed in the danger zone. When we have a very long border line with China where first case was found out. The most dangerous thing of COVID-19 is very easy to infection. Moreover, we have no specify vaccine for that virus and also have no many information about it exclude that it has few similiarities with SARS.

We have immediately researched and implemented a project that will help us to prevent the spread of this pandemic. This project name is .

Green Zone is an early warning application which has several function like:

- Let user be able to know immediately whether or not they have been in contact with infected person.
- The application will provide information on cases as well as localize high-risk places or vice versa.
- User can declare their health status through the program.

Green Zone is an application and it's available for IOS and Android. Green Zone project is implemented within 6 months, so the time to open source code repository, license declaration time and release time of mobile versions is different, expecting user community and developer community. feel and join hands to find and fix errors as well as propose improvement idea. Estimate cost is more than 50.000$ and we need more than 10 people work for at least 3 weeks to finish this project

Green Zone application will help 4 main function

- Localize the disease area and infection travel.
- Statistics about Corona over the world.
- News and article about COVID.
- Send Health Report.

We have many task to perform in Green Zone. Firstly, we need to collect information from many sources credible sources like WHO or Health Ministry. Secondly, Green Zone team will analyze collected information and make an infection travel with Google API as map. When marking the travel of an infected person, the infected areas will be localized. Lastly, the information will be displayed on the user's Green Zone application after verified.

Scale: it will be available in Hanoi in experiment time and other city after.

For now, Green Zone is not available for others platform exclude mobile device.

1. Project Objectives.

The developmental results of physical, financial, institutional, social, environmental or other development results that the project is expected to achieve.

Quantitative

Specific results include quantitative or qualitative criteria (for example, the total user will be raise to 1 million in 1 month.

Qualitative

Your results / goals must clearly identify the changes you desire to bring through project intervention.

a) Expand the Green Zone community

Green Zone has working like spider web patterns. Therefore, each user is an important chain for our system. Beside the information from ministry of health and other information channel. We also have to collect information from Green Zone's user. We aim to 1 million users in first month.

b) Increase user awareness.

This pandemic is very dangerous. In addition to measures and actions what has been proposed by government departments and agencies, we need to increase our mental alertness and no cheating in declaring health.

c) Security

Because, this application collect so much information included information about location and travel itinerary from many people. So there will be hell if someone can steal our user information.

d) Effectiveness

We use Google Map API building the journey of infection and zoning the high risk area. Base on google API and user GPS, we hope the accurate rate is more than 90%.

e) Performance

All information are up to date as soon as possible for all Green Zone member. Each user health declare will be analyze and send to ministry of healthy quickly.

2. Project deliverables.

Technical and user documentation which will be given to the company.It include some graphical representations for ease of reference in the technical guide, diagrams showing movement of data through the system, and flowcharts describing how the system works.

- **User documentation**
- **Technical documentation**
- **Communication log**
- **Interview, Survey, Focus group**

III. Project plan.

1. Human Resources.

Human resources is the list of team member who has responsibility with project. It include management and recruitment. Human resources is the important stage of any organization or a project . Building an employer brand and company culture helps organization increase qualified candidates (42%), increase diverse candidates (35%), increase employee referrals (43%), and hire the right people (45%) (CultureIQ, 2020).

Team	Roles	Quantity
Project manager	+ Manage team member + Contact with other departments. + Project analysis + Divide the project to many part. + Project monitoring	1
Business Analyst	+ Research and propose solutions, ideas and features + Provide improve.	1
Data analyst	+ Analyze user data. + Analyze pandemic data.	1
Designer	+ Design user interface + Design content for social media and marketing	1
Coder	+ Code application function	5
Tester	+ Test application function	2
Community Specialist	+ Gather user feedback about app.	1

	+ Develop the community.	
Marketing Specialist	+ Create a content for marketing. + Promote the app.	1

Table 1: Human Resources

2 WBS and WBS dictionary.

Project will be implemented and developed in 6 months. In this project, we have 8 stage to do include:

a) Planning
b) Requirement Analyst
c) Designing.
d) Coding.
e) Testing.
f) Primary.
g) Secondary.
h) Installation and Maintenance.

a) WBS
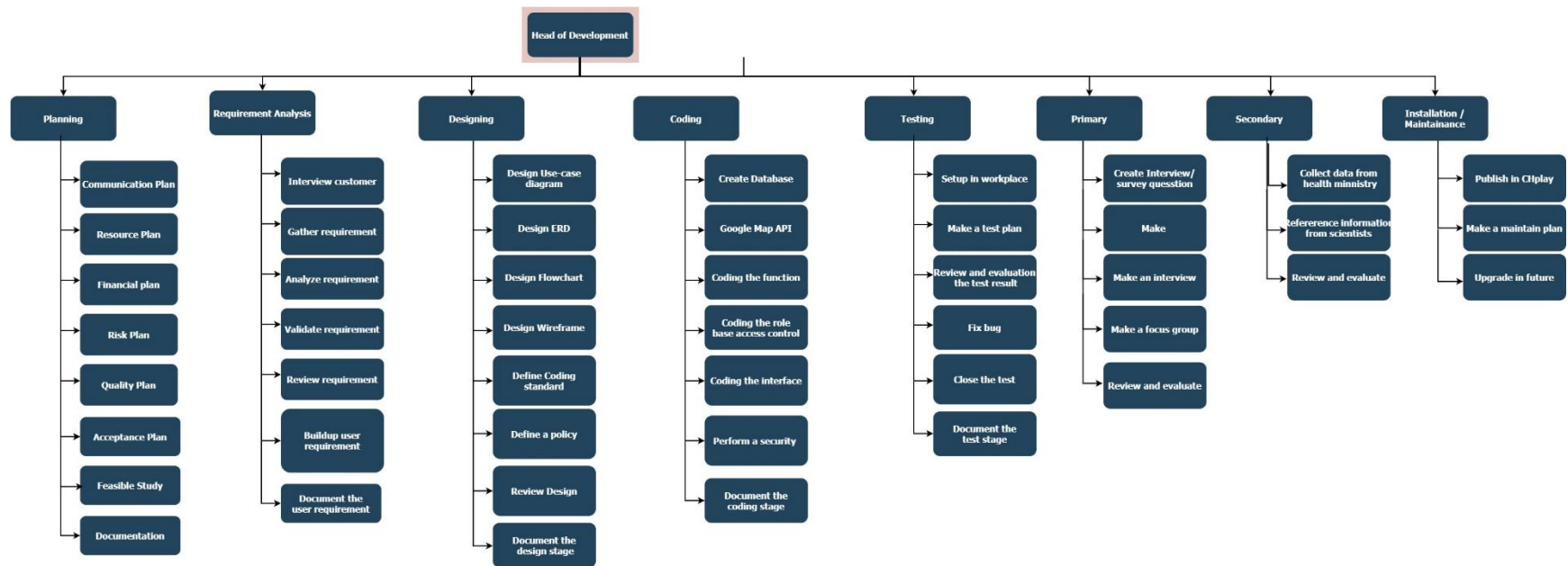
Figure 1: Work Breakdown Structure of Project

b) WBS dictionary

WBS Level 2	WBS Level 3	WBS Description
Planning	Communication Plan	Schedule meetings as well as conversations during project completion.
	Resources Plan	Make a list about labors and their responsibility. It include number of people for each role. Beside, we need to plan all other resources which will be used in project.
	Financial Plan	List expenses and allocate costs appropriately.
	Risk Plan	Plan all the risk can be happened then evaluted it and make solutions for each case
	Quality Plan	Make a plan that includes goals and apply policies to ensure project quality.
	Acceptable Plan	Make a necessary procedures and licenses to ensure the legality of the project.
	Feasible Plan	Evaluate and review all the plan stage of project to identify feasibility of each part.
Requirement Plan	Interview Customer	Make an interview
	Gather Requirement	Collect requirement and feedback from customer to analyze.
	Analyze Requirement	Analyze the customer feedback to identify the main purpose of project.
	Validate Requirement	Consider the feasibility of the customer requirements.
	Review Requirement	Evaluate and review the user requirement in project team.
	Buildup User Requirement	Complete the user requirement to start development deployment.

