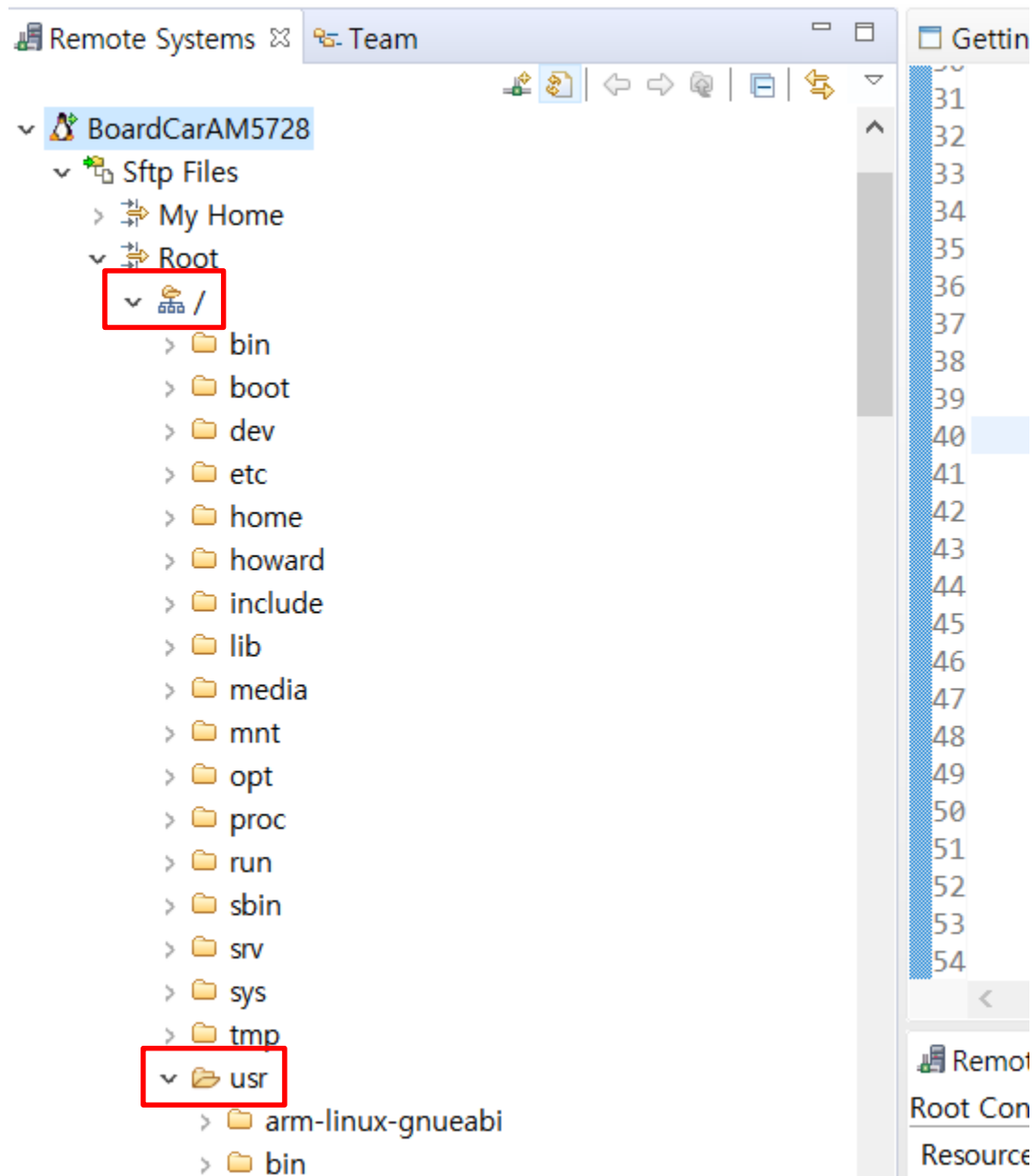


# TI MCU, DSP 및 Xilinx FPGA 프로그래밍 전문가 과정

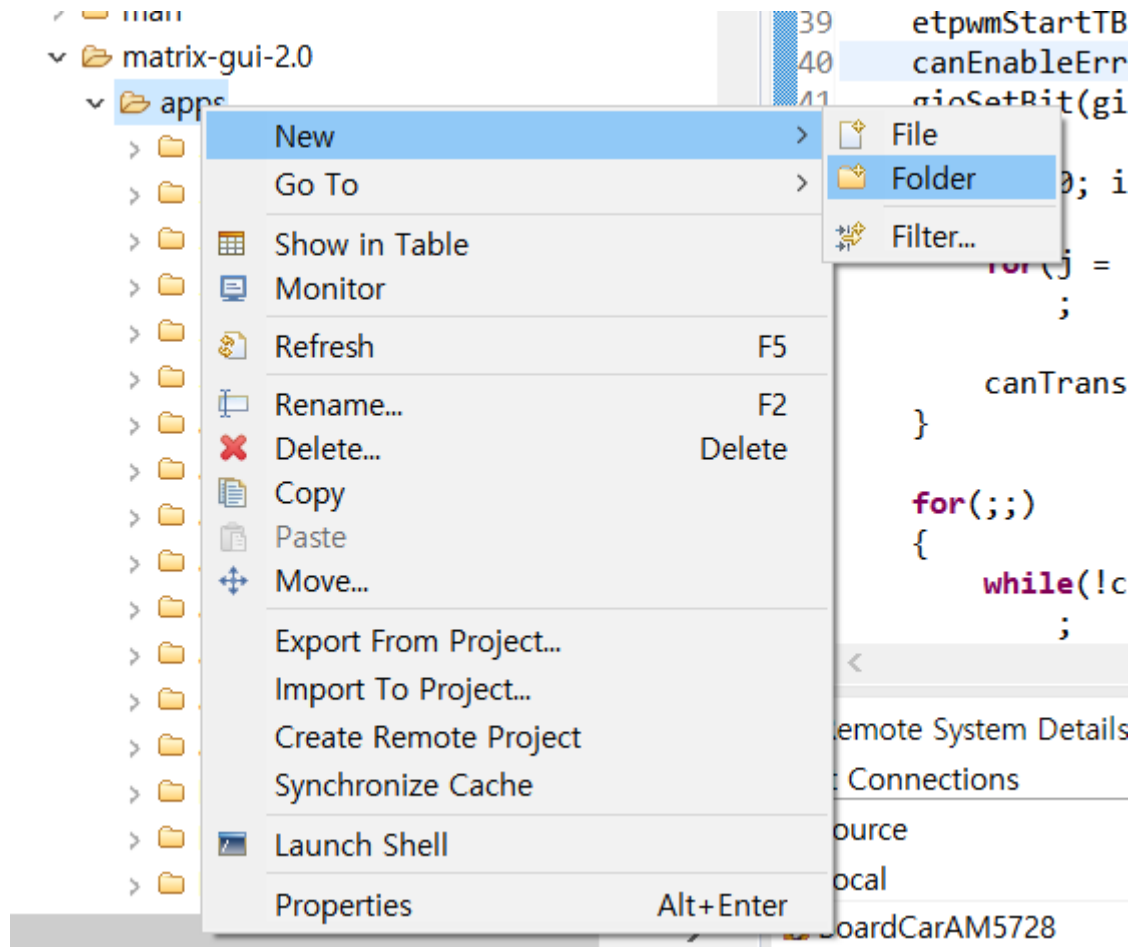
Innova Lee(이상훈)  
[gcccompil3r@gmail.com](mailto:gcccompil3r@gmail.com)

