

Software Architecture, Advance Master Units for IT44

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# Health Evaluation Documentation

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## **Title**

Health application evaluation is an important process to collect and analyze data from user's activities, outcome and feedback. The objective of evaluation is to support and improve program in terms of design and implementation.

## **Introduction**

In today's software application are becoming more popular and essential in people life. For example, it can help an organization to manage a thousand of bank account to do several activities such as transfer, withdraw and deposit money. According to these example activities, software is a middle tool of communication between organization and user which mean it can effect direct to an organization if the software provide an low quality and unexpected information to what user needs. In term of creating a high quality of software, software evaluation can identify what to improve and what to change based on user experience and usability. There are several sections to evaluate software, in this project will focus on performance, usability and maintainability. In addition, evaluation cannot be done only on a user, there are some part of technical problem such as software architecture, process flow and environment usage. The evaluation need to cover in perspective of variety of users, general user, user and developer. Lastly, there are several health application has been published public and also they have a similar feature which is acceptable. On the other hand, evaluation will be a useful methodology to explore an idea how to create the same feature in a different way, support developer to identify barrier of feature's usability. This health evaluation will be a evaluate food and sleep features of heath activities after the first prototype of health activity challenge complete around a mid of semester one and then when the evaluation success, the application will use those information outcome from the evaluation to implement the second prototype and make a comparison at the end of semester to use in oral presentation.

## **Purpose and aims**

This evaluation will focus on three main quality approach on food and sleep features. Firstly, the evaluation of performance is a high quality of software process to produce an accuracy information and smoothly. For example, food feature will motivate people to take a photo of what they eat and automate generate a calories for each type of food. On the other hand if the software provides an incorrect calories amount so that user can notify developer to improve this part of a feature. Secondly, the evaluation of usability will focus on complexity of a user interface and user experience. For example, sleep feature will ask user to input several type of data before they start this activity

such as how long will you expect to sleep, during day time or night time, full sleep or rest. According to this input requirement, there are some users might stumble and confuse with a complex user interface to complete this feature, they will be able to comment direct to a developer to combine every single data into one page or use system driven which have less input to get a correct result. Lastly, the evaluation maintainability is the most significant part for future development. This evaluation will focus on technical terms to support a developer. For example, the application will use a pulse rate function to count a heart rate while user sleeps. After that, developers create their own function to calculate a heart rate from a beginning and at the end of process they find that it takes more time than using the API that was already provided online. The maintainability will collect this information to suggest the next developers what to improve in the future part. This health evaluation will also classify type of user into four types of classes. In terms of General user, the evaluation aim to retrieve a feedback from user about application usability, user interface is friendly and easy to use. In the developer areas, this evaluation will support developer by suggesting them with essential information to improve an application such as fix an error to make application more efficient or extends functionality. The expectation of the evaluation outcome is to analyze data from users to make an application more efficient and sustainability.

## **Significance**

At this moment, there are several of health applications available online with similar feature, process to collect data and usability. Moreover user have more work and less time to take a rest and they still need to stay healthy by using a tool to collect their health behavior. According to this expectation, user aim to use health application in a different way with a simple user interface and also including well organize of system driven to support their life activities. The evaluation is an important methodology to listen to user's needs and transfer feedbacks to developer to improve an application more success and efficient.

## **Project approach or design**

Health application is becoming more popular day to day. User consider that it will help them to stay healthy so that developer who write a source code need to have an document to check user's feedback to provide a useful functionality to support user needs.

### **Specific data requires:**

There are two main types of users, general user and developer. The type data that will use to collect for general user will related to user interface and functionality. In terms of user interface, after user use the health application they will give a feedback within five minute, this first five minutes will shows that the user interface is friendly or unfriendly to user. In terms of functionality, user need to start to use an application to collect data, create challenge and invite friend to complete their challenge. After that they can give more feedback about application process that they get stumble or the application provides a smooth process.

### **Strategies and finding participants**

Health application can be used to every kind of person. However, this case will observe on two type of participant. Firstly, the working people who has less time to exercise and trying to keep fit and firm such as project supervisor and project coordinate supervisor. The expectation of this observation is to improve and motivate the working people to spend some time to exercise and relax. Secondly, the healthy person can find in a university gym or people who exercise around botanic garden. These people always spend their time to exercise to stay healthy. The expectation of this observation is to improve in each favorite activity by collecting the amount of calories burning and then challenge them to complete in the higher level.

### **Project Plan**

Milestones:

After testing the first prototype complete during a mid of semester one, the mandatory will use to evaluate by participants to collect information and observe user's feedback with the first prototype. After that, participant's feedback will use to analyze and advise developer what to improve in the second prototype. Finally, the last stage is to compare between the first prototype's functionality and the second's functionality, this is significant information to use in an oral presentation after the demonstration part to summarize a learning outcome with a real participants.

Week1	Week2	Week3	Week4	Week5	Week6	Week7	Week8	Week9	Week10	Week11	Week12	Week13
Implementation process, launch the first prototype												
						Evaluate the first prototype						
									Improve an application, launch the second prototype			
											Oral presentation preparation with a comparison between the first and second prototype	

## **Essential Methodology**

There are resources online to evaluate a quality of software and application called "Criteria based Assessment". This assessment provides a group of criteria relevant to usability, sustainability and maintainability to check with the software qualitative. On the other hand, it may not cover a particular part of health application to check an accurate data. However, it can be a basic checking task to measure an overall of health application such as which platform the application can install before it launch to public. Lastly, after complete checking criteria, developer will compare the most important parameters between majority and minority criteria score and use any kind of tool to generate charts to summarize for a report and presentation.

## **Risk Assessment**

Risk management is an essential method to make the evaluation more efficient and remove all kind of mistake that user will not interact. There are several types of risk in evaluation. In this project will determine into two classes of risk, time and quality. In terms of time management, the evaluation require accuracy information from a participant and it may provide many of section to complete which will takes long time to complete. Most of the volunteer will be a people who spend a half of a day at university to work and study and time management is seems to be very significant for them. At the very beginning of creating the evaluation, the time is the most significant variable to focus on participant who will be the volunteer to evaluate so that the evaluation criteria supposed to be clear, understandable and readable to reduce and safe time. In the second risk of evaluation, quality of each criteria section is the second important variable to include in the evaluation. For example, if the evaluation criteria is not relate to the health application, the result is useless and it is unable to suggest or advice a developer about what to improve. According to this risk, the first prototype of health application needs to test by the closer person who stands beside this project. They will understand a basic problem and needs to make the health application more flexible and then use the software Evaluation Guide to support the idea to create a criteria section on the health evaluation.

## **Communication**

The tools to use to contact the research projects supervisor will be an email. According to an email, the more details inside can be issues that occur during implementation process, new plan to change or a new feature to add. Moreover, details in an email are a brief of topic to discuss with a supervisor at a meeting.

## References

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