Designing	Design Use-case diagram	Make a use-case diagram base on the user requirement.
	Design ERD	After analyze the user requirement make an entity relationship diagram for all entities which will be used in project
	Design Flowchart	Design flowchart for each function in the project.
	Design Wireframe	Design wireframe for user interface of application.
	Define Coding Standard	Unified design and programming rules to make it easy to upgrade and maintain.
	Design a policy	Make some rule which user can do or not.
	Review Design	Review and evaluate the design stage.
Coding	Create Database	Buildup a database of application base on ERD.
	Google Map API	
	Coding the function	Develop the function of application.
	Coding the role base access control	Develop the role base access control/ account system for admin and normal user.
	Coding the interface	Complete the user interface from the blueprints.
	Perform a security	Contact the security parties or setup a protect shield for system.
Testing	Setup in workplace	Setup application in test environment.
	Make a test plan	Make a test list and test plan.
	Review and evaluate the test result	Review and evaluate the test result to find bug or which are not working right.
	Fix bug	Fix bug left or complete the function if there is a function which not like user requirement

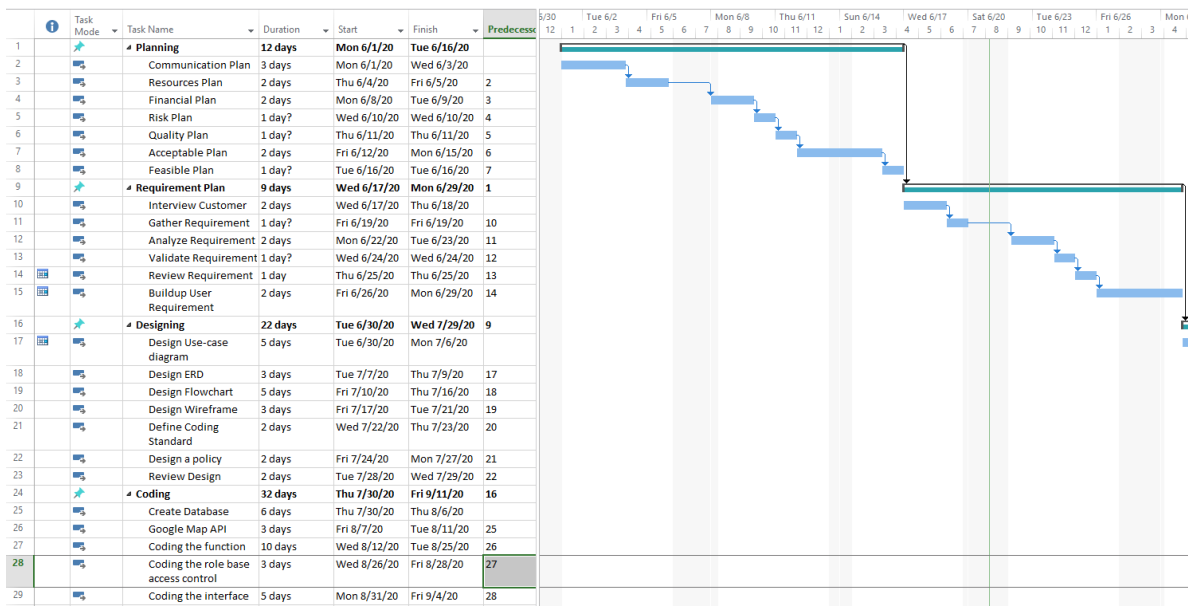|		
	Close the test	Finish the test stage.
Primary	Publish in CH play	Upload apps to CH play for android operating.
	Create survey question	Make survey form with appropriate question for user.
	Make an interview	Interview few user to get their experience after use application.
	Make focus group	Make an interview for group of people to collect their answer about app.
	Review and evaluate the result	Review and evaluate the result of survey, interview and finish finding of research team.
Secondary	Collect data from health ministry	Collect data from health ministry to get statistics about pandemic.
	Reference information from scientists	Interview or ask few scientists to get their opinion about app and this effect.
	Review and evaluate the result	Review and evaluate the result.

