**1. Full Project Review**

GUI: The Graphical User Interface (GUI) of the application will have an image display area and five function buttons on the right side of the image. The function buttons are “Open Image”, “Encode Image”, “Decode Image”, “Reset Image” and “Save Image”. The “Reset Image” button will be initially disabled until an image is successfully encoded. There will be a text field at the bottom of the GUI to enable the user to enter the secret data. Between the text field and the image display area will be a label to display error messages regarding the text field (e.g., The remaining words in the text field are less than 0).

**2. Main Goals**

GUI: Provide visible functions to enable the user to interact with the application.

Reset Function: Provide the user with the possibility to edit/remove an encoded message from the current image.

**3. Access Files.**

GUI:

assets/icon.png

images/uncoded\_image\_1.jpeg

images/uncoded\_image\_2.jpeg

images/coded\_image\_1.jpeg

images/coded\_image\_2.jpeg

Reset Function:

images/uncoded\_image\_1.jpeg

images/uncoded\_image\_2.jpeg

**4. Data Structures**

GUI & Reset Function:

No data base access will be required.

All images will be placed in the “images” file and “icon” file.

**5. Input/Output Formats**

GUI & Reset Function:

The format of all input images should be .jpg, .jpeg, or .png.

The format of the input text field should be UTF-8.

**6. Class/Method Names and Functions**

GUI & Reset Function:

File1 - \_\_main\_\_.py

class MainFrame (BoxLayout)

# Function names are compromisable

def on\_open\_button\_click(self)

def on\_encode\_button\_click(self)

def on\_decode\_button\_click(self)

def on\_reset\_button\_click(self) # Reset Function

# retrieve the original image

# if fails to open the file throws Exception

# discard the newly encoded image

# display the original image

# clear the text field

# disable “Reset Image” button

def on\_save\_button\_click(self)

File2 - stego.kv # handle GUI

MainFrame # main interface

<MainFrame> # define main frame to build up the app GUI

orientation: “horizontal”

RelativeLayout:

Image:

source: “images/uncoded\_image\_1.jpeg” # access file & display

# add properties

BoxLayout:

Button:

# Open Image: define properties

# on\_press: use “root” keyword call on\_open\_button\_click(self) function

Button:

# Encode Image: define properties

# on\_press: use “root” keyword call on\_encode\_button\_click(self) function

Button:

# Decode Image: define properties

# on\_press: use “root” keyword call on\_decode\_button\_click(self) function

Button:

# Reset Image: define properties

# on\_press: use “root” keyword call on\_reset\_button\_click(self) function

# disable: enable the button only when encode the button is pressed

Button:

# Save Image: define properties

# on\_press: use “root” keyword call on\_save\_button\_click(self) function

Label:

id: gui\_label

text: use “root” keyword dynamically displays error message

# Display Error Message: define properties

TextInput:

id: gui\_text\_input

# Add more properties

Text

Description automatically generated