**Python-based OpenCV and Tello Installation Report**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Suyeon Chung | Student ID | 201834952 |
| Affiliation | Software | Subject | Drones and Robotics |

|  |  |
| --- | --- |
| LAB 01 - Show “Lenna” image using OpenCV | |
| **Source Code** | **Captured Result** |
| # Press Shift+F10 to execute it or replace it with your code. # Press Double Shift to search everywhere for classes, files, tool windows, actions, and settings. import cv2 as cv import sys  # Press the green button in the gutter to run the script. if \_\_name\_\_ == '\_\_main\_\_':  # 201834952 정수연  img = cv.imread("Lenna.png")  cv.imshow("Display window", img)  cv.waitKey(0) |  |

|  |  |
| --- | --- |
| LAB 02 - Tello “main.py and utils.py” Programing | |
| **Source Code** | **Captured Result** |
| **<main.py>**  from utils import \* import cv2 as cv  # Press the green button in the gutter to run the script. if \_\_name\_\_ == '\_\_main\_\_':  # 201834952 정수연  myDrone = initTello()  moveTello(myDrone)  **<utils.py>** from djitellopy import Tello import cv2 as cv import time  def initTello() :  myDrone = Tello()  # drone connection  myDrone.connect()   # set all speed to 0  myDrone.for\_back\_velocity = 0;  myDrone.left\_right\_velocity = 0;  myDrone.up\_down\_velocity = 0;  myDrone.yaw\_velocity = 0;  myDrone.speed = 0;   print("\n \* Drone battery percentage : " + str(myDrone.get\_battery()) + "%")  myDrone.streamoff()  return myDrone  def moveTello(myDrone) :  myDrone.takeoff()  time.sleep(5)  myDrone.move\_back(50)  time.sleep(5)  myDrone.rotate\_clockwise(360)  time.sleep(5)  myDrone.move\_forward(50)  time.sleep(5)  myDrone.flip\_right()  time.sleep(5)  myDrone.flip\_left()  time.sleep(5)  myDrone.land()  time.sleep(5) |  |

|  |  |
| --- | --- |
| LAB 03 - Tello keyboard control example | |
| **Source Code** | **Captured Result** |
| from utils import \* import cv2 as cv  # Press the green button in the gutter to run the script. if \_\_name\_\_ == '\_\_main\_\_':  # 201834952 정수연  myDrone = initTello()  # moveTello(myDrone)   myDrone.takeoff()  time.sleep(1)  myDrone.streamon()  cv.namedWindow("Drone")  frame\_read = myDrone.get\_frame\_read()  time.sleep(2)   while True:  img = frame\_read.frame  cv.imshow("Drone", img)   keyborad = cv.waitKey(1)  if keyborad & 0xFF == ord('q'):  myDrone.land()  frame\_read.stop()  myDrone.streamoff()  exit(0)  break  if keyborad == ord('w') : myDrone.move\_forward(20)  if keyborad == ord('s') : myDrone.move\_back(20)  if keyborad == ord('a') : myDrone.move\_left(20)  if keyborad == ord('d') : myDrone.move\_right(20) |  |