Table 2: WBS Dictionary

3. Gantt Chart
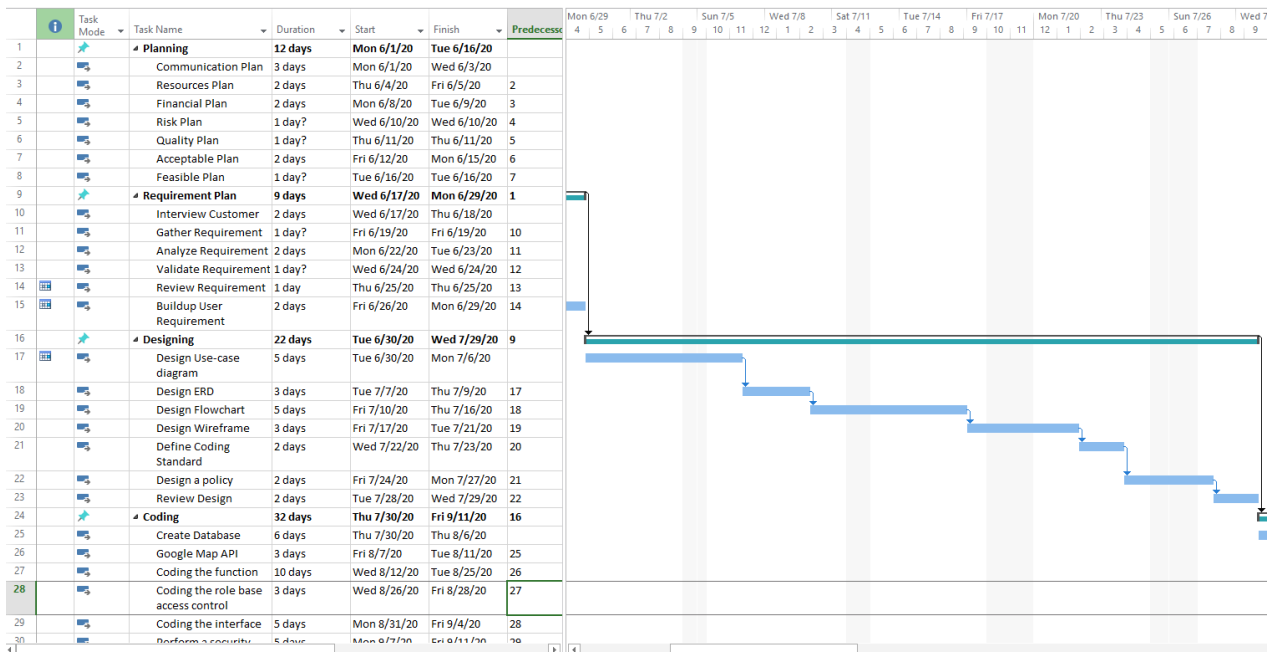
Figure 2: Gantt Chart From 1/6 to 29/6

#	Task Mode	Task Name	Duration	Start	Finish	Predecessor
1		▲ Planning	12 days	Mon 6/1/20	Tue 6/16/20	
2		Communication Plan	3 days	Mon 6/1/20	Wed 6/3/20	
3		Resources Plan	2 days	Thu 6/4/20	Fri 6/5/20	2
4		Financial Plan	2 days	Mon 6/8/20	Tue 6/9/20	3
5		Risk Plan	1 day?	Wed 6/10/20	Wed 6/10/20	4
6		Quality Plan	1 day?	Thu 6/11/20	Thu 6/11/20	5
7		Acceptable Plan	2 days	Fri 6/12/20	Mon 6/15/20	6
8		Feasible Plan	1 day?	Tue 6/16/20	Tue 6/16/20	7
9		▲ Requirement Plan	9 days	Wed 6/17/20	Mon 6/29/20	1
10		Interview Customer	2 days	Wed 6/17/20	Thu 6/18/20	
11		Gather Requirement	1 day?	Fri 6/19/20	Fri 6/19/20	10
12		Analyze Requirement	2 days	Mon 6/22/20	Tue 6/23/20	11
13		Validate Requirement	1 day?	Wed 6/24/20	Wed 6/24/20	12
14		Review Requirement	1 day	Thu 6/25/20	Thu 6/25/20	13
15		Buildup User Requirement	2 days	Fri 6/26/20	Mon 6/29/20	14
16		▲ Designing	22 days	Tue 6/30/20	Wed 7/29/20	9
17		Design Use-case diagram	5 days	Tue 6/30/20	Mon 7/6/20	
18		Design ERD	3 days	Tue 7/7/20	Thu 7/9/20	17
19		Design Flowchart	5 days	Fri 7/10/20	Thu 7/16/20	18
20		Design Wireframe	3 days	Fri 7/17/20	Tue 7/21/20	19
21		Define Coding Standard	2 days	Wed 7/22/20	Thu 7/23/20	20
22		Design a policy	2 days	Fri 7/24/20	Mon 7/27/20	21
23		Review Design	2 days	Tue 7/28/20	Wed 7/29/20	22
24		▲ Coding	32 days	Thu 7/30/20	Fri 9/11/20	16
25		Create Database	6 days	Thu 7/30/20	Thu 8/6/20	
26		Google Map API	3 days	Fri 8/7/20	Tue 8/11/20	25
27		Coding the function	10 days	Wed 8/12/20	Tue 8/25/20	26
28		Coding the role base access control	3 days	Wed 8/26/20	Fri 8/28/20	27
29		Coding the interface	5 days	Mon 8/31/20	Fri 9/4/20	28
30		Perform a security	5 days	Mon 9/7/20	Fri 9/11/20	29

Figure 3: Gantt Chart from 30/6 to 27/7

#	Task Mode	Task Name	Duration	Start	Finish	Predecessor
19		Design Flowchart	5 days	Fri 7/10/20	Thu 7/16/20	18
20		Design Wireframe	3 days	Fri 7/17/20	Tue 7/21/20	19
21		Define Coding Standard	2 days	Wed 7/22/20	Thu 7/23/20	20
22		Design a policy	2 days	Fri 7/24/20	Mon 7/27/20	21
23		Review Design	2 days	Tue 7/28/20	Wed 7/29/20	22
24		▲ Coding	32 days	Thu 7/30/20	Fri 9/11/20	16
25		Create Database	6 days	Thu 7/30/20	Thu 8/6/20	
26		Google Map API	3 days	Fri 8/7/20	Tue 8/11/20	25
27		Coding the function	10 days	Wed 8/12/20	Tue 8/25/20	26
28		Coding the role base access control	3 days	Wed 8/26/20	Fri 8/28/20	27
29		Coding the interface	5 days	Mon 8/31/20	Fri 9/4/20	28
30		Perform a security	5 days	Mon 9/7/20	Fri 9/11/20	29
31		▲ Testing	8 days	Sat 9/12/20	Tue 9/22/20	24
32		Setup in workplace	1 day?	Mon 9/14/20	Mon 9/14/20	
33		Make a test plan	1 day?	Tue 9/15/20	Tue 9/15/20	32
34		Review and evaluate the test result	2 days	Wed 9/16/20	Thu 9/17/20	33
35		Fix bug	2 days	Fri 9/18/20	Mon 9/21/20	34
36		Close the test	1 day?	Tue 9/22/20	Tue 9/22/20	35
37		▲ Primary	31 days	Wed 9/23/20	Wed 11/4/20	31
38		Publish in CH play	1 day?	Wed 9/23/20	Wed 9/23/20	
39		Create survey question	1 day?	Thu 9/24/20	Thu 9/24/20	38
40		Make a interview	26 days	Fri 9/25/20	Fri 10/30/20	39
41		Make focus group	1 day?	Mon 11/2/20	Mon 11/2/20	40
42		Review and evaluate the result	1 day?	Wed 11/4/20	Wed 11/4/20	41
43		▲ Secondary	3 days	Thu 11/5/20	Mon 11/9/20	37
44		Collect data from health ministry	1 day?	Thu 11/5/20	Thu 11/5/20	
45		Reference information from	1 day?	Fri 11/6/20	Fri 11/6/20	44

Figure 4: Gantt Chart from 30/7 to 9/9

#		Task Mode	Task Name	Duration	Start	Finish	Predecessor
22			Design a policy	2 days	Fri 7/24/20	Mon 7/27/20	21
23			Review Design	2 days	Tue 7/28/20	Wed 7/29/20	22
24			▲ Coding	32 days	Thu 7/30/20	Fri 9/11/20	16
25			Create Database	6 days	Thu 7/30/20	Thu 8/6/20	
26			Google Map API	3 days	Fri 8/7/20	Tue 8/11/20	25
27			Coding the function	10 days	Wed 8/12/20	Tue 8/25/20	26
28			Coding the role base access control	3 days	Wed 8/26/20	Fri 8/28/20	27
29			Coding the interface	5 days	Mon 8/31/20	Fri 9/4/20	28
30			Perform a security	5 days	Mon 9/7/20	Fri 9/11/20	29
31			▲ Testing	8 days	Sat 9/12/20	Tue 9/22/20	24
32			Setup in workplace	1 day?	Mon 9/14/20	Mon 9/14/20	
33			Make a test plan	1 day?	Tue 9/15/20	Tue 9/15/20	32
34			Review and evaluate the test result	2 days	Wed 9/16/20	Thu 9/17/20	33
35			Fix bug	2 days	Fri 9/18/20	Mon 9/21/20	34
36			Close the test	1 day?	Tue 9/22/20	Tue 9/22/20	35
37			▲ Primary	31 days	Wed 9/23/20	Wed 11/4/20	31
38			Publish in CH play	1 day?	Wed 9/23/20	Wed 9/23/20	
39			Create survey question	1 day?	Thu 9/24/20	Thu 9/24/20	38
40			Make a interview	26 days	Fri 9/25/20	Fri 10/30/20	39
41			Make focus group	1 day?	Mon 11/2/20	Mon 11/2/20	40
42			Review and evaluate the result	1 day?	Wed 11/4/20	Wed 11/4/20	41
43			▲ Secondary	3 days	Thu 11/5/20	Mon 11/9/20	37
44			Collect data from health ministry	1 day?	Thu 11/5/20	Thu 11/5/20	
45			Reference information from scientists	1 day?	Fri 11/6/20	Fri 11/6/20	44
46			Review and evaluate the result	1 day?	Mon 11/9/20	Mon 11/9/20	45

Figure 5: Gantt Chart from 12/9 to 15/10

#		Task Mode	Task Name	Duration	Start	Finish	Predecessor
22			Design a policy	2 days	Fri 7/24/20	Mon 7/27/20	21
23			Review Design	2 days	Tue 7/28/20	Wed 7/29/20	22
24			▲ Coding	32 days	Thu 7/30/20	Fri 9/11/20	16
25			Create Database	6 days	Thu 7/30/20	Thu 8/6/20	
26			Google Map API	3 days	Fri 8/7/20	Tue 8/11/20	25
27			Coding the function	10 days	Wed 8/12/20	Tue 8/25/20	26
28			Coding the role base access control	3 days	Wed 8/26/20	Fri 8/28/20	27
29			Coding the interface	5 days	Mon 8/31/20	Fri 9/4/20	28
30			Perform a security	5 days	Mon 9/7/20	Fri 9/11/20	29
31			▲ Testing	8 days	Sat 9/12/20	Tue 9/22/20	24
32			Setup in workplace	1 day?	Mon 9/14/20	Mon 9/14/20	
33			Make a test plan	1 day?	Tue 9/15/20	Tue 9/15/20	32
34			Review and evaluate the test result	2 days	Wed 9/16/20	Thu 9/17/20	33
35			Fix bug	2 days	Fri 9/18/20	Mon 9/21/20	34
36			Close the test	1 day?	Tue 9/22/20	Tue 9/22/20	35
37			▲ Primary	31 days	Wed 9/23/20	Wed 11/4/20	31
38			Publish in CH play	1 day?	Wed 9/23/20	Wed 9/23/20	
39			Create survey question	1 day?	Thu 9/24/20	Thu 9/24/20	38
40			Make a interview	26 days	Fri 9/25/20	Fri 10/30/20	39
41			Make focus group	1 day?	Mon 11/2/20	Mon 11/2/20	40
42			Review and evaluate the result	1 day?	Wed 11/4/20	Wed 11/4/20	41
43			▲ Secondary	3 days	Thu 11/5/20	Mon 11/9/20	37
44			Collect data from health ministry	1 day?	Thu 11/5/20	Thu 11/5/20	
45			Reference information from scientists	1 day?	Fri 11/6/20	Fri 11/6/20	44
46			Review and evaluate the result	1 day?	Mon 11/9/20	Mon 11/9/20	45

Figure 6: Gantt Chart from 3/10 to 8/11

4. Budget

Project can have project budgets that are several pages. Such projects often have a large number of costs associated with them, such as salary costs, development cost, and implement cost. The Project Budget itself is a dynamic document. It is continuously updated over the course of the project (Anon., 2020).