# **How to make AM5728 Matrix App(Wi-Fi)**

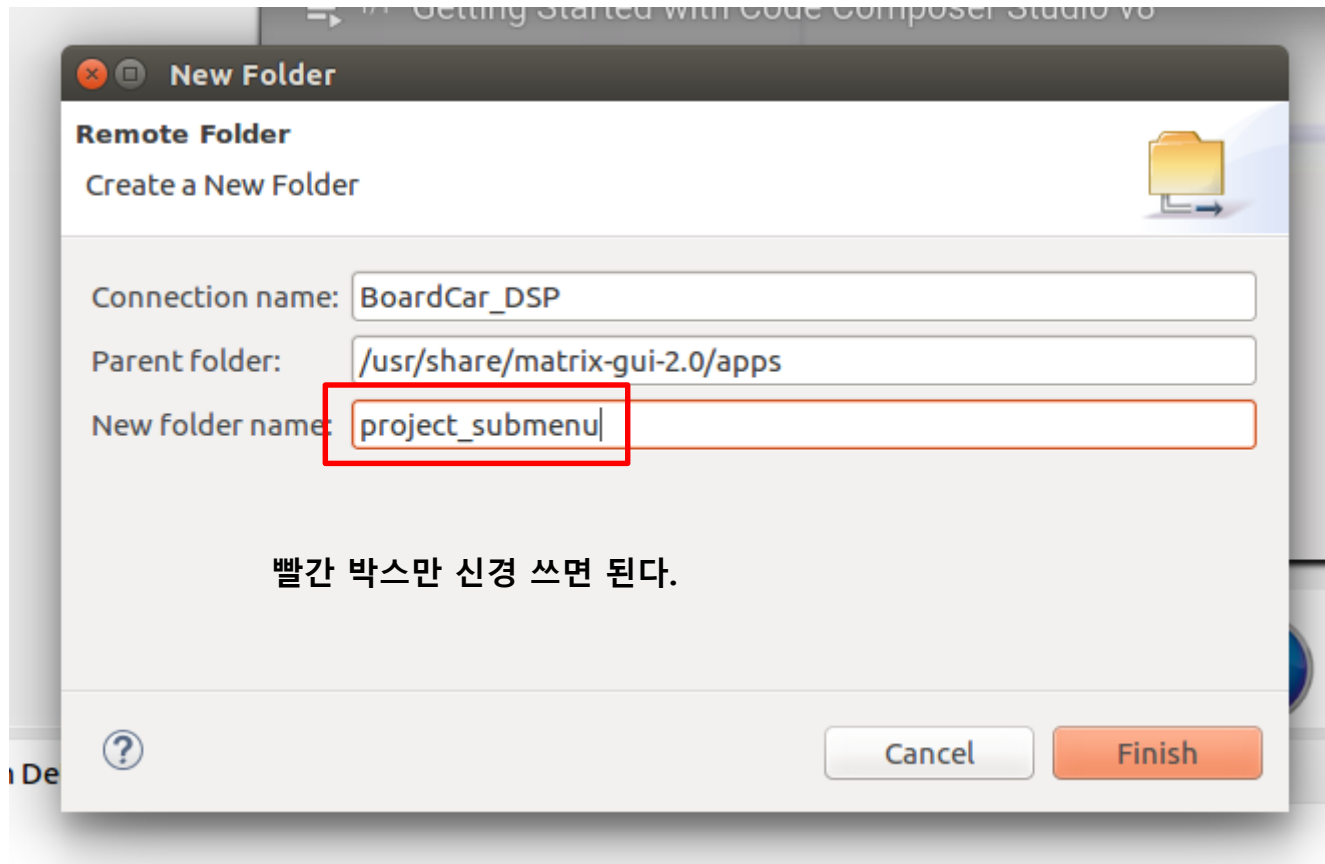
DSP 상에 /usr 디렉토리를 열어보자! (본 작업은 반드시 Linux 에서 진행해야만 한다)  
그렇지 않을 경우 하나도 제대로 동작하는 것이 없을 것이다!



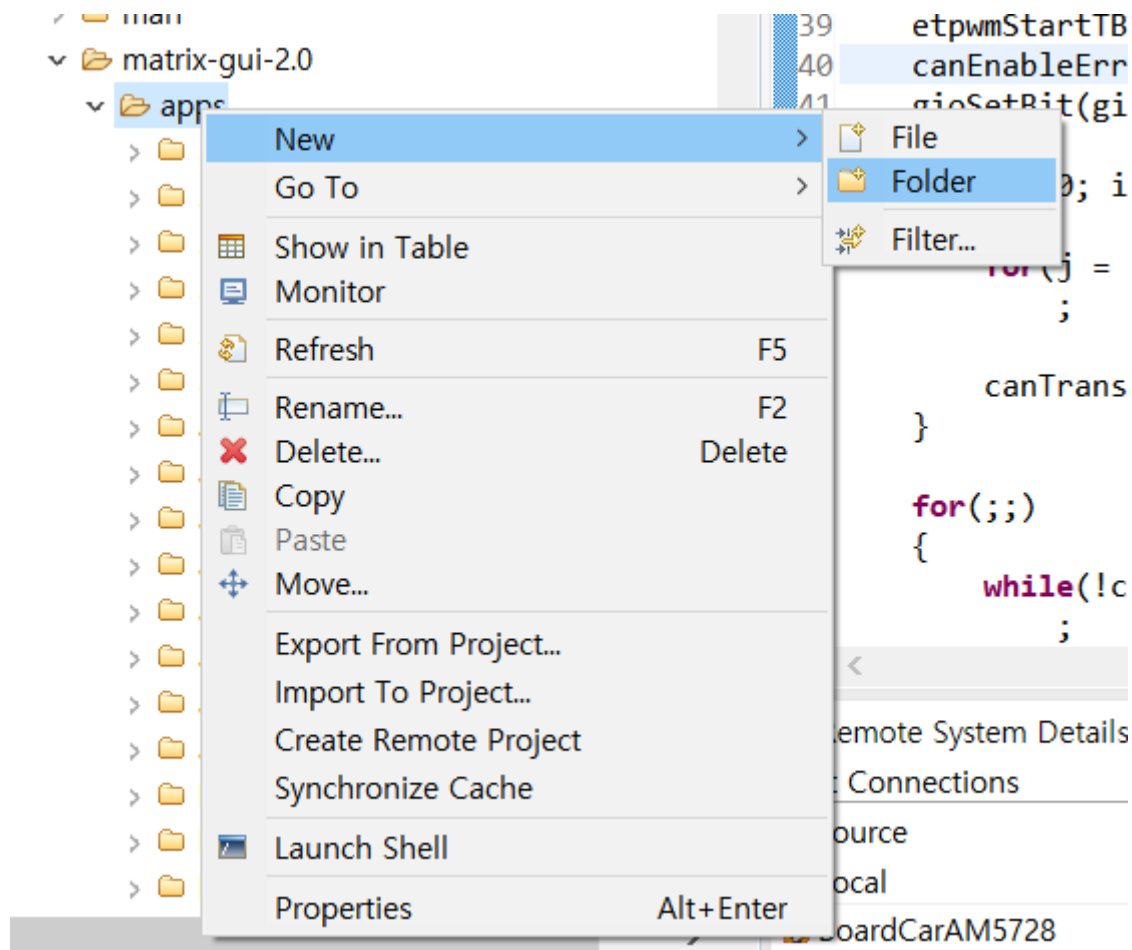
/usr/share/matrix-gui-2.0/apps 를 우클릭하고 New -> Folder 를 누른다.



