### **Systems and Biomedical Engineering Department**

# Medical Image Processing & Computer Vision Fall 2022

# Faculty of Engineering Cairo University

Assignment#1: Image Viewer

# **Simple Image Viewer**

## **Requirements:**

You are required to create a GUI that allows the user to browse for and display a:

- 1. DICOM image
- 2. JPEG image
- 3. BMP image

The GUI must also display the following information besides the image:

- 1. Image width and height (number of rows and number of columns)
- 2. Image total size in bits
- 3. Bit depth (bit/pixel)
- 4. Image color (RGB, grayscale, binary)
- 5. For a DICOM image, display all the above AND:
  - Modality used (US, CT, MR...) [Standard name: *Modality*]
    - Patient name [Standard name: *PatientName*]
    - Patient Age [Standard name: *PatientAge*]
    - Body part examined [Standard name: *BodyPartExamined*]

#### **Submission**

Submission will be in person during the tutorial The due date for submission is Monday, 18/10/2021

#### General instructions

- Handle any errors or exceptions that might occur (e.g., corrupted image)
- You are allowed to use MATLAB (App Designer) or Python (PyQt)
- Your code should be clear, understandable, and documented (COMMENTS)
- Follow a consistent naming convention for variables and functions
- The assignment will be graded out of 5