Project costs		Percentage of overall budget	Budget
Application/Licenses		6%	3000$
Staff cost	Data analyst	3%	1500$
	Coder	10%	5000$
	Designer	3.2%	1600$
	Tester	3%	1500$
	BA	2.8%	1400$
	Project manager	4%	2000$
	Marketing specialist	2%	1000$
	Total	28%	14000$
Hardware		10%	5000$
Event	Interview	3%	1500$
	Meeting	4%	2000$
	Workshop	9%	4500$
	Total	16%	8000$
Implement (Before and after project)		25%	10000$
Network		10%	5000$
Maintainance		10%	5000$
Marketing		10%	5000$
Total		50000$	

Table 3: Cost

5. Risk management

Risk management is the identification, evaluation and prioritization of risks followed by the rational and economical application of resources to minimize, monitor and control the probability of occurrence or impact of events. unfortunate events or to maximize the performance of opportunities. The goal of risk management is to ensure that this uncertainty does not divert the activities of the business goals.

Risk description	Type	Probability	Impact	Solution
Unreasonable cost allocation (Pay too much for one but other is lack of cost)	Budget risk/internal	Medium	High	Analyze and design clear and accurate cost for each work.
Lack of cost (Some hardware or application are more expensive than estimate,…)	Budget risk/ internal	Medium	High	Calling for investment. Cut down on unnecessary expenses.
Overdue deadline	Time risk/ internal	High	Very High	Reasonable time calculation. Proactively remind members to complete on time.
The transmission line is not stable	Technology risk / Resources	High	High	Use multiple lines to be able to change as needed. Increase the registered bandwidth.
Out of date (Old version application, outdated hardware)	Technology risk	Low	Medium	Always up to date all the application and select the suitable hardware for project.
Limited communication (Wrong understand or team member can't talk to each other much.	Resources risk	Medium	Medium	Assign communicator of each team in the project. Unify the project's standard projects.
Hardware error (broken Server, broken components, …)	Technology risk / Resources risk	Medium	Very high	Planned routine maintenance. Make Backup

Steal user data	Technology risk	High	Very High	Upgrade security system. Rent some security engineers.
Fire house (Server room or staff room are fired,…)	External / environment	High in summer Low in other seasonal	Very High	Use early warning system for detect the fire as soon as possible. Automatic fire extinguisher. Always keep the temperature within the safe range.
Flood	External / environment	Low	Very High	Build good drainage system.
Errors of the program (User cannot connect, login. Wrong information)	Technology	Medium	Very High	Make a test plan. Ready to fix the error when there is feedback from the customer

Table 4: Risk Plan

6. Quality Project

To ensure the design and development process go smoothly. Just like the application is completed in the best state before reaching the user. I have to follow quality assurance process in 4 steps.

a. Plan

Project leader will divide this step into smaller parts base for our experience after analyze the user requirement. Firstly, project team will analyze and classify user based on user requirements. To clearly, we will draw the use-case diagram. After identify the user. Who has reponsibilities with database design will analyze about the entities which will use in the application and their relationship. Then design a suitable entity-relationship diagram for application. Secondly, our designer will try to design a site-map for application. Lastly, based on the components acquired in step 2, designer will design wireframe applications. And to ensure that what you have analyzed is true to customer requirements. Project team need to let them know about what will become. Note that, our customer sometime not a technician. So BA need to talk with them and let them understand in the suitable way. There should not use so much confusing specialized terms.

b. Do

In the Plan step, project leader have divided our application to many part to do. We also confirm with our customer about their requirement. In this step, Project team will continue to build an application base on which got before. Data analyst can build a suitable database based on the ERD designed.

Designer need to complete the user interface base on wireframe. Our developer also make some change to be more consistent as well as to add small details that the wireframe cannot indicate. The next work is connect the database to application and then completing functions for user objects based on use-case diagrams.

c. Check

To ensure application will work well, Tester have to do many test. In this project, tester would to do as many as possible test by assuming different cases. If there are still any error/bug, developer/coder will try to fix it. Depend on test result, project team will make reviews and evaluate for identify weaknesses and strengths as well as advantages and disadvantages of the system.

d. Act

After check step, Project team suggest improvements and upgrades in the future. Documentation of the main content of web development and design also makes maintenance easier. A quality project is not only perfect when it

It will be quality project if almost requirement of user are solved. There are not any bug or problem which direct affect to the user experience.

7. Project Communication.

Communication is the most important things of project success. In fact, according to the Project Management Institute (PMI), most project failures are due to communication issues. Project communication management ensures that does not happen (Anon., 2020). Project will be divided to many parts for many people. Each people have different work to do but it still a part of project. So when anyone begin their work, they need to communicate with other to ensure the synchronization. Beside, a member can ask for help when they got problem. Lastly, a project or each parts of project should be confirmed by all team member before begin.

Date	Method	Type	Description	Responsible team member
01-06-2020	Meeting	Project	Meet and introduce the participants in the project.	All member
01-06-2020	Discord / Zalo / Facebook	Project	Invite team member to discord channel and zalo/facebook group	Quoc Anh

04-06-2020	Meeting	Project	Project leader divide the project to parts for member. Schedule a project.	All member
08-06-2020	Discord	Project	Project team willl discuss and allocation cost for each part of project.	All member
10-06-2020	Discord	Project	Discuss about risk and solution for each risk which can be happened.	Nam, Hoa
16-06-2020	Meeting	Project	Agree the plan steps of the project and start developing.	All member
24-06-2020	Face to face	Project	Review user requirement	
26-06-2020	Meeting	Project		
12-07-2020		Project		
17-07-2020	Gmail	Project	Design team sends the blueprint to customers for preview and evaluation, comments.	Nam
22-07-2020	Discord	Project	The team members will agree on standards and regulations in the code including code convention, name convention, language, technology ...	All team member
28-07-2020	Meeting	Project	All team members will discuss and review all stages of the design before going into application development.	All Team member
30/07/2020	Discord	Project	Quoc Anh will discuss with user again to ensure that the design steps are according to user requirements.	Quoc Anh

07/08/2020	Gmail	Project	Sang will send email to Google API admin to request permission to use API in application. Besides, he also emailed the code team about how to use it.	Sang
15/08/2020	Discord	Project	Hoang got a problem with health report function. Form data can't send to database so he need to work with Phuong to resolve it.	Phuong, Hoang
22/08/2020	Discord	Project	There are many problems when we try to sync code of Truong to the main application.	Truong
27/08/2020	Email	Project	Coder team will send a mail to the user to confirm the authorization of the accounts when using the program.	Quoc Anh
02/09/2020	Discord	Project	The coder and designer will discuss to revise and improve the user interface during development.	Quoc Anh , Sang, Nam
12/09/2020	Email	Project	Tuan will send an email to ask expert system security from BKAV for help.	Tuan
17/09/2020	Meeting	Project	All team member will discuss about the test case results. We also find bugs, reasons and plan solutions for each bug left.	All team member