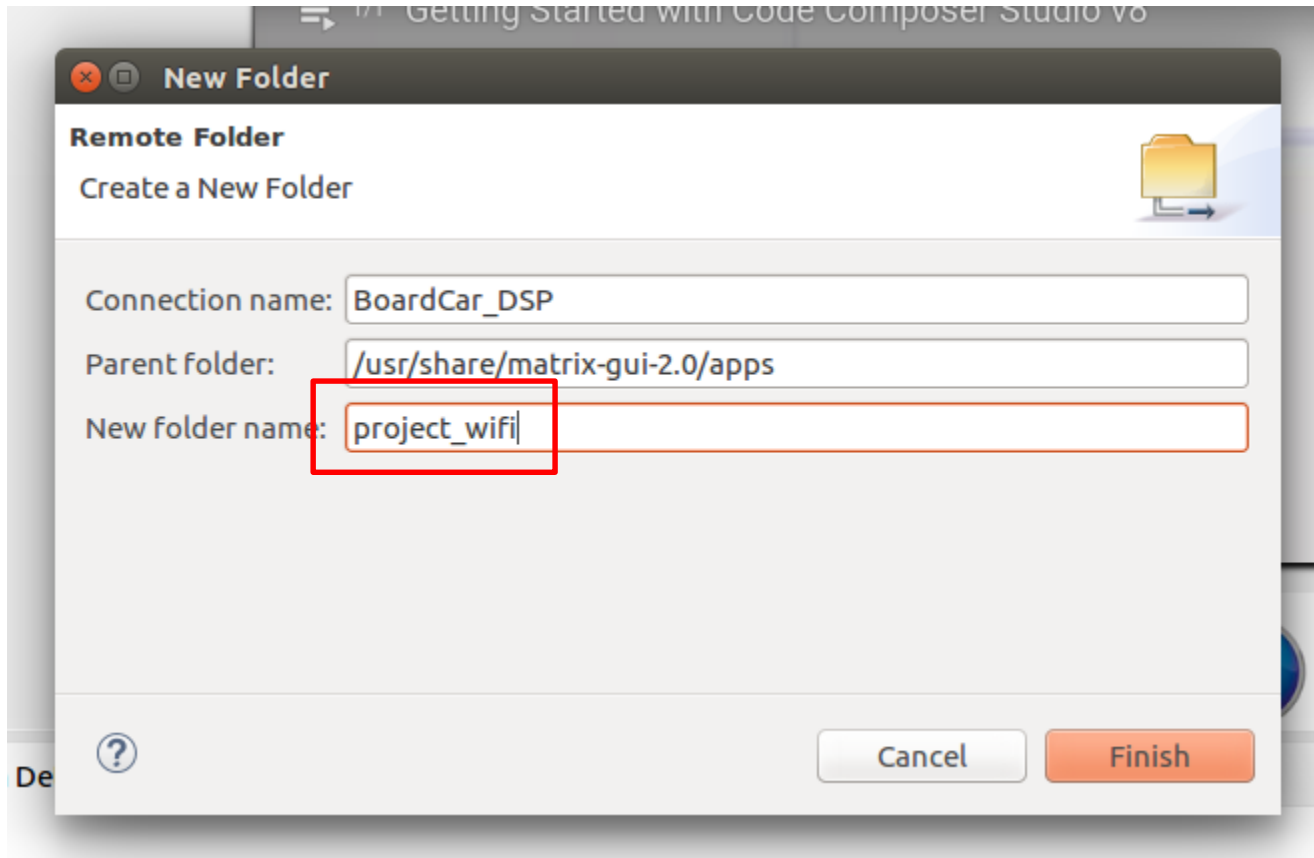
아래와 같이 **project** 라는 이름의 폴더를 만든다.  
현재, 그리고 앞으로 우리가 작업할 **Matrix App** 들은 이 부분에 배치될 것이다.



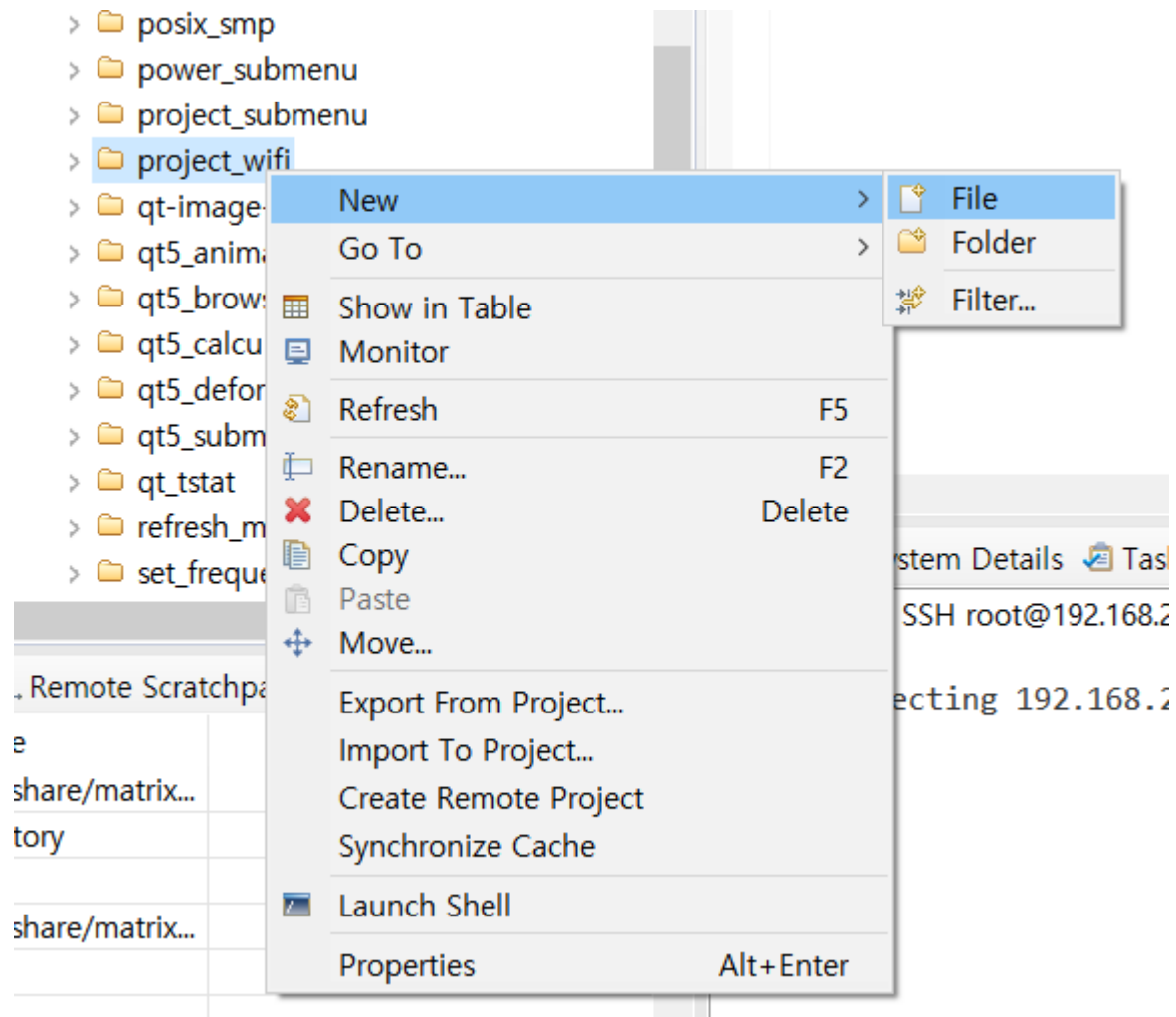
다시 한 번 /usr/share/matrix-gui-2.0/apps 를 우클릭하고 New -> Folder 를 누른다.



Wi-Fi Matrix App 을 만들 것이므로 project\_wifi 라고 이름 짓는다.

