An-Najah National University

Faculty of Engineering and IT

جامعة النجاح الوطنية

كلية الهندسة وتكنولوجيا المعلومات

Image Processing	
Instructor: Dr. Anas Toma	Final Project
Academic year**: 2020/2021**	Semester: **First**
Student:	
"Mohammad Saleh" Issam Dwikat	Sunday/Tuesday : 9.30 – 11.00

Programming language: Python

Pressures:

1) Convert colored image to gray scale image
2) Apply noise removal on the image by using **fastNlMeansDenoising**
3) **Threshold** the image
4) Detect image edges using **Canny** method
5) Then find the **countors** using **findCountors** method
6) Then used **boundingRect** to find the position of shape and the size of window that contains it
7) Then we used **arcLength** method to detect the shape of **countors** that we found it previously then approximated the curve using **approxPolyDB** method
8) Finally, we draw the name of the shape depending on **contour approximation** using **putText** method on the position detected shape by using the result of step number 6.

The link of the test cases used in the source code:

https://drive.google.com/drive/folders/1UExR9ohAdutC0vXscmNyLvZwxiOAr1Kg?usp=sharing