23/09/2020	Face-to-Face	Project	QAnh, Hoa, Nam will making a present according to their work for the purpose of discussing the ways of project implement and project management can be met during the process	QAnh, Hoa,Nam
24/09/2020	Google Drive	Project	Nam will upload the presentation for the day 25/9/2020 to google drive folder	Nam
27/09/2020	Discord	Project	A team will demonstrate and analyzing the information provide for the day 25/9/2020	All team member
01/09/2020	Discord	Project	Quoc Anh will be assigned Hoa and Nam to prepared a question for interviewing	All team member
03/10/2020	Face-to-Face	Project	Qanh and Nam will prepare some question related to group topic for planning and interviewing for the purpose of gathering customer feedback. They will need to find a suitable person who have experience and knowledge	Quoc Anh and Nam
08/10/2020	Google Drive	Project	A team member will discuss in brief on the interviewing collect answer for the day 8./10/2020 then upload to google drive folder	All team member
16/10/2020	Discord	Project	A team will discuss the way of how to meet the project objectives and the project budget during the whole of implementing to prevent project failed	All team member

24/10/2020	Email	Project	A team member will prepared and notify a group for the next interviewing with the professional project manager : Don will be scheduled on 3/11/2020	All team member
03/11/2020	Face-to-Face/ Meeting	Project	A team member interview with Don to gather his information of get the good ways to get control strongly of the security and apply the API for the project	Phi Anh
09/11/2020	Face-to-Face	Project	Team member will prepare a survey question and find a group of people to gather their feedback from the project	
17/11/2020	Discord	Project	A team will planning of project deadline finish will be schedule on 2/12/2020	All team member
29/11/2020	Discord	Project	A team will discuss about how to apply API for the project and implement security for the project	All team member
01/12/2020	Face-to-Face	Project	Team member will make a presentation of analyzing the user feedback to Improve the ways of project implementing	All team member

Table 5: Communication Log

IV. Qualitative and quantitative research.

Hypothesis.

- Green Zone project help prevent the spread of coronavirus.
- Green Zone project helps easier to report health and health ministry can easier to collect information
- Green Zone project help people keep distance with the danger area so decrease the new case number.

1. Qualitative and quantitative research

a) Interview.

Interview is one of the most reliability way to collect data from user. We have to invite atleast 2 people to increase the accuracy. But due to the Corona pandemic, social gap policy has been implemented so we must to do it through discord or google meets. Age of interview participants from 20 to 65 years old. We choose the participant with the age range from young to old to receive answer from different generations. Because, depend on their age, they may have different point of view. To clarify more about advantages and disadvantages, our team has listed some questions. Question will focus on the experience and perspectives of people living in the epidemic area. Beside the available question, we will give them other question depend the development of conversation. There is questionnaire:

1. How often are you use Green Zone?
2. Is the information we provide accurate and helpful? Have it affect to you in a good way?
3. Will you send your health report through this app?
4. What do you think about this app?
5. Do you believe Green Zone will help prevent disease in Vietnam?
6. Are there any suggestion for our team to improve Green Zone project?

Both interviewees gave very objective answers about their experience with Green Zone. They trust the information Green Zone provides and it is extremely helpful to them.The interview participants are ready to send their health reports through Green Zone. To sum up, the participants believed and hoped that Green Zone would help prevent this dangerous pandemic.

b. Focus Group.

Focus group interviews are interviews you conduct with a group of interviewee to collect a variety of information. It's a part of quantitive research. Researcher can control the content of conversation with some question. After that, all the interviewee can discuss together about that. Each opinion of interviewee will be recorded by research team and be used for this research.

1. Are you affected by this pandemic?
2. What do you think if there is an application which help you find out and follow infection person journal? Is it helpful?
3. What will you do when you have contact with infection person? Will you send health report with this app?
4. How this app change your behavior?
5. Do you believe Green Zone will help limit disease in Vietnam after used it?

6. Which function do you expect to appear on app?

In this focus group, 5/5 interviewee answer that they are affected by the pandemic. There have been many cases in their city. Most of them responded well to the application that help monitor the patient's journey and consider it helpful in the current situation.

Figure 7: Review of Green Zone

When asked about using the health reporting feature, 4/5 agreed to report their health status periodically through Green zone, the rest would only report their health when they had it. exposure to F0 or F1. All of them will report back to us if they saw anyone have symptoms.
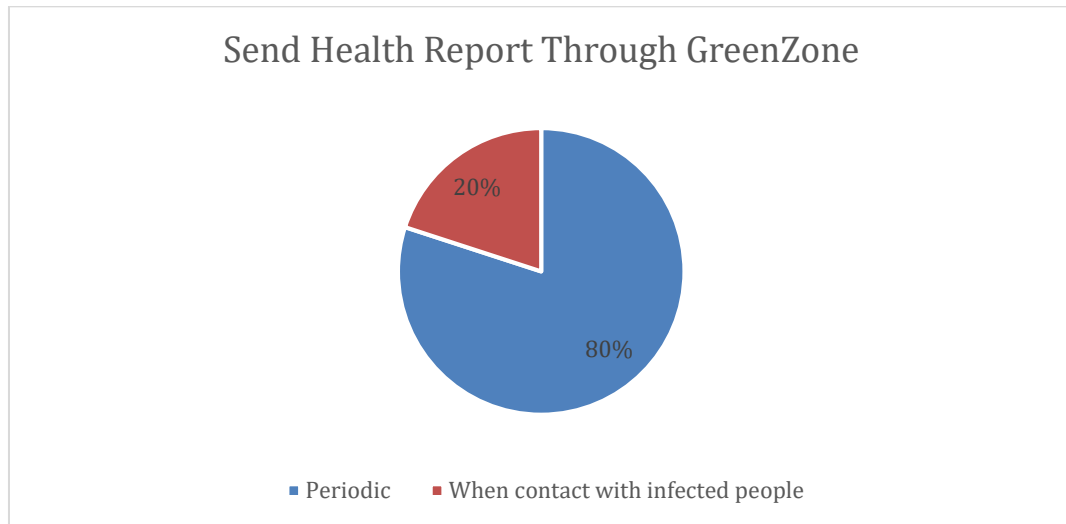
Figure 8: Health Report

c. Survey.

Interview and focus group bring about objective data but survey is better if researcher want more data. Survey can easier to do in a group of people with 10 or more. In this project, our team will conducted a survey with 10 people.

How often you use Green Zone (per day)?
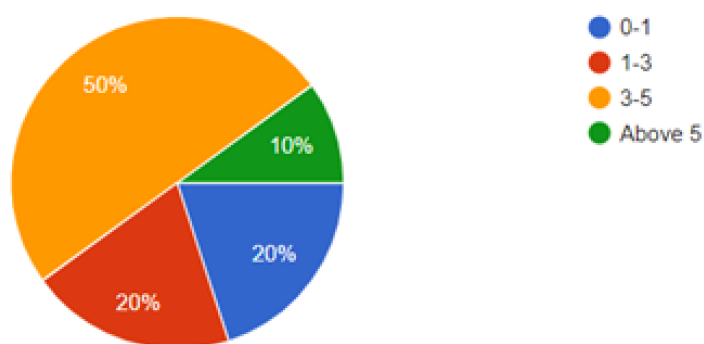
Figure 9: Frequency of using Green Zone

We started the survey on 20 people. When asked about the frequency of using Greenzone, 50% of the respondents use the application 3-5 times a day, the other two use it more than 5 times a day. Finally, the frequency of use 0-1 and 1-3 times together has a population of 2.
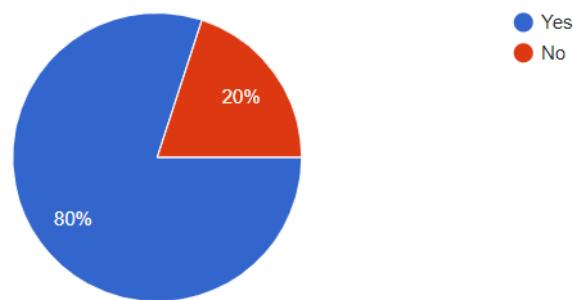
Figure 10: Accurate and helpful information.

