

Software Requirement Specification for Camera App Homepage

Version: 1.0

Prepared By: Lubna Jahan

Date: 20-11-2024

Table of Contents

1. Introduction.....	2
1.1 Purpose.....	2
1.2 Scope.....	2
2. Functional Requirement.....	2
2.1 UX Actions.....	2
2.2 User Feedback.....	3
3. Non-Functional Requirements.....	3
4. Error Handling.....	3
5. Test Cases.....	3

1. Introduction

1.1 Purpose

This document outlines the requirements for a camera app homepage to guide development team in implementing functionality, user interface and error handling.

1.2 Scope

The camera application allows user to take photos, record videos and access the photo gallery. This document focuses on the homepage functionalities and their expected behavior.

2. Functional Requirement

2.1 UX Actions

- **Capture Button:**
 - **Tap:** Capture a photo and displays a toast message “Saved to Gallery”.
 - **Hold:** Start's a video recording, showing a red recording indicator and when release the button the recording stops and saves video to the gallery.
- **Gallery Icon:** Tapping the gallery icon the photo gallery opens within one seconds.
- **Flash Toggle Button:** It has three modes – ON, OFF and AUTO. Each mode displays a corresponding icon.
 - **ON:** Tapping the ON toggle button user can take photos or videos with flash light.
 - **OFF:** Generally default mode of the flash toggle button is OFF.
 - **AUTO:** The AUTO mode automatically turns on the mobile camera flash in certain situation, user don't need to turn on the flash light for each photo, the camera will decide when it is necessary to use for better exposure.
- **Switch Camera Button:** Tapping the switch camera button user can take front and rear photos. It appears with a smooth flipping animation.
- **Zoom Slider:** Pinching on the screen or using the slider or choosing the corresponding displayed range (1x,2x,4x etc) user can adjust zoom level.
- **Settings Icon:** Open the camera setting page within one second.
- **Filter Icon:** Filter icon allows user to apply a visual effect in real-time while taking photos or videos. Essentially altering the colors, tones, or appearance of the image before one capture it, often using pre-set options like "vintage," "black and white," "portrait," or "HDR.
- **Timer Icon:** User taps the timer icon displayed in the upper panel of camera homepage to capture the photo after selected amount of time such as 3s, 5s, 10s etc.

2.2 User Feedback

- **Animations:**
 - A shutter animation appears briefly on the screen when a photo is taken.

- A zooming animation plays when the user adjusts the zoom slider.

- **Toasts and Alerts:**

- **Low Storage Alert:** If storage is insufficient, display a modal alert: "Insufficient storage. Please free up space."

3. Non-Functional Requirements

- **Performance:** All actions like opening gallery, toggling flash should execute within 1 second.
- **Security:** Deny access to the camera or gallery if permissions are not granted.

4. Error Handling

- **No Storage Space:**

- Display a modal alert: "Insufficient storage. Please free up space."
- Disable the capture button until storage is available.

- **Permission Denied:**

- If the user denies camera access, show an alert: "Camera permissions are required to use this app. Please enable them in settings."
- Redirect the user to the app's permission settings when they tap "Open Settings."

5. Test Cases:

- **Photo Capture:**

- **Scenario:** User taps the capture button.
- **Expected Result:** Photo is taken, a shutter animation is displayed, and "Saved to gallery" toast appears.

- **Video Recording:**

- **Scenario:** User taps the video option displayed in the lower panel of camera homepage at the bottom before the capture button and then holds the capture button.
- **Expected Result:** Video recording starts with a red indicator; releasing the button stops recording and saves the video.

- **Gallery Access:**

- **Scenario:** User taps the gallery icon displayed with the photos or videos which is taken the last time.
- **Expected Result:** The photo gallery opens within 1 second.

- **Flash Toggle:**

- **Scenario:** User taps the flash toggle button.
- **Expected Result:** All Flash mode appears on the screen with corresponding icons and text.

- **Zoom:**
 - **Scenario:** User pinches to zoom.
 - **Expected Result:** Zoom level adjusts smoothly, and the current zoom value is displayed.
- **No Storage:**
 - **Scenario:** User tries to take a photo when storage is full.
 - **Expected Result:** Display "Insufficient storage" alert and disable the capture button.
- **Camera Permission Denied:**
 - **Scenario:** User denies camera permissions.
 - **Expected Result:** Display an alert with a button to open app settings.
- **Timer:**

Scenario: User taps the timer icon displayed in the upper panel of camera homepage.

Expected Result: Different time set like 3s, 5s, 10s appears on the top panel of the camera homepage.