

Webcam, Bullseye 버전, 사진 저장

(참고: <https://www.youtube.com/watch?v=OEGR19aE0dg>)

(webcam setup, bullseye)

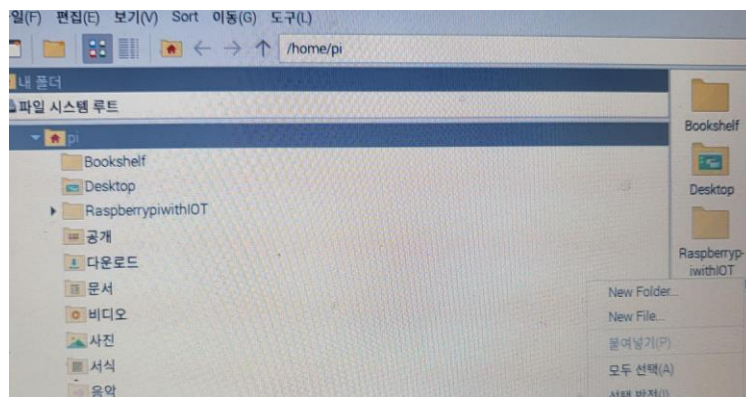
\$ lsusb

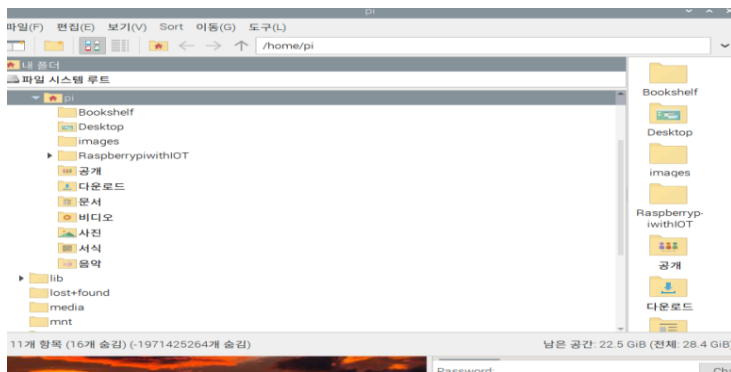
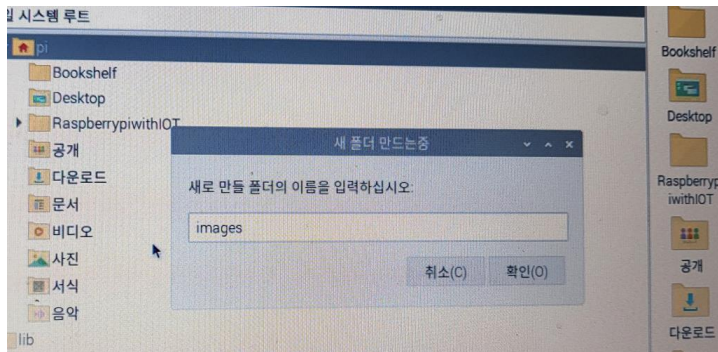
```
pi@raspberrypi:~/RaspberrypiwithIOT/ch7 $ lsusb
Bus 002 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 001 Device 005: ID 04d9:0007 Holtek Semiconductor, Inc. Raspberry Pi Internal Keyboard
Bus 001 Device 004: ID 046d:c018 Logitech, Inc. Optical Wheel Mouse
Bus 001 Device 003: ID 0bda:58b0 Realtek Semiconductor Corp. SPC-B900W Webcam
Bus 001 Device 002: ID 2109:3431 VIA Labs, Inc. Hub
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
pi@raspberrypi:~/RaspberrypiwithIOT/ch7 $
```

\$ sudo apt install fswebcam

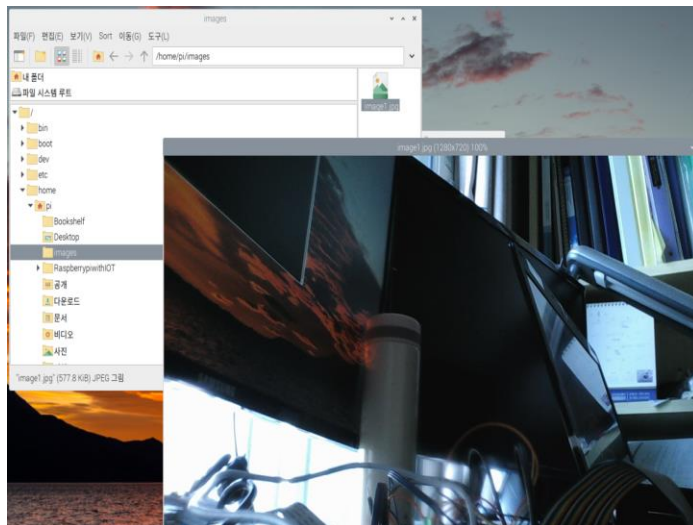
```
pi@raspberrypi:~/RaspberrypiwithIOT/ch7 $ sudo apt install fswebcam
패키지 목록을 읽는 중입니다... 완료
의존성 트리플을 만드는 중입니다... 완료
상태 정보를 읽는 중입니다... 완료
fswebcam is already the newest version (20140113-2).
다음 패키지가 자동으로 설치되었지만 더 이상 필요하지 않습니다:
  libfuse2
Use 'sudo apt autoremove' to remove it.
0개 업그레이드, 0개 새로 설치, 0개 제거 및 0개 업그레이드 안 함.
pi@raspberrypi:~/RaspberrypiwithIOT/ch7 $
```

* 새로운 data 폴더 만들기





```
$ fswebcam -r 1280x720 --no-banner /home/pi/images/image1.jpg
```



```
$ pip3 install opencv-python
```

```
pi@raspberrypi:~/RaspberrypiwithIoT/ch7 $ pip3 install opencv-python
Looking in indexes: https://pypi.org/simple, https://www.piwheels.org/simple
Requirement already satisfied: opencv-python in /home/pi/.local/lib/python3.9/site-packages (4.9.0.80)
Requirement already satisfied: numpy>=1.17.3 in /usr/lib/python3/dist-packages (from opencv-python) (1.19.5)
pi@raspberrypi:~/RaspberrypiwithIoT/ch7 $
```

```
$ python3 (opencv 설치 확인. 빠져나올 땐 >>> exit()함)
```

```
pi@raspberrypi:~ $ python3
Python 3.9.2 (default, Feb 28 2021, 17:03:44)
[GCC 10.2.1 20210110] on linux
Type "help", "copyright", "credits" or "license" for more information
>>> import cv2
>>>
```

\$ cat capture.py

```
import cv2

import time

num = 1

cap = cv2.VideoCapture(0)

while True:

    ret, img = cap.read()

    cv2.imshow('Frame',img)

    if cv2.waitKey(1) & 0xFF == ord('c'):

        images/' +str(num)+''.jpg',img)

        print('Capture '+str(num)+'Successful!')

        num = num + 1

    if num==4:

        break

cap.release()

cv2.destroyAllWindows
```

* 'c'를 누를 때마다 'images' 폴더에 1 장의 jpg 사진 저장. 최고 3 장의 사진까지 저장.

```
pi@raspberrypi:~/RaspberrypiwithIOT/ch7 $ python3 capture.py
Capture 1Successful!
Capture 2Successful!
Capture 3Successful!
```