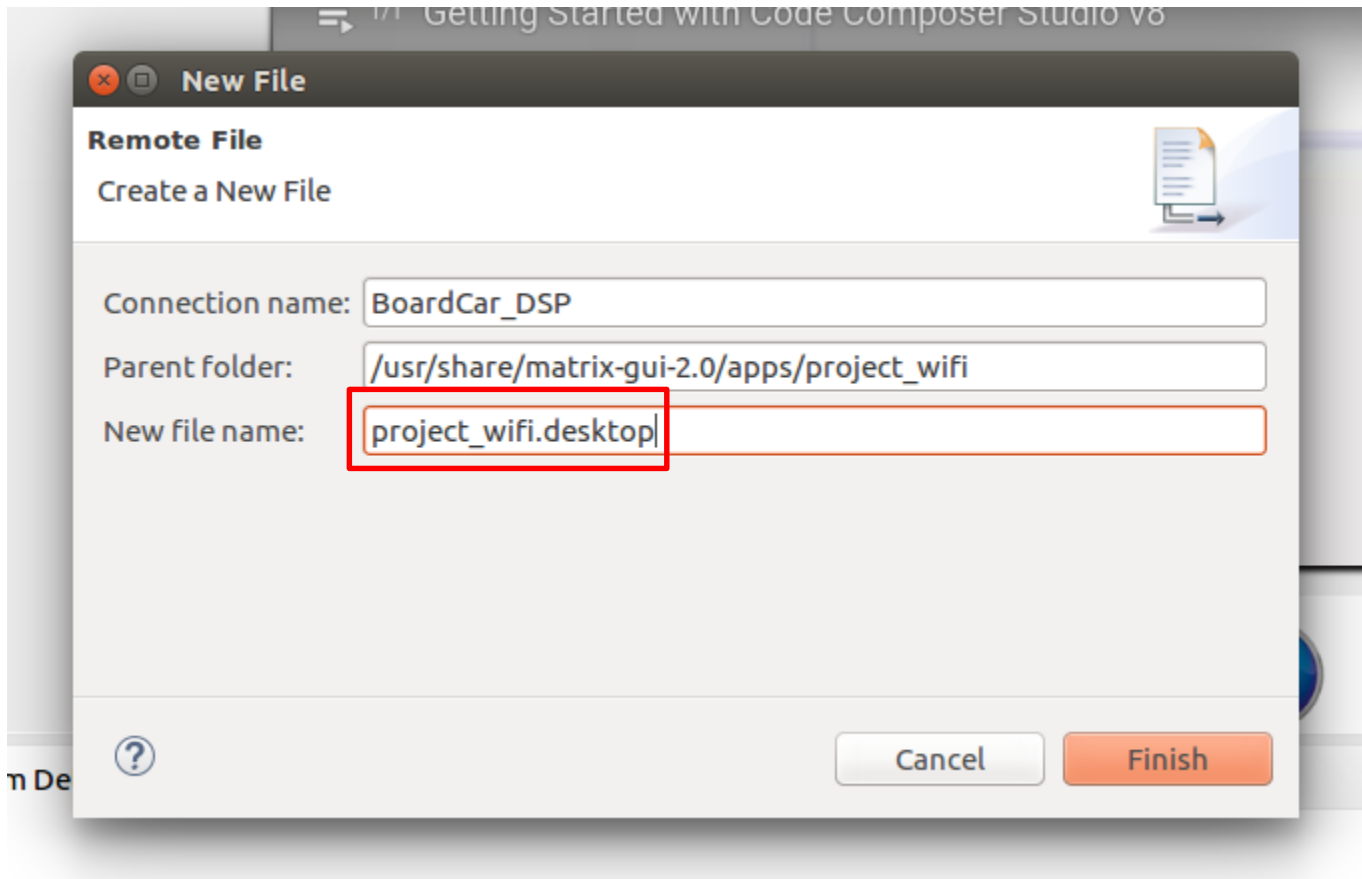


생성된 project\_wifi 폴더를 우클릭하고 New -> File 을 누른다.

