

**An-Najah National University**  
**Department of Computer Engineering**  
**Digital Image Processing - 10636318**  
**First Semester 2023/2024**  
**OpenCV Project – Part 2**

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Write a program with Graphical User Interface (GUI) to implement all segmentation techniques studied in the literature (as described in the slides).

Your program should provide the following functionalities:

- Open an image
- Convert the image to gray-scale
- Apply all segmentation filters and techniques
- Implement a user-defined filter, allowing the user to design his own filter by specifying the size and coefficients. Then, apply it on the input image.
- Export the enhanced image and save it.

Please adhere to the following regulations:

- Each student must complete the assignment individually.
- Only C, C++, or Python programming languages can be used, in conjunction with OpenCV.
- Deadline: 28.12.2023