

Cystic Fibrosis Flowchart



BMES 550 Final Project

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Register

Once the user selects the "New User" button, they will be sent to this GUI and be prompted to fill in Username, Password, and demographic info, and once completed they will be sent back to the Login Page GUI

User_Registration.mlapp &
Register.m

Save in Database

Survey information will be stored in a SQL database that is able to be accessed to display to user.

ImportData.m

Login Page

Prompts user to enter a username and password to login to their respective account. If the user is new, they can select the "New User" button to be sent to a registration GUI

Login_Screen.mlapp &
PassMatch.m

Survey

Prompts user to fill in each symptom listed. If they do and hit submit, it will add to their user database. It will then redirect to the previous symptom database of entries.

Alternatively, they can skip the survey and go straight to seeing their previous symptoms database.

Symptom_Survey.mlapp

Show symptoms chart

Shows the progression of the users symptoms from SQL database since the first input date.

Disp_Database.mlapp & Database.m

Optional: Symptom graphs

Outputs quantitative symptom graphs so the user can visualize their progression over the range of dates the survey is filled

Graph_Data.mlapp & Graph.m

Create
Account

Login
Complete

Survey Filled

Survey Skipped

Output Displayed

Name	Input	Output	Purpose	Responsibility
Login_Screen.mlapp	Username, Password	Error message for incorrect username or password	Allows the user to input their username and password to access their account or gives the option to create an account	Sam
PassMatch.m	Username, Password	Calls the correct user symptom tracker associated with the username and password	Takes the inputted data from the Login Screen and matches it to an existing username and password. Connects user with the associated account.	Sam
User_Registration.mlapp	Username, Password, Date of Birth, and Demographic Information	Error message for previously existing account with identical credentials and/or unmatched passwords	Create a new user account associated with password and symptoms survey results	Corine
Register.m	Username, Password, Date of Birth, and Demographic Information	Creates an account with the inputted data	Receives inputs from User_Registration.mlapp and stores information in SQL database	Corine
Symptom_Survey.mlapp	Symptom Values	Goes to ImportData.m to import into SQL database	Provide way to for user to input cystic fibrosis symptoms	Soham
ImportData.m	Symptom_Survey.mlapp survey results	Survey data in a new row on SQL table	Provide a way to import data into a SQL database	Soham

Name	Input	Output	Purpose	Responsibility
Disp_Database.mlapp	Database.m table	Table of Symptoms	See overall progression of symptoms over time	Sam
Database.m	SQL database	MATLAB table	Pull SQL database into a MATLAB table	Sam
Graph_Data.mlapp (Optional)	Graph.m X and Y data	Graphs displaying data from Symptoms Survey	Display figure of data from the table for users to visualize	Corine
Graph.m (Optional)	SQL database	X and Y axis inputs for a graph	Configures data into a format that can be graphed	Soham

Database Schema

Symptom	Date (MM/DD/YY)	Height (in)	Weight (lb)	Sputum Color	Stool Consistency	Stool Color	Cough Frequency	Effort of Breathing	Level of Activity	Amount of Sputum	Stomach Pain	Appetite Level
Type	Text	Real	Real	Text	Text	Text	Integer	Integer	Integer	Integer	Integer	Integer

User will fill out survey with the
above data types