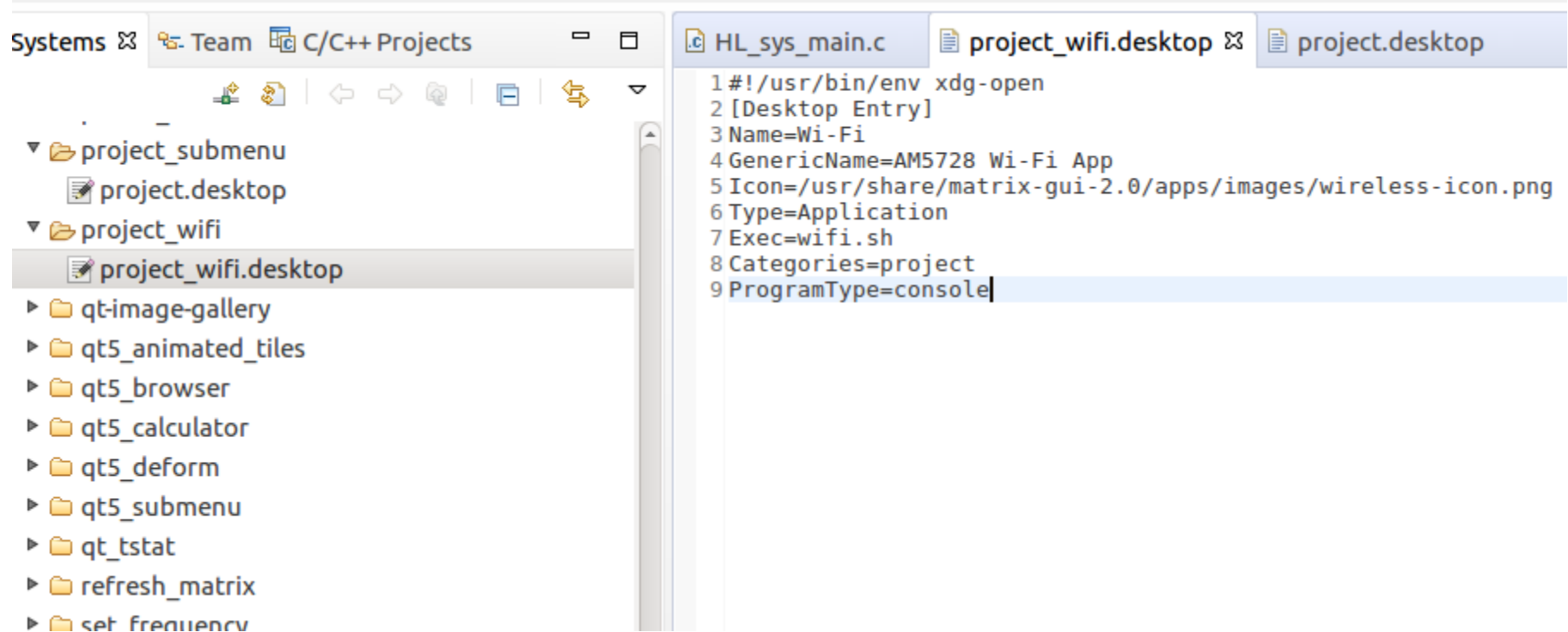




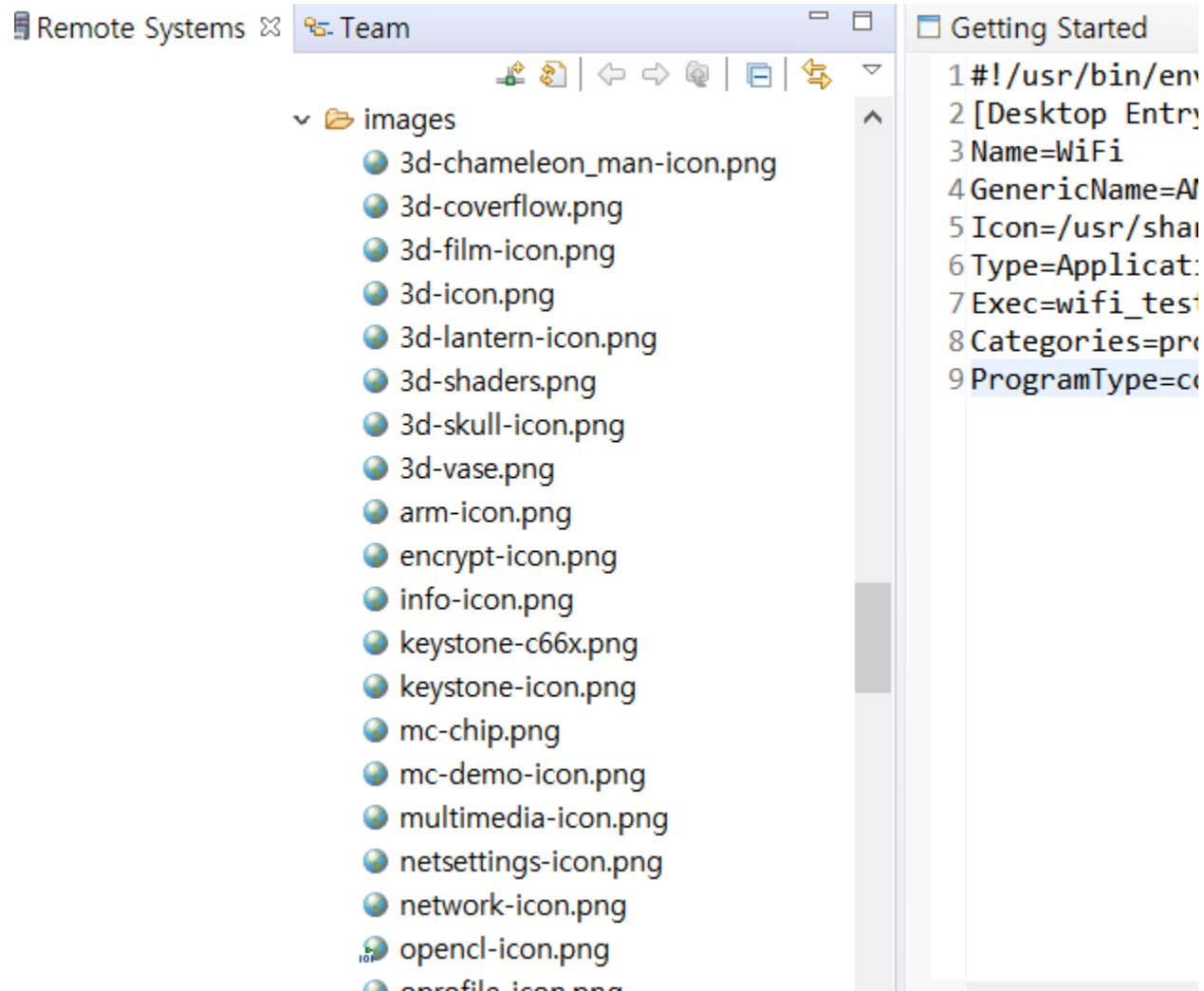
파일명을 `project_wifi.desktop` 으로 만든다.



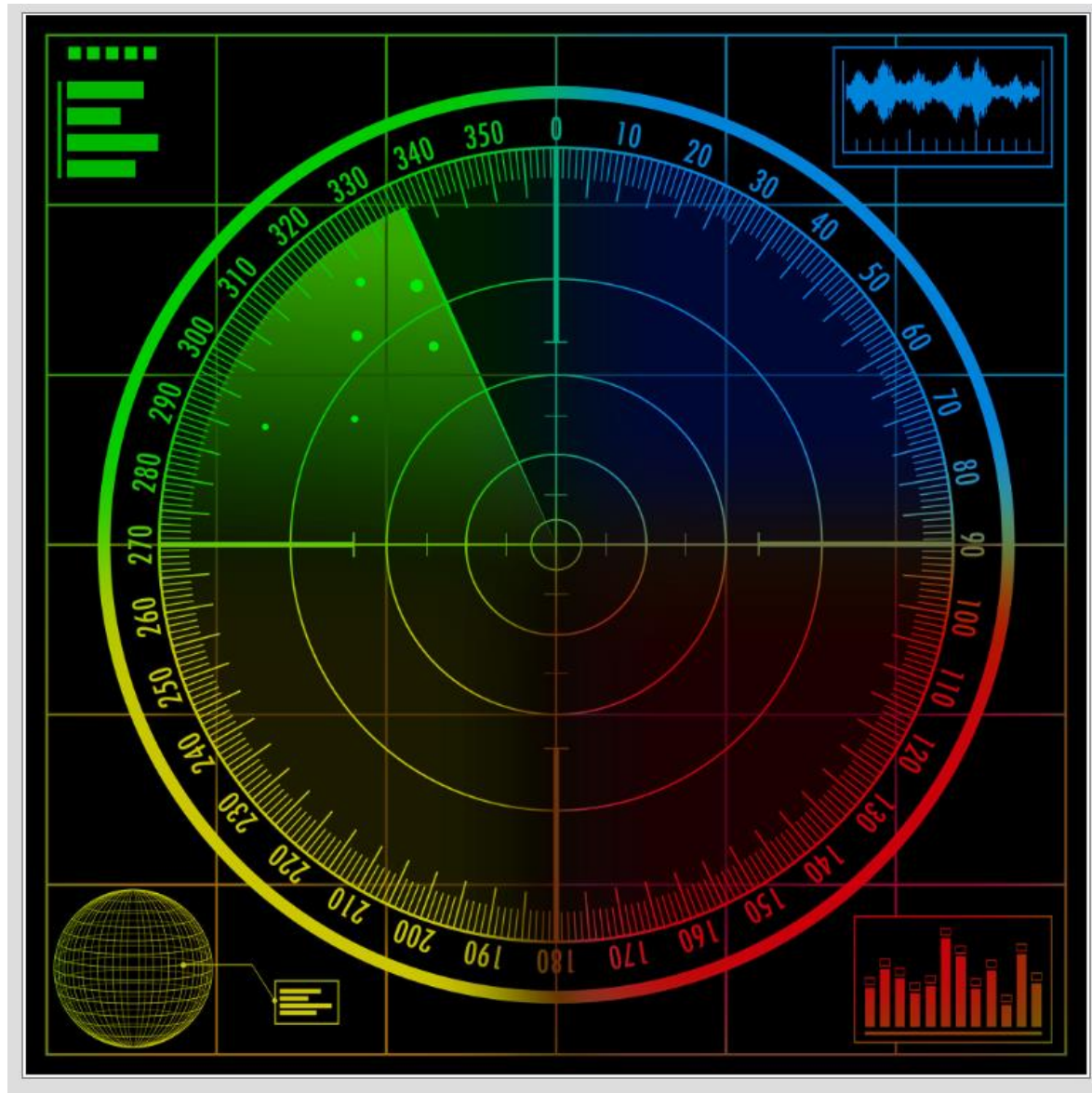
project\_wifi.desktop 을 더블 클릭하고 아래와 같은 내용을 기입한다.



