# **Systems and Biomedical Engineering Department**

# Medical Image Processing & Computer Vision Fall 2022

# Faculty of Engineering Cairo University

Assignment#5 PART 1: Fourier Domain

#### **Fourier Domain**

# Requirements:

Using the GUI you created in assignment 1, after browsing for an image you are required to:

- 1. Display the image
- 2. Apply Fourier transform to the image
- 3. Display the magnitude and the phase of the Fourier transformed image
  - a. You will need to use fft and fftshift
  - b. You will need to perform log for the display of magnitude image
  - c. You will need to use scaling for display

## **Submission**

Submit working code files through Blackboard.

- This is an individual based assignment.
- The due date for submission on Blackboard is Friday, 26/11/2021
- No need to upload the GUI

This is a two-part task. The in-person submission will be for the two parts of the task together after the statement for part 2 is uploaded.

The statement for part 2 will include the due-date for in-person submission for the two parts.

## General instructions

- You are allowed to use built-in functions for this part
- 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