

**Project Design Phase-II**  
**Solution Requirements (Functional & Non-functional)**

Date	14 October 2022
Team ID	PNT2022TMID35953
Project Name	A Gesture-based Tool for Sterile Browsing of Radiology Images
Maximum Marks	4 Marks

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Users can create an account to use the application. This can be done by creating a persona on the application with a username and password or by making use of an existing email ID.
FR-2	User Confirmation	Once a user registers onto the application, they receive an OTP to their registered mail-id to ensure identity.
FR-3	Upload image	The user can upload the image that need to be manipulated using upload image button in the application
FR-4	Image Capturing and Processing	The application allows users to capture images of the user hands and fed it to the model for predicting their appropriate gesture and its related command. The application should be able to recognize user hand gesture accurately even when there are c.
FR-5	Image viewer	Once the command is mapped with the predicted Hand gesture, the image is manipulated according to the given instructions.  0. Original image 1. Resize 2. Blur 3. Flip vertically 4. Flip horizontally 5. Rectangle 6. Undo
FR-6	Close	Exit the image viewer and navigate to home page
FR-7	Logout	User can log out of his information and the session is stored in database for security purpose.

### Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	The User interface should be user-friendly. The image capture process should be smooth and not a delayed process which may annoy the user.
NFR-2	<b>Security</b>	Details of the users and their session is stored to database for security.
NFR-3	<b>Reliability</b>	The application should correctly identify the users hand gesture and the model must map it to the appropriate command.
NFR-4	<b>Performance</b>	The application should be built using efficient prediction model with good space and time complexity.
NFR-5	<b>Availability</b>	The application should be available to its users both offline and online.
NFR-6	<b>Scalability</b>	The application should be able to support updates in terms of hand gestures and commands to expand system functionality.