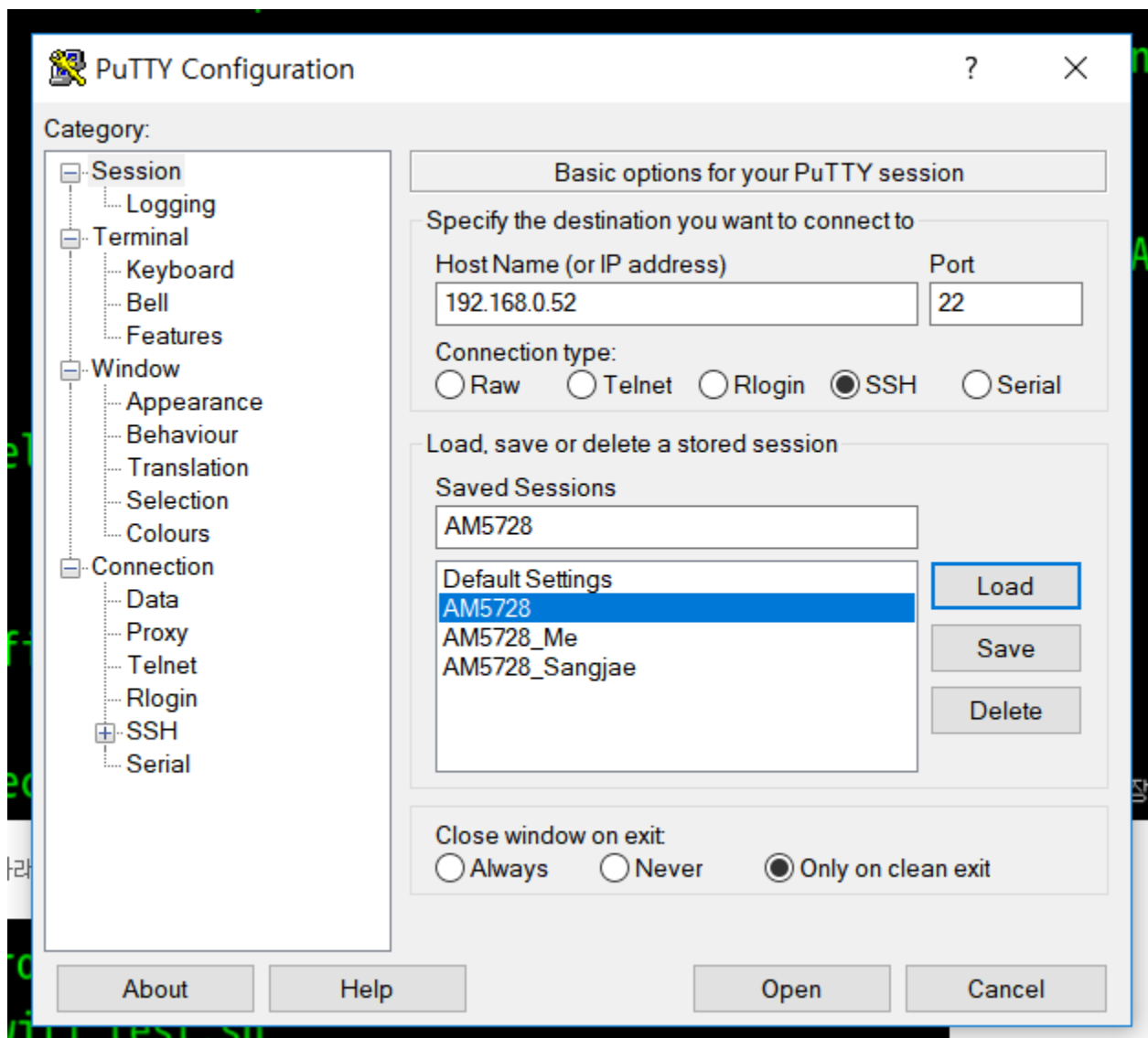
images 폴더를 열어보면 다양한 아이콘들이 존재한다.  
직접 Custom 하고 싶다면 아이콘을 직접 만들어도 무방하다.



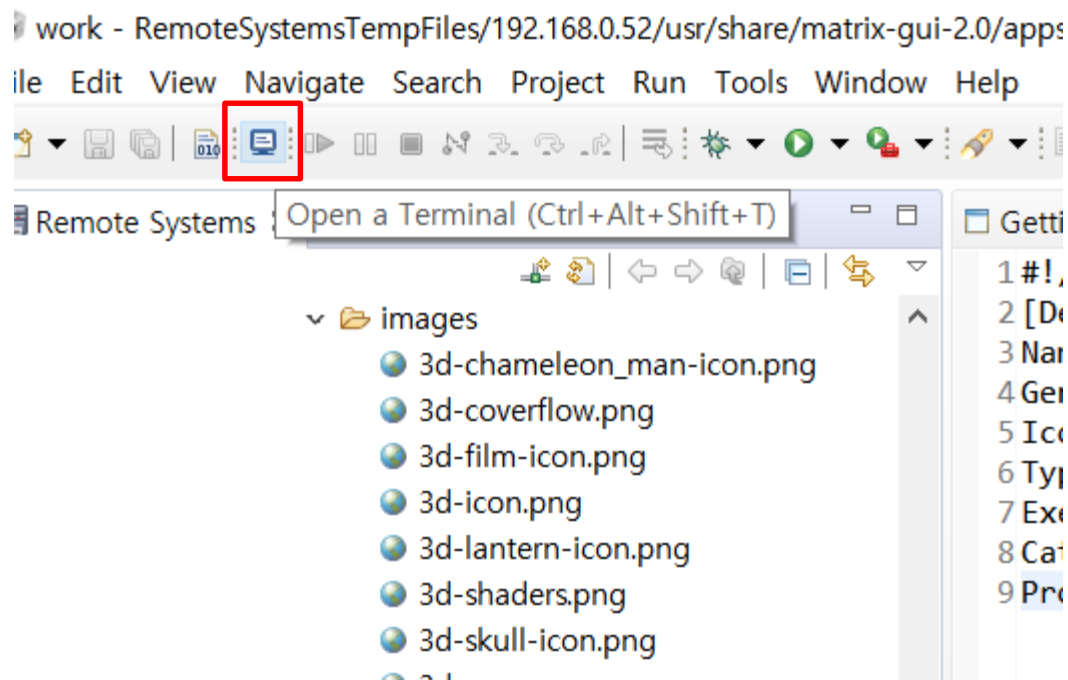
Lidar 전용으로 만들 App 에 사용할 Icon 에 해당한다.  
요런식으로 직접적으로 Custom 할 수도 있다.  
포토샷을 좀 할 줄 안다면 발군의 능력을 발휘 할 수 있을 것임



