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ASSIGNMENT 3: OUR IT PROJECT

*We declare that in submitting all work for this assessment we have read, understood and agree to the content and expectations of the Assessment declaration.*

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# TEAM PROFILE

Team name: Healter

Personal info:

|  |  |  |
| --- | --- | --- |
| Name | Student number | Email address |
| Nguyen Anh Duy |  |  |
| Dao Kha Tuan |  |  |
| Suk Jang Moon |  |  |
| Le Ngoc Nguyen Thuan |  |  |

Anh Duy:

Kha Tuan:

Suk: I have a lot of hobbies, which are playing games, watching movies, and read books. I do have an interesting thing about myself is that I am a crossbred between Korean and Vietnamese. I started having interest in technology field when I was young. People using smart phones like iPhone and Samsung are so convenience that makes me curios. How do technology works? And how did it change our life. For me to cure my curiosity, I must know some of these works, so that I started learning Python, GitHub, … I have some knowledge of how to code and interesting works that I shared on GitHub.

Ngoc Thuan: My full name is Lê Ngọc Nguyên Thuần, my student number is s3877961, and my email is s3877961@rmit.edu.vn. I was born in Viet Nam. I follow my family religion of Buddhism. I graduated from high school, and I am attending RMIT university. Since RMIT is an international school, I can speak two languages English and Vietnamese. Some facts about myself are I love animals, and I usually play with cats in RMIT. I typically learn about IT or go to the gym when I have free time. Moreover, I am a big fan of martial I'm following a Muay Thai course in district 7 art. Also, motorbike is one of my hobbies, especially classic bike like XSR 155. In IT industry, I am full of passion for AI developer because I was inspired by Mark Elliot Zuckerberg. He is a genius in IT. Mark is known for co-founding Facebook. Moreover, he created an AI system to control his house. His AI can turn on and off the light or music by recognizing his family's voice. This gave me a lot of motivation in AI. However, my experience in IT is still very lacking because I started to learn IT quite late.

# TOOLS

# PROJECT DESCRIPTION

To begin with the description, it is true that there are countless number of ideas that can be very intriguing and attractive to many potential investors. This essay will illustrate our group’s project about building a system that can enhance people living standards which is called ‘My Healer’.

What drives us to fortunately get this idea comes from many factors. The first thing to consider about when choosing our topic is the passions and the available skills from the team. We believe that people like us are very lucky to have a well life, with enough food to eat and much money to use. In contrast, there are also many people out there struggling to earn a living, and they might not know how to treat themselves as good as possible. Therefore, our team are passionate to assist people on making their work-life healthier. For allocating tasks in our team, Thuan and Suk have great experiences on creating a nutritious diet because they usually go to the gym, and also they are very good researchers. For Duy and Tuan, their advantages is the programming skill and some basic knowledge about user interface in order to create the friendliest environment as possible for users. The following factor that affects our decision is the IT trend nowadays. Many IT system are built to support people in general, but most fields that are worth considering is economics, health, and militaries (references needed). For our team, health would be something that are familiar and very closed to us, that is why we choose to develop the system on health. Based on these skills and interests, we decided to construct and develop a healthy system, specifically an application to fulfill our desire to support the community.

To briefly discuss about the project, we will build a multifunctional application that can assist people on their health including measuring some of the basic human health statistical number such as amount of water drink, calories needed, heart rate,… and provide a balance diet which would be most efficient for a day. What makes this app difference compare to other similar health apps is that we are targeting many different types of users: it can be a gymnast, an athlete, a pregnant woman or just simply a normal person. Most importantly, our main user that we want to focus on is the people that has disease or might get a disease. The reason is that these people, they have a hard time suffer with their diseases and without doctors, they usually find it hard to treat their health properly and could not find a way to cure the disease properly with a healthy diet and therefore, their health can be negatively impact. For further explanation, we will describe it under the detailed description.