There are 8 survey participants who believe in the accuracy of information as well as the usefulness of Greenzone.
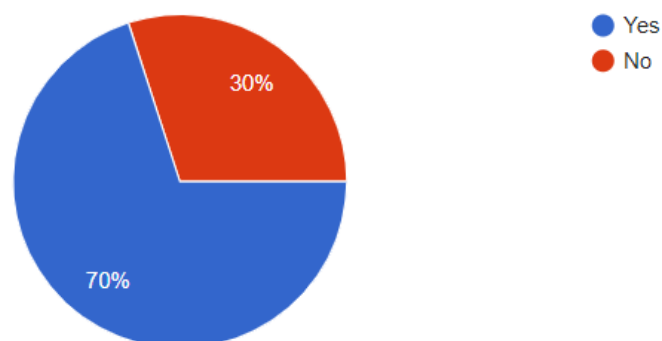
Figure 11: Advantage

Survey have a good result in the lastest answer but in this, it's only 70% people feel that Greenzone has affected thêm in a good way.

Figure 12: The use rate function.

In the next question, most users use Green Zone to check statistics about corona in vietnam and world with 70% of people. it's the same percentage with check danger zone function. Beside, 30% of people have used Green Zone to send health report. Lastly, 50% people use Green Zone for reading news about Covid 19.
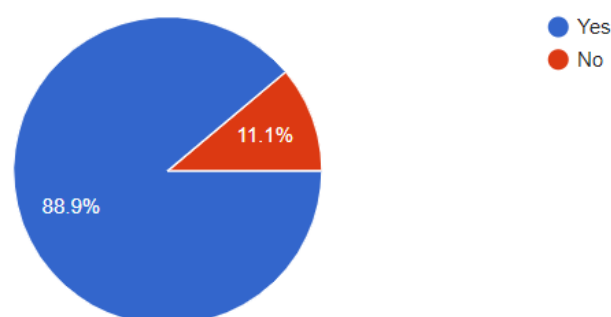
Figure 13: Keep up to use Green Zone.

With outstanding and useful features, most survey participants (90%) will choose to continue using Green Zone in the near future.

2. Finding.

Green Zone project help people change behavior and take more care about health. According to the statistics from collected data from social. We got some positive signal from people who do the survey and focus group about Green Zone project. People have changed their behaviors and they really take more care about their and family health. Almost people have sent their health report through Green Zone app. They also pay more attention to the symptoms that appear. According to the survey, Green Zone indirectly helped to make their lives healthier with some guide and article. For example: "Articles instructing to increase resistance or nutrition in epidemic season, …".

Green Zone project help health ministry can easier to collect and provide information. The increase in the number of people using the health reporting function will help the Ministry of Health get more information. Thereby it may be easier to manage and make appropriate policies. According to the collected data, 90% of users will send their health reports and relatives through the app.
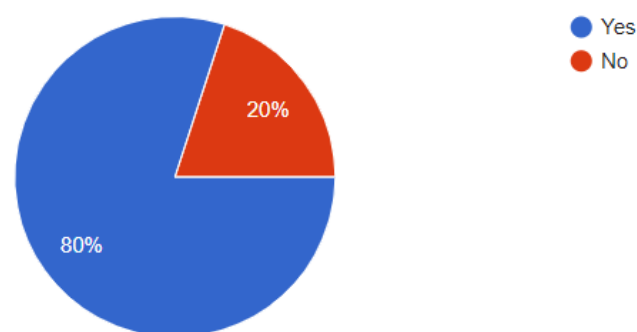
Figure 14: Health Report

Besides collecting information, the most accurate information of the Ministry of Health will be displayed directly through the Green Zone.

What do you do when you use Green Zone?

10 responses
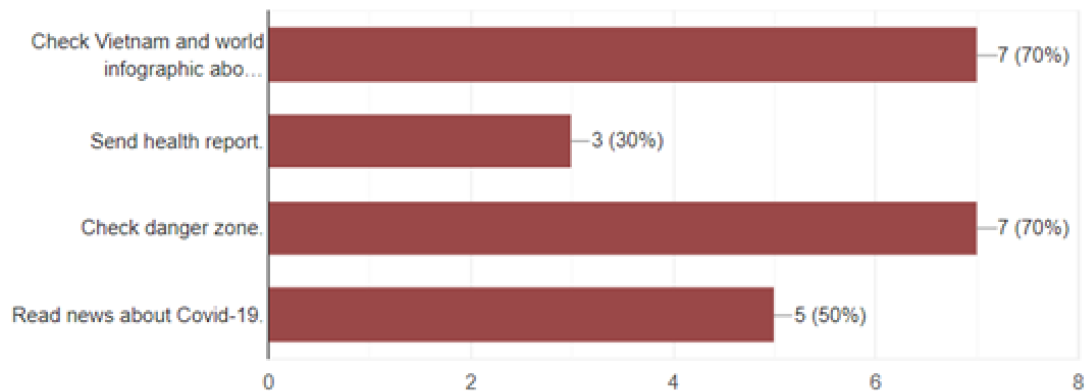
Figure 15: The use rate function.

Feature display the statistics about Corona case over the world and read news about Corona virus is very popular with Green Zone users. In our surveys, 70% are following the statistics about Covid-19 through this app. Therefore, Green Zone is a communication channel that helps the information of the Ministry of Health to reach people quickly and effectively.

Figure 16: Statistics of health ministry. (Ministry, 2020)

Green Zone project help prevent the spread of coronavirus. In the fight against corona pandemic, besides the measures set by the government, the people's awareness is also a very important part. In the survey, the majority of users decided to use the application and recommend it to others. As mentioned at the beginning, each user is the chain of system, our application will be more and more effective when there are more users. According to the statistics of health ministry, till the time of this report, Vietnam had no new cases in the community for 63 days. All cases of entry have been quarantined (Anon., 2020). As Deputy Prime Minister Vu Duc Dam stated: "Living in Vietnam is the dream of many people around the world." Life in Vietnam has gradually returned to normal. All public utilities and schools have been reopened (Anon., 2020).

Do you believe Waifu will help prevent disease in Vietnam?

10 responses
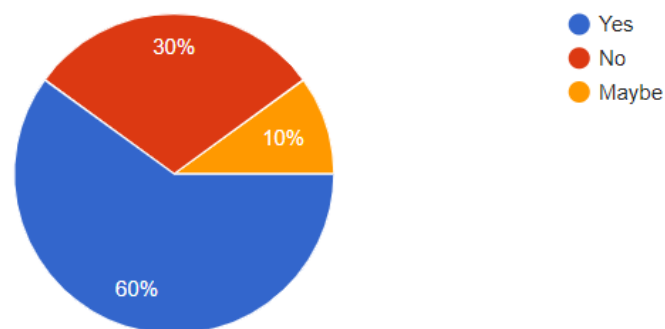
Figure 17: Prevent disease in Vietnam

V. CONCLUSION

Green Zone is an early application about COVID-19. This is an application developed under the trend of digital wellbeing in the pandemic. Project team hope that GreenZone will prevent or limit the pandemic in Vietnam.

