*Software Engineering 1 –* **Capstone Project Requirements Notes**

***Mini Health Diagnostics Application***

*Problem Statement*

An intelligent health prediction system can transform the way people take charge of their health while also connecting them to the nearest healthcare providers immediately. Many times, patients are unable to access healthcare services due to some reason or the other. The smart health prediction system seeks to solve this problem by enabling patients to get instant healthcare advice and guidance online from licensed medical practitioners.

The smart health prediction application is an online consultation system for users. The system is fed with huge volumes of healthcare data (symptoms and the diseases or health issues associated with those symptoms). So, when a user enters their medical problems and symptoms, the application uses data mining to delves into the database and find the most accurate match of disease/illness related to those symptoms.

Useful Links:

<https://spdload.com/blog/healthcare-mobile-app-development-guide/>

<https://topflightapps.com/ideas/5-steps-to-build-a-healthcare-app/>

<https://www.velvetech.com/blog/healthcare-mobile-app-development/>

<https://www.businessofapps.com/news/how-to-develop-a-healthcare-app-or-a-medical-mobile-app/>

Create an empathy map to find more possible requirements

Give a list of three or more things a patient would say, think, do, or feel when using a “health diagnoses application” like our product

*Requirements*

1. User must be connected to the internet to use application
   1. If connected to the internet, allow user to use application
   2. If not connected to the internet, notify user to connect to internet in order to use application
2. Application sends user to the home screen when opened
3. Users input their health problems and symptoms
4. Search via data mining to find any known health issues and diseases associated with user inputted symptoms and health problems
   1. Begin data mining only after user inputs symptoms
5. Display to the user an accurate list of health diagnoses as a result from searching via data mining
   1. Only display health diagnoses specifically related to the users inputted symptoms and health problems
6. Application must follow all privacy and security regulations for software applications (find out what specific privacy and security regulations we must abide by)
7. Application should have an information/support tab that gives the user information about what the application is, what it does, how to use its functions, and how to contact the developers with any feedback, questions, or concerns about the application

Purpose – to determine more requirements, if any, and understand more about what the product is going to be like and how it will function

**Empathy Map – *Medical Diagnoses Application***

***Says***

***Thinks***

* I want a dependable and accurate health app
* I want to be able to feel safe knowing I can determine the answer to my issues with a health app
* I want to be able to easily access information about my health problems without much hassle
* I want something I can depend on for accurate and reliable information about my health
* I want something that is easy to use (user-friendly)
* I want to feel safe when putting my personal health information on the app
* Happy: able to effectively and efficiently find health diagnoses related to symptoms from app
* Scared/Worried: experiencing health issues and do not know want to do or where to go
* Confused: do not know how to work or maneuver through application
* Scared: do not feel comfortable putting that information about myself out there

***Does***

* Open and use application if it is beneficial to them. Continue to use it if satisfied and easy to use (user-friendly)
* Use health app for reliable and accurate health diagnoses and feedback

***Feels***

***USER***

***(PATIENT***)

**Conclusion From Empathy Map:**

* We need to make our health application appealing to the user to encourage them to use it
* We need to make our health application user-friendly so it is easy and stress-free for the users to use
  + The easier it is to use, the likelihood of them using it again and recommending it to others
  + Simpler the better
* We need to make sure each function is doing its proper tasks at the right time
  + When user clicks on app, the app should open and display home screen
  + When app is opened by user, the home screen should appear and prompt the user to fill in the corresponding boxes with information about their symptoms
  + When user clicks “get results”, data mining should begin searching for possible diagnoses based on inputted results
  + Data mining should only begin when user clicks “get results”
  + Results are displayed to the user in an efficient manner once data mine is finished
  + If the user closes the app, it should exit and close the app
  + If the user what to do another search, they should have the option to go back to the home screen to search again
* We need to make sure that the application runs quickly and effectively
* We need to make sure we are keeping all personal health information entered into the application by the user safe and secure
* We need to make the user themselves feel safe when using the application and encouraged to use the application
* Possibly make the home page where user input is taken a UI