# OVERVIEW

Topic:

Health is a major concern to the modern society as more and more serious illness and diseases exist, so a healthy and nutritional diet will be essential to many people to protect and improve their bodies. However, preparing a healthy and nutritional diet can be challenging due to many factors based on the health conditions of each person such as their weight, illness, eating habit, environment, etc. In order to solve this problem, we decided to create an application that is not only competent to offer an appropriate diet and health advices for each person but also user – friendly enough for everyone to use it. The application will have many features but still simple and effective. Some of these features including a diet table appropriate for each type of health condition such as obesity or for the specific purpose of each individual such as ones who want to lose weight. Moreover, there is also a calorie calculator for the users to calculate the number of calories in their food, or a BMI (Body Mass Index) calculator to measure the fat in their bodies. This feature is necessary to individuals who are suffering serious obesity to control the number of calories they put into their bodies and prevent them to eat food that has serious harm to their health. In addition, it can calculate the amount of specific nutrients in your food such as carbohydrates, fats, protein, vitamins, fiber, minerals, and water. Having a thorough understanding in the different types of nutrient in the food that we eat will be useful to create a healthy lifestyle and eating habit to improve our health. The application also gives some useful advices for some simple sickness such as cold or fever as well as keeping track of the health condition of the users such as heart rate, footsteps, etc. This will help doctors to keep track with the health conditions of their patients and relive the burden of the healthcare systems. This advantage will help the users to save a considerable amount of money on healthcare services. According to a report entitled [*The Digital Revolution Comes to US Healthcare*](https://www.massdigitalhealth.org/digital-revolution-comes-us-healthcare#:~:text=IoT%3A%20Unleashing%20the%20power%20of%20disruption%20on%20healthcare&text=This%20report%20aims%20to%20show,a%20fraction%20of%20current%20costs.) by Goldman Sachs, digital services can generate approximately $300 billion in healthcare savings (Designveloper, 2020).

The application will have an interface that is designed in an understandable way so that everyone, including the elderly can use it effectively. This will help the application to be approached by a wide range of users, which means that various patients with different health conditions can use it for their medical practice. When the application is fully developed and improved, it will be an indispensable tool for everyone who want to keep fit and live a healthy life. The potential of this application is unmeasurable, and its popularity can be extended when we upgrade it to totally function well in any device, enhance the user experience (UX) and turn it into a cross – platform application. We can also upgrade it to become a main communication method between patients and doctors so that the doctors can monitor the health of their patients in a meticulous way, help them to offer appropriate treatments as soon as possible, especially for patients with serious illness such as cardiovascular diseases or stroke. We also try to upgrade the application regularly in order to fix some unpredictable bugs and enhance the performance of the application.

Motivation:

As “over 1 billion people are estimated to live with some form of disability. This corresponds to about 15% of the world's population, with up to 190 million (3.8%) people aged 15 years and older having significant difficulties in functioning, often requiring healthcare services” (World Health Organization, 2020). Thus, this health application will play a major role in encouraging many people to improve their health and increase the awareness of protecting their bodies. Equip the society with essential knowledge about health issues will bring benefits to all kinds of people and indirectly increase the development of the society in general. According to the Maslow’s hierarchy of needs, health is the located at the bottom of the triangle of needs, which indicates that health is the foundation of the society’s demand. So, proper healthcare will be the main motivation to boost the progress of the community, which emphasizes the necessity of the health application. Health application is the future of medical practice as it can minimize the preventable medical errors during diseases diagnosis and treatment decisions (Designveloper, 2020). This application also offers the patients a precious opportunity to monitor their health personally so they can detect and predict their health problems in the shortest amount of time. The application can be integrated with the latest innovations in Information Technology such as AI, Internet of Things (IoT) to enhance its performance and grant access to various patients and medical staffs including doctors and nurses as well. For instance, IoT connected healthcare applications offer real-time monitoring and smart medical IoT devices synced to a smartphone app that enables doctors to collect medical data of their patients at any given place or time (Murugan 2020). This project is an opportunity for us to exploit everything that we have learnt about software development and present to the future employers our hands – on experience in developing applications and ability to apply the cutting – edge technologies to solving a major problem. It will reflect our willingness to work with sophisticated projects and the capability to complete the tasks in a limited time.

Landscape:

We have researched about similar products are available. There are a lot of apps which have nearly the same feature as our app, but only three of them are the most similar and have the highest rating. Those apps are Track, YAZIO, and MyFitnessPal. The food warehouse is rich and varied, you can add new dishes yourself. Especially is Track and MyFitnessPal, it has more than 800,000 different foods, and there are both European and Asian dishes. They have many amazing features, which make them become our competitors. However, Track only supports one language is English, so some users might find it hard to use. YAZIO also uses English as the main language but users can search for foods in Vietnamese but YAZIO's user interface is quite hard for new users to get used to it, and some important features are not free such as healthy recipes. About MyFitnessPal, it has both European and Asian dishes. Moreover, users can use both English and Vietnamese to search for foods or add them by themself. It also can calculate the calories you lose or gain if you use this menu. However, some of the information is not accurate, the user needs to do more research to find the right one. Those apps above have their strength and weakness. Our app can deal with this problem. Our app can support two languages English, Vietnamese. You do not need to create your menu by your self, our app will do it. You just need to input your body information, taste, and allergies. It will create your menu to follow your order to gain or lose weight.