VI. Appendix

1. Some meeting minutes

Green Zone Project Team Meeting			
MINUTES	01-06-2020	4.30pm – 6.00 pm	ED 202
MEETING CALLED BY	Team		
ATTENDEES	Nam , Sang , Quoc Anh, Long , Hoa, Hung, Tuan Anh, Tuan, Hoa, Nhat Minh, Phuong		
ABSENTEES	-		
MINUTES	Quoc Anh		
Agenda topics			
30 MIN	Project Review - (Group Project Portfolio)		
DISCUSSION	Meet and introduce the participants in the project.		
The meeting between all members will participate in the project. They can meet to get used to communicating before starting the project.			
CONCLUSIONS			
• All members had a general view of the project			
ACTION ITEMS	**PERSON RESPONSIBLE**		**DEADLINE**

Green Zone Project Team Meeting			
MINUTES	04-06-2020	4.30pm – 6.00 pm	ED 202
MEETING CALLED BY	Team		
ATTENDEES	Nam , Sang , Quoc Anh, Long , Hoa, Hung, Tuan Anh, Tuan, Hoa, Nhat Minh, Phuong		
ABSENTEES	-		
MINUTES	Quoc Anh		
Agenda topics			
30 MIN	Project Review - (Group Project Portfolio)		
DISCUSSION			
Project leader divide the project to parts for member. Schedule a project.			
CONCLUSIONS			
• The members have been discussed and divided the work in detail.			
ACTION ITEMS	**PERSON RESPONSIBLE**		**DEADLINE**
Plan stage	Nam, Sang , Hoa, Quoc Anh		16-06-2020
Requirement Plan	Phuong, Quoc Anh		29-06-2020
Designing	Nam, Tuan Anh, Quoc Anh, Hoa, Phuong, Tuan		27-09-2020
Coding	Nam, Sang, Quoc Anh		11-09-2020
Testing	Long, Nhat Minh		22-09-2020
Primary	Hoa, Nhat Minh, Long, Nam		11-04-2020
Secondary	Sang, Nam		11-09-2020

Green Zone Project Team Meeting			
MINUTES	28-07-2020	4.30pm – 6.00 pm	ED 202
MEETING CALLED BY	Team		
ATTENDEES	Nam , Sang , Quoc Anh, Long , Hoa, Hung, Tuan Anh, Tuan, Hoa, Nhat Minh, Phuong		
ABSENTEES	-		
MINUTES	Quoc Anh		
Agenda topics			

30 MIN	Project Review - (Group Project Portfolio)	
DISCUSSION		
Discuss and review all stages of the design before going into application development.		
CONCLUSIONS		
• All the stage are suitable and correct with the user requirement.		
ACTION ITEMS	**PERSON RESPONSIBLE**	**DEADLINE**

2. Interview

Interviewee 1

Interviewer: Hi, Sang

Sang: Hi.

Interviewer: How are you today?

Sang: I'm fine, thank you.

Interviewer: I knew that you have ever used Green Zone for 1 month, so can I ask you a few questions?

Sang: Of course.

Interviewer: How often are you use Green Zone?

Sang: I used it 4-5 times per day. I always use it to check the news about Corona.

Interviewer: Is the information we provide accurate and helpful?

Sang: Yes, it is. All the information which I have read is correct. It's help me so much to know more about pandemic.

Interviewer: Have it affect to you in a good way?

Sang: Of course, I help me too much. I take care more about myself.

Interviewer: Will you send your health report through this app?

Sang: Yes, I will. I will send it anytime when I feel my health is not good or when I have any symptoms.

Interviewer: What do you think about this app?

Sang: It's helpful, easy to use.

Interview: Do you believe Green Zone will help prevent disease in Vietnam?

Sang:

Interviewee 2

Interviewer: How often are you use Green Zone?

Nam: I often used Green Zone 1-2 hours per day

Interviewer: Is the information we provide accurate and helpful?

Nam: I feel those information you have provided is helpful for me to check the news of corona virus, exactly accurate with the statistic of number

Interviewer: Have it affect to you in a good way?

Nam: I thought that it be affected me in good ways.

Interviewer: Will you send your health report through this app?

Nam: Of course ,I will send my health report through your apps , if my health affected , I will find the ways to get a detection from examination on your apps.

Interviewer: What do you think about this app?

Nam: I feel it's very convenient and helpful.

Interviewer: Do you believe Green Zone will help prevent disease in Vietnam?

Nam: Yes, according to some functions in this apps, Green Zone will recommend and signal all people from a dangerous zone and will prevent as soon as possible

Interviewer : Are there any suggestion for our team to improve Green Zone project?

Nam: I think overall the app is good with good service.

3. Survey
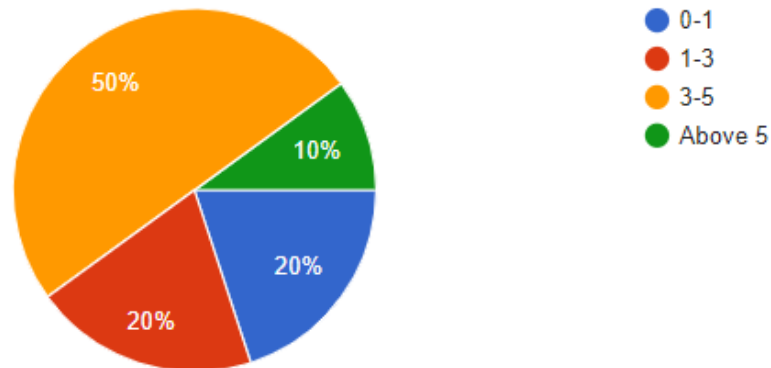
Which city do you live in?
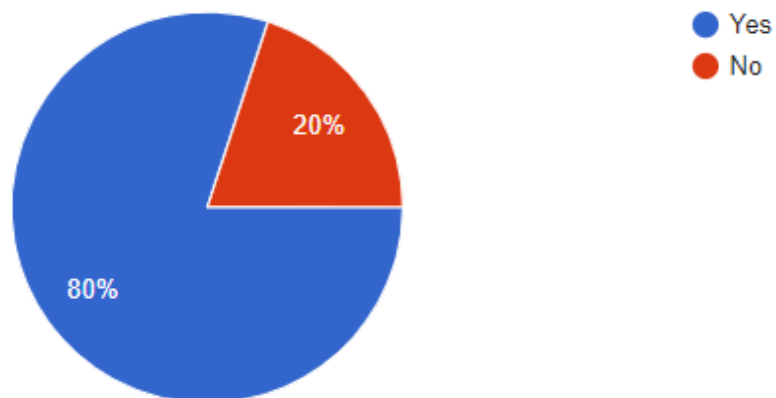
9 responses
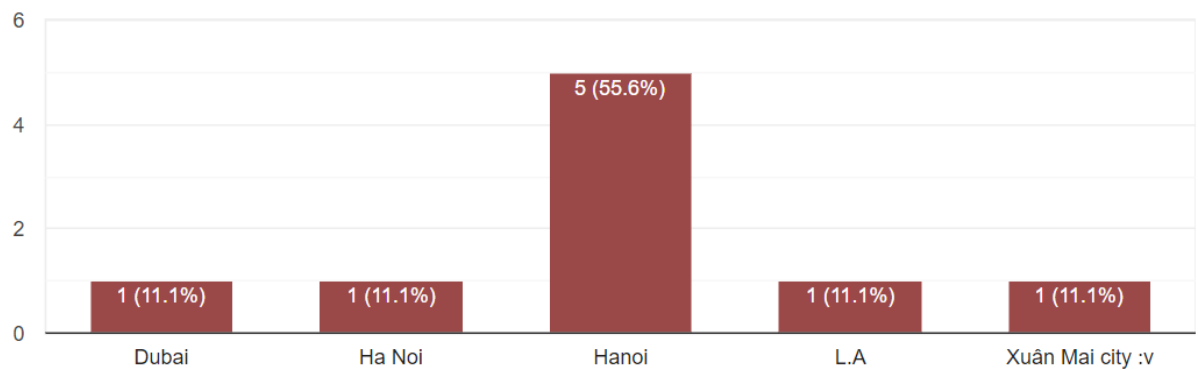
Have you ever used our App?

10 responses

Yes
No
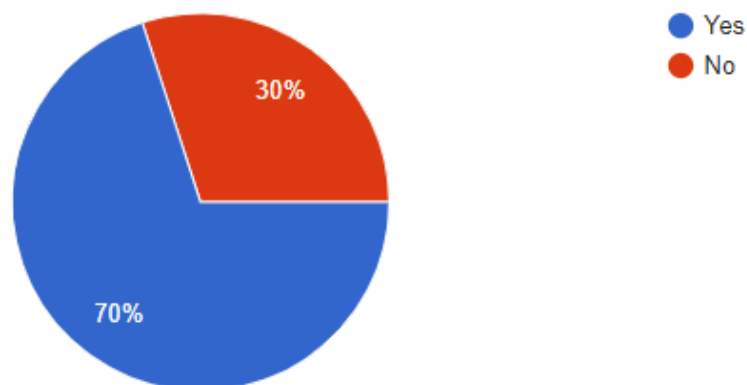
How often are you use Waifu? (per Day)

10 responses

- 0-1
- 1-3
- 3-5
- Above 5

Is the information we provide accurate and helpful?

