Specifications

1. Read a DICOM image and Show it in the screen using matlab gui
2. Name of the software ECiitkgpMatlab3DView
3. Make the GUI using GUIDE
4. Use matlab varargin so that more inputs are taken
5. Read all dicom files present in a given folder. Use another function to do it. Pretty complex ☹
6. Load the volume it includes only the reading of the dicom files
7. Show different views in axial sagittal and coronal (i.e slice in x direction, y direction and z direction)
8. Most important part is load data. Funtion should not have any errors.
9. Click on the axial view to show the axial view .
10. Making an structure is very important.
11. For changing the slices use scroll as well as the up and down button.

Functions Used overview

1. Read one dicom file by showing a GUI
2. Read all the dicom files present in that folder and subfolder.
3. Include addpath for both folder and subfolder in the read dicom file . Subfolder can also be removed but it will not affect the speed much.
4. For every dicom file include the file name, size, Scale, UID, Date in which it is taken, Time and see whether it is MR etc.
5. While reading files if the user will not select a folder then show a gui to select the folder.
6. See if the input given is a file or a folder and respond accordingly.....a if loop is required.
7. A structure is required to store all the files and folders.
8. Use uigetfile when ever a folder is selected......it is used many times.....if no file is present then return and give the previous thing.
9. Use structure array (isstruct) to see about the patient and see whether to use header read using a if loop
10. Make another function to make a voxel volume using slices and make a very good GUI just to show that the images are loading and then show something.
11. Another function for writing the volume.....it requires
12. Use a resize function for resizing the initial window....it is very necessary
13. Number every slice using a function to give information on the screen
14. Make a function to change the cursor when something can be done with the windows......it will be very helpful while rotating in 3D.
15. Make different functions for Axial, sagittal and coronal views.
16. Make the umber of windows as one and the include a function such that it can be changed later.
17. CloseRequestFcn :- for closing the main window.
18. Windowsscrollwheelfunction: used for changing the slices using scrolling

Name of the functions used and its uses

1. Showmenu :- for loading lung images with a call back
2. Addwindowmenus:- for making more links just below the loading of the llung image
3. Check data.numberwindows
4. Keypressfcn :- takes care of the pressing of the key when we are in figure 1 and it doesnot affect any other function.
5. Addwindows :- add more windows....if required....just write case 2 in the switch function
6. Makewindow:- for making a window ..... small function