# DETAILED DESCRIPTION

Aims:

Plan and progress:

Roles:

# SCOPE AND LIMIT

Our core objective is to deliver an application that is simple but still sophisticated enough to fulfill the users’ demand. The application will have basic features such as diet table, calorie, nutrients calculators, BMI, etc.

Below is the table indicating our priorities of the project:

|  |  |  |
| --- | --- | --- |
| **Priority** | **Feature** | **Description** |
| **High** | Diet table | A table showing the plan of drinking water and eating the specific kinds of food appropriate for different purposes such as losing weight, preventing heart diseases, etc. If the users cannot follow the diet plan for some reasons, it will automatically update to help the users achieve their targets. |
| Calorie calculator | The application will help the users to calculate the amount of calorie in their food so that they can have a diet plan suitable for their health |
| BMI test | The application can calculate the BMI based on the users’ age, height, and weight to help them have a suitable plan to lose weight and keep fit. |
| Nutrients calculator | The application will calculate the amount of carbohydrates, fat, water, and other essential nutrients in the users’ meal to help them monitor the nutrients they put into their bodies. |
| List of advices to improve health | The application will have list of advices for the users to strengthens their health based on the symptoms and health conditions of them. |
| **Medium** | History records of health conditions | The application will store information of the users’ health conditions and measurement to help doctors monitor the health of their patients better. |
| **Low** | Communication channel between doctors and patients | The application can offer a chatting channel for the users to reduce the inconvenience of communicating with the doctors. |

Although we tried to include as many features as possible, but due to the amount of workload and the limited understanding of software development so there will be some limitations in our project. Some features such as history records of health conditions and communication chat between doctors and patients may be omitted so we can concentrate more on features that can meet the basic requirements of the users such as diet table, calorie calculator, nutrients calculator, etc. Nevertheless, feature as list of advices to improve health may be applied to only some common symptoms such as cold or fever and it will not cover detailed information about other illness. The diet table will be simple and only a suggestion for the users if they want to have a nutritional and healthy diet. The menu design will not be complicated but still reflect every basic features of the application.

Tools & Technologies:

We decided to use Oracle APEX to build an application. APEX is a low – code development platform that allows us to build apps with modern features and can be deployed everywhere. We can build a complicated app without a high level of coding experience and we can focus on the back–end of the application. And we will have no difficulty in getting used to this useful tool as some tutorials and videos give specific instructions to us. Our group members have used Oracle Apex in the Practical Database concept, so it will be easy for us to use this platform. This is a free platform, so there is no concern about the license requirement. We also use Pycharm to calculate the calories of foods for the app and use My SQL to create some popular foods database. Members of our group have experience in using PyCharm so we may not encounter many obstacles while creating the database. We are using RMIT email to log in to Pycharm, so we do not worry about the software licenses. To work together, we decided to use Github. This is a website that allows you to share your project and work with other people. Moreover, we will use canvas to design a picture for this application.

Testing:

Testing is very necessary to check if the application work properly or not. It will bring good or bad results depend on how many times we test our project. So, we will have a test for every feature we make. Each feature is created will be testing right after finish. This will help us to know that the project is still track on the plan and if there are any mistakes, we can fix it immediately. Testing will take a lot of time, so we will do a test in parallel with working on the project. This will guarantee that the project can complete according to our schedule. The project succeeded when it can suggest different foods for different people. Our project is to control the nutrition for a person, it can also suggest for sick people. If it can give suggest meal for them depend on what they set up in the first time, are they allergic? Are they sick? How much is their weight? How old are they? That information will help the app to calculate customer BMR (Basal metabolic rate) and TDEE (Total Daily Energy Expenditure). This app will depend on that information to create their menu. The app will offer a complete nutritional menu according to international nutritional standards. After we finish all the main feature for the App, we will find someone to test it. First, we will find Mr. Duy because one of our members have seen Mr. Duy post on his story that he lost 7 kg after running for 2 months. We think he will be the suitable tester. Moreover, we are planning to find about 10 persons, who are normal persons, body building or someone are dieting or maybe some sick people. There is some requirement to become a tester, that is they need to know how to use healthy app, have some experience about nutrition and user interface. Those requirements will guarantee that we will have the best feedback from the tester.

