Project Proposal for Team 6 (Development Track)

1 TEAM MEMBERS AND TASKS DIVISIONS

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  Backend implementation & Main Frontend implementation
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  Functionality testing & Main report writer & Source searcher
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  Backend implementation & Frontend implementation

2 PRIMARY FUNCTIONS AND TARGETED USERS

- The main functionalities of the envisioned tool is to provide the users an agent that is expected to act as a health assistant. We divided the functions into different aspects based on their different purposes:
  - Relation-Based We are expecting our Conversational Health Advisor (Referred as CHA in the rest of this proposal) to establish a healthy and comfortable relation with our users. CHA should be able to positively offer help, give feedback after each action performed by the user.
  - Function-Based CHA should be able to remind the users after being set. Reminders we are considering right now including: symptoms recheck, reexamination date, pill-taking time, pre-set goal pursuing.
  - Information-Based
    * provide appreciation messages to users weekly
    * suggest the do's and don'ts based on the search history in the past week.
    * provide personalized answers to user;s health questions based on their history record, aiming for accuracy.

3 SIGNIFICANCE ANALYSIS

- People would need this new designed feature because when simply searching for symptoms or diseases, the results shown are just the ones match descriptions given. But sometimes, based on different medical records, symptoms and diseases occur with different causes. One possible example that could

be applied to this situation is that weakened eyesight resulted from diabetic retinopathy. And based on our CHA's capability of personalized searching, we can greatly improve the accuracy and reliability.
- Also, CHA aims to be a more intelligent reminder system. It would be able to digest the user's record and the searched results, and then it will perform our unique feature of humanized care for our user.
- CHA could greatly reduce the possibility of searching for the wrong symptoms and obtaining wrong diagnosis resulting in becoming panicked. However, keeping the health index under control is a severe problem. Our first and only purpose could also be seen by addressing the medical needs: nothing matters more than one's health.

4 APPROACH

- we will mostly focus on manipulating the prompt provided by the users and results returned by ChatGPT based on the backend APi provided by SavvvyHealth. Most of our programming will be done with python for the backend, algorithms applied will be coming from our knowledge from CS510 lecture and practices. For the frontend, we will be using Swift and/or flask, also with Java and JavaScript as reference or implementation source.
- The risk and potential barrier for us to anticipate are:
  - Different coding styles: our source program, team members' skills, and it may involves languages none of us have used before
  - Data collecting: as an existing application, we are expecting a huge amount of data, how to collect and then utilize becomes a must-solve problem
  - Training language retrieval processing: since we will be focusing on the feature of personalizing search query and result display, how to parse and make use the query and search result is the main problem we are trying to solve

5 EVALUATION

- We will be performing multiple queries with different history information collected, also, since this is medical related, we will also do a manual search with the help from a licensed clinic staff.
- We will also be testing the reminder functionalities in different time with different time ranges to see if the reminders will be sent correctly.

6 TIMELINE

- 04/112024 - 04/17/2024 – collecting and getting familiar with our source application
- 04/18/2024 - 04/25/2024 - implementing our feature and meanwhile write the progress report
- 04/26/2024 - 04/30/2024 - Final implementation and black/white box testing. Meanwhile, write the final report and prepare for the presentation.