10 responses

- Yes
- No

Have it affect to you in a good way?

10 responses

- Yes
- No

30%

70%
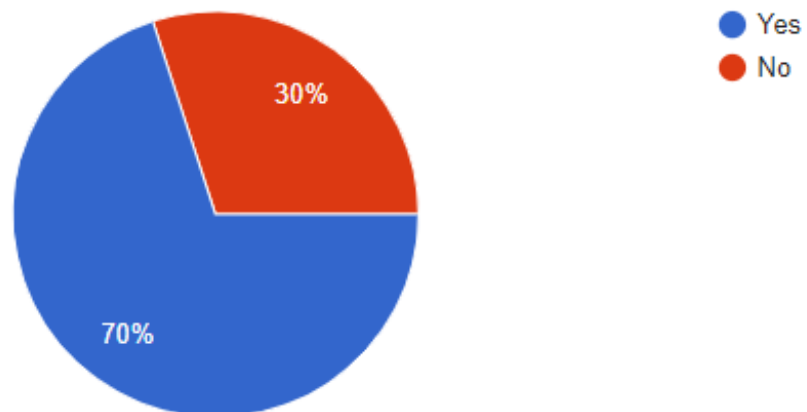
Will you send your health report through this app?

10 responses
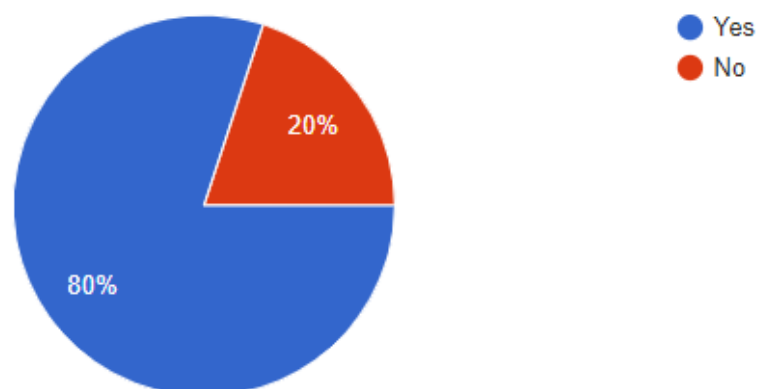
- Yes
- No

20%

80%

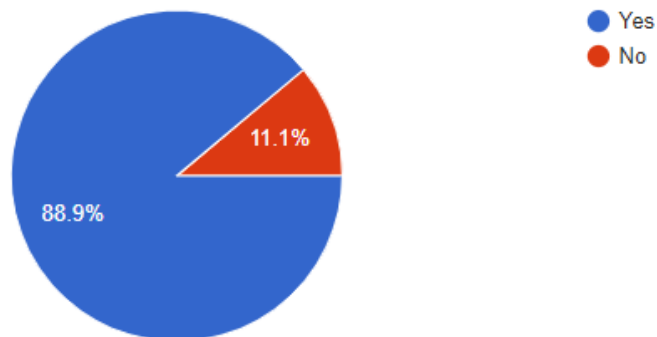## Do you believe Waifu will help prevent disease in Vietnam?

10 responses

- Yes
- No
- Maybe

30%

10%

60%
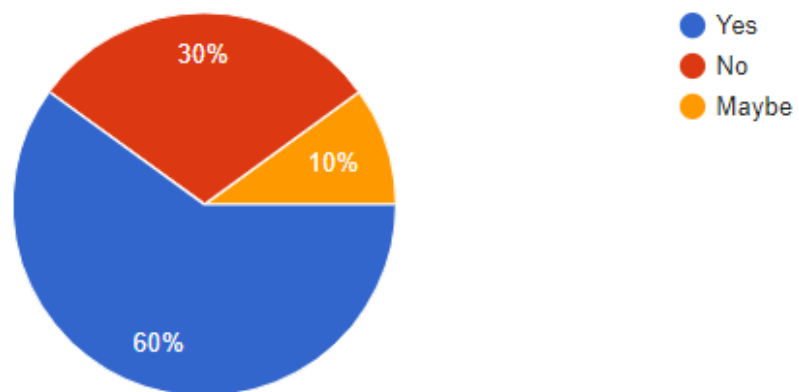
What do you do when you use Waifu?

10 responses

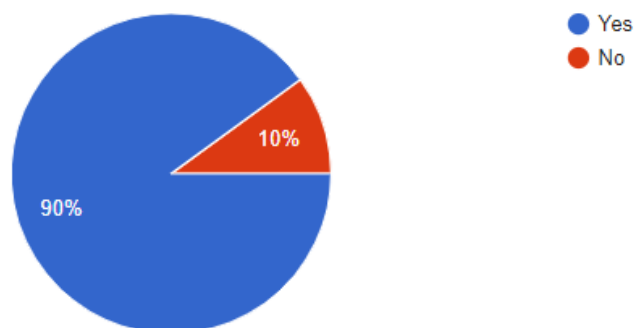|	
Check Vietnam and world infographic abo…	7 (70%)
Send health report.	3 (30%)
Check danger zone.	7 (70%)
Read news about Covid-19.	5 (50%)
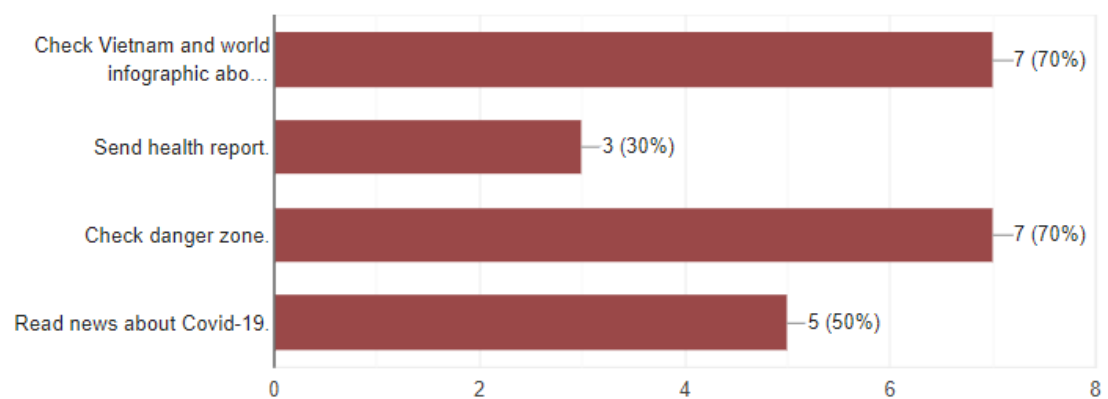
Will you keep up to use this app in the near future?

9 responses

Yes
No

11.1%

88.9%

Will you introduce this app to your friend or family?

10 responses

Yes
No

10%

90%

Are there any suggestion for our team to improve Waifu project?

5 responses

Hem

Nothing needs improvement

it's good enough

Nope

References

Anon., 2020. *corporatefinanceinstitute.com.* [Online]
Available at: https://corporatefinanceinstitute.com/resources/knowledge/finance/project-budget-overview/
[Accessed 24 6 2020].

Anon., 2020. *NCOV.* [Online]
Available at: https://ncov.moh.gov.vn/web/guest/-/thu-tuong-viet-nam-a-buoc-sang-trang-thai-binh-thuong-moi-

Anon., 2020. *wrike.com.* [Online]
Available at: https://www.wrike.com/project-management-guide/faq/what-is-project-communication-management/

CultureIQ, 2020. *cultureiq.com.* [Online]
Available at: https://cultureiq.com/blog/company-culture-employee-engagement-statistics/
[Accessed 24 6 2020].

Ministry, H., 2020. *NCOV.* [Online].