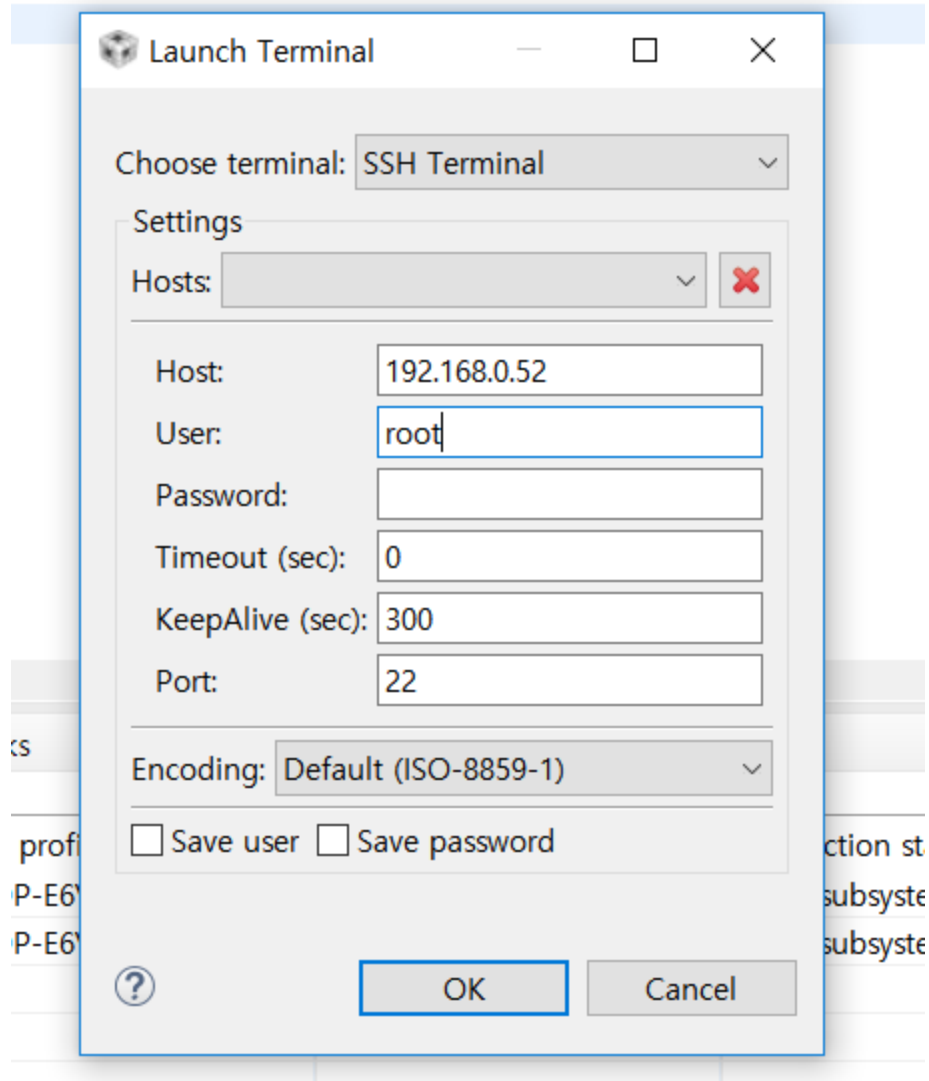
이제 Putty 로 AM5728 에 접속하도록 한다.



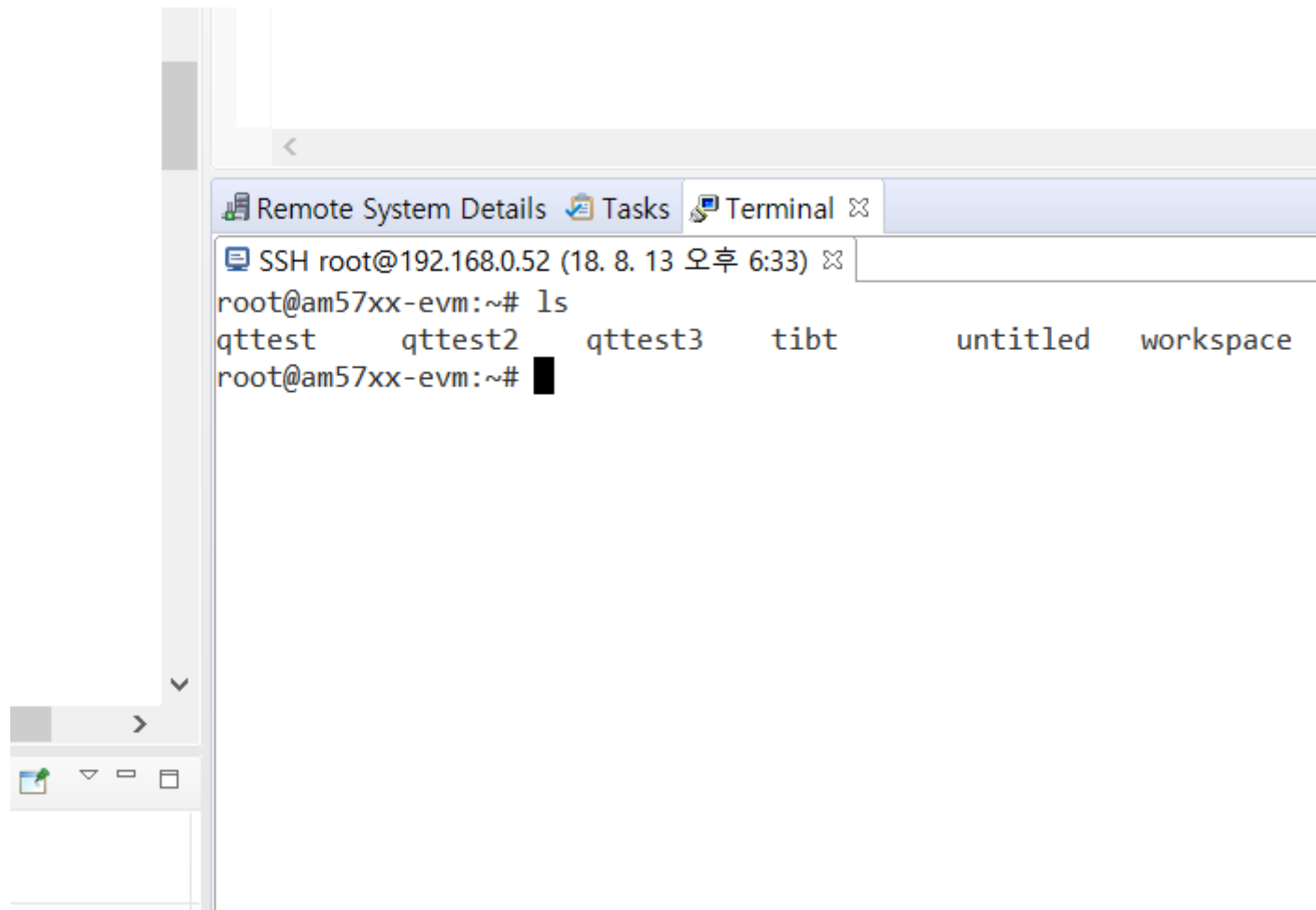
혹은 CCS 상에서 Terminal 로 DSP 에 접속해도 무방하다.



아래와 같이 CCS 상에서 AM5728 에 접속한다!