Time frame:

|  |  |
| --- | --- |
| **Week 1** | Getting to know each other teammates. |
| **Week 2** | Asking each other’s about what the ideas would be. |
| **Week 3** | Start deciding what the project would be. And Name the project |
| **Week 4** | Start the project with assigning work for each other’s. |
| **Week 5-7** | Doing research on sickness, diet, fasting schedule. |
| **Week 8-10** | Doing an algorithm on how to calculate schedule days for the Sick period, fasting, and diet. |
| **Week 11-12** | When gathering all the information, we start creating an app for it |
| **Week 13** | Run a test on how the apps work |
| **Week 14** | Feedback period. We as a team will view ourselves as a customer using this app. Then more feedbacks from other |
| **Week 15** | Take in some feedbacks and edit more on the app. |
| **Week 16** | We decorate on our apps and do a final edit. Then we release our app. |

As we start the project, we need to plan a timeframe on how long we need to do this project. As for this project our first week, getting to know our teammates is one of the most important things. As for future career, we will be place in a group of strangers to work on a project. So that, I believe this is an important step that all of us need. We can start by having ice cream with each other and ask more about what other hobbies are. If we were to remove this step, we will have a hard time understand each other and blame each other’s on small mistake. After getting to know each other’s, we combine our ideas to create a project. It can be something fun or challenging such as water reminder apps, creating a chip that recognize our vehicles location, … We had more than just one idea and we had fun tell all of them out. After deciding what we wanted, we start agreeing on a healthy app. Our final decision was given out on week 3, which is a food base healthy app. We named our project **Healter** (DRAFT). As a team, we divide our work to each other’s so that we can do this project more efficiently. For this plan we needed 1 week to divide all the jobs. On week 5 we do a research on sickness, diet, fasting, schedule. Our app will look in people needs and separate the food base on what we recommend them. For example, the schedule for sick people, we recommended porridge for lunch and proteins like meat for dinner. We wanted to do some research on this area so that we needed more or at least 2 weeks of this research. Since creating this app, we are asking the app to find a recommendation, we wanted to create an algorithm for the apps to calculate the schedules and how many days it needed. For that we needed 2 weeks to find a solution. On week 11-12, after gathering all the report, we start creating this app with Apex. We do need to get used to this app first so that we needed a week to understand this app. Once we finish the draft of an app, we run a test. After finishing this app, we should be on week 14. This week is a feedback week, we view ourselves as a customer to know how we experience this app. Then we let others test our app for a trial run. We need to gather feed back from a total of 10 people first. Then edit our app for a better outcome, we need to put ourselves in a customer spots to know what is missing. After some positive and negative feedback. We can understand what we miss and do a final edit on our app. Week 16 will be our final week to make the app better with decorations run a few tests. Edit more on the outcomes and release our app. The Healter.

Risk:

There can be some potential risks that come along with our project, but the first consideration is that we cannot learn or understand thoroughly how to use tools and technologies to create an application. Oracle Apex and other tools may take a considerable amount of time to master and build a good application. This is also the first time that we create an application, so there might be some drawbacks to the app. The app can be crack or not work properly on the mobile platform as we expected. Moreover, the biggest risk is the app cannot work smoothly. It might suggest too many calories for a person or wrong foods. Or the users cannot find the food suggestion. This will make a bad effect on both the users and our team. The hardest part is how it can suggest a different meal for each person. A database about foods is large and it includes various types, it is very hard to select which one will be used because some foods when combines will create toxic which is very dangerous. Furthermore, some people will not trust this app right away, this application needs to have a reliable license of the doctor. Because of that, we will need to have a doctor to give some pieces of advice about nutrition for this project.

Group processes and communication

Communication between group is necessary to complete this app faster and more efficiently. Miss communication can occur many mistakes such as missing information or a mistake in an app that we cannot find. So that we decided that our communication should be more active. Every week on Wednesday, we would be meeting face to face on how we should improve our project. But we can only do a one to two hours of meeting, so that it would be inconvenienced to work without a contact. It would be better to communicate daily, so that we use Messenger on Facebook to text each other’s what the plan is. Instead of waiting until the meetings to ask about what we should do. We should discuss directly on the text message then we gather some errors for the meetings. But what if we cannot communicate when they have not received or respond to our message. We need to tell our teammates our times schedule to know when we are busy and when will we be online.

Skills and Jobs

Feedbacks

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