**EPIC:**

Our project will be an android app that is launched by pressing the app icon on the home screen. This app will allow the user to input alphanumerical characters on the log-in screen. Upon successful entry, they will be given access to the filter page. From there they can import images from the Gallery, preview the image, change the image title, scroll through the filter buttons, select image format, and save all changes. The other features include Greyscale, Invert, Sepia, Horizontal/Vertical Flip, Blue Tint, Contrast, Saturation, and Smoothing Bitmap Filters.

**UI Design/Visual:**



1. Login Page 2. Filter Page

**Functional Requirements:**

* The user should be able to enter alphanumerical data on the main login page.
* Once the user enters their credentials in the login screen, they should have access to the main features right away.
* When the user logs in they should be directed to the page with the core features.
* Images will be loaded directly from Android’s built-in Gallery app when the “Load Image” button is clicked.
* The user should be able to preview the loaded image.
* Bitmap filters should be applied to the loaded image when the given button is clicked.
* The user should be able to scroll through the filter choices to select a filter of their choice.
* When the “Save to Gallery” button is clicked, the edited image should be stored in Gallery.
* The filters correctly correspond to their given button name and adjust the bitmap layer to the chosen image.
* UX notifications should be displayed to notify the user what it is required of them to do.
* Save notification lets the user know if their image is saved successfully.

**Non-Functional Requirements:**

* Regardless of hardware and emulation limitations, the application itself should launch and run without any issues.
* The User should be instantly given access to Android’s built-in keyboard when entering their credentials on the log-in page.
* When the user saves an image it will be saved to the Gallery instantly.
* The user should be able to utilize every feature without the application crashing.
* The code for this application is written in a way that more features and functional requirements can be added in the future without hassle.
* The application is ready to be expanded upon in the future with more features without affecting the performance of the Android OS.

**Error-handling, help, comments, code guidelines, and architectural guidelines**

* Login requires a minimum number of alphanumeric input for successful entry.
* Image can’t be saved without loading it first.
* Filters can’t be applied until the image has been loaded first.
  + Code Guidelines:
    - CamelCase syntax for readability.
    - Try and catch error handling in loading and saving bitmap images.
    - Use classes and inheritance for proper syntax.