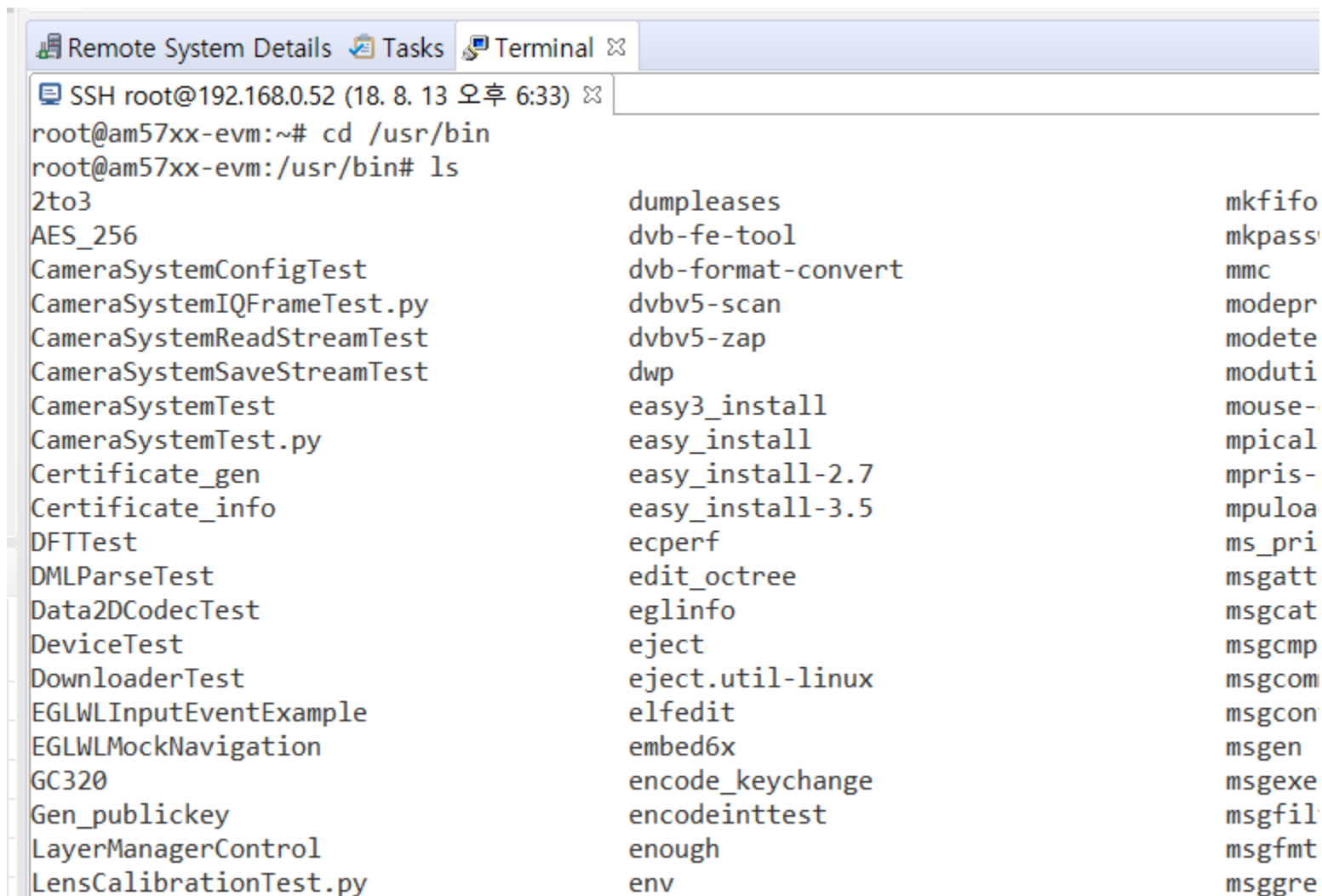
접속이 잘 되었다면 아래와 같이 나올 것이다.





이제 /usr/bin 으로 이동하도록 한다.

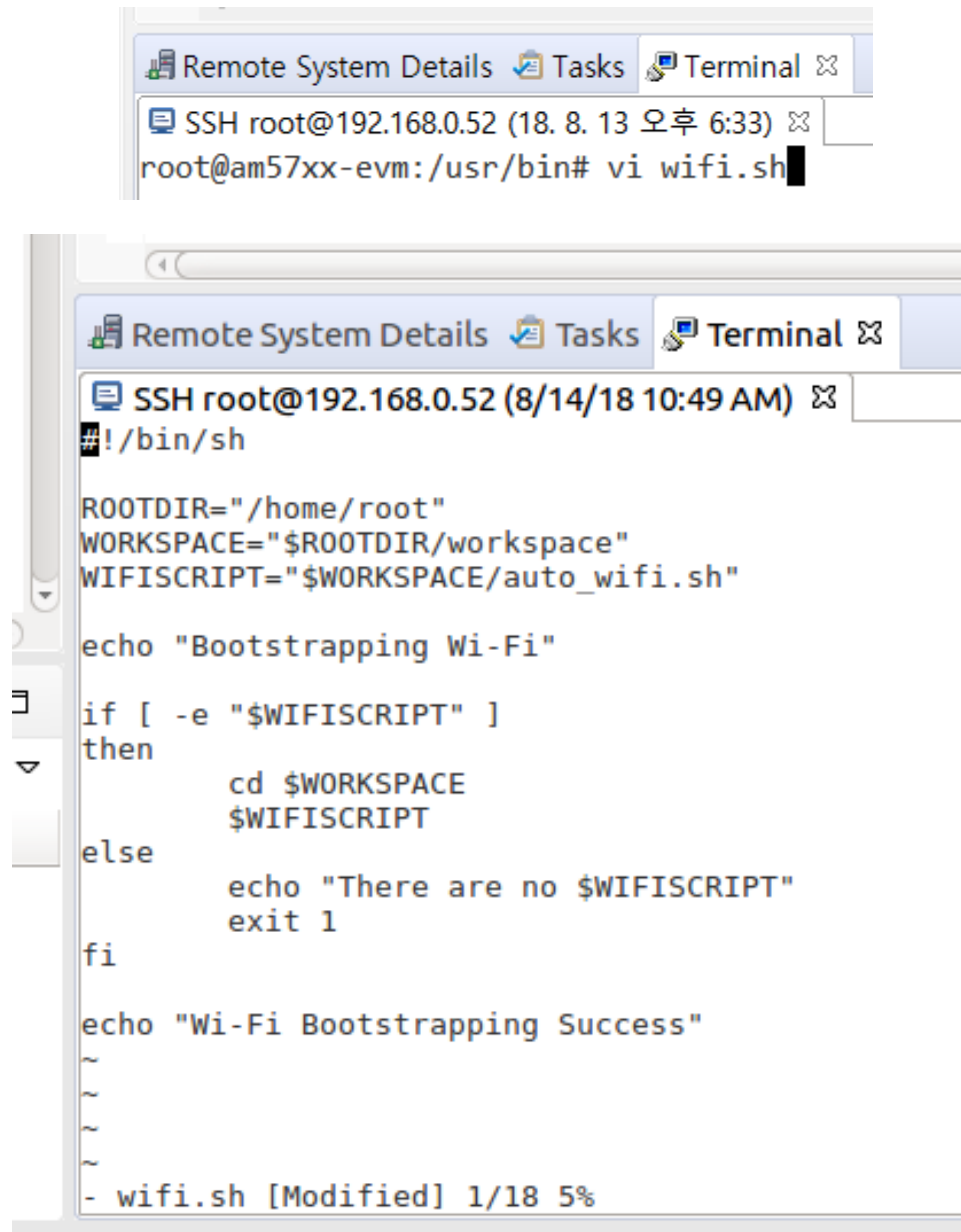
AM5728 상에서 지원하는 방대한 양의 실행 파일들을 볼 수 있다.



The screenshot shows a terminal window with a title bar containing 'Remote System Details', 'Tasks', and 'Terminal'. The terminal session is an SSH connection to root@192.168.0.52. The user has navigated to /usr/bin and executed the 'ls' command. The output is a long list of files and executables, including various test scripts, system utilities, and development tools.

```
SSH root@192.168.0.52 (18. 8. 13 오후 6:33)
root@am57xx-evm:~# cd /usr/bin
root@am57xx-evm:/usr/bin# ls
2to3
AES_256
CameraSystemConfigTest
CameraSystemIQFrameTest.py
CameraSystemReadStreamTest
CameraSystemSaveStreamTest
CameraSystemTest
CameraSystemTest.py
Certificate_gen
Certificate_info
DFTTest
DMLParseTest
Data2DCodecTest
DeviceTest
DownloaderTest
EGLWLInputEventExample
EGLWLMockNavigation
GC320
Gen_publickey
LayerManagerControl
LensCalibrationTest.py
dumpleases
dvb-fe-tool
dvb-format-convert
dvbv5-scan
dvbv5-zap
dwp
easy3_install
easy_install
easy_install-2.7
easy_install-3.5
ecperf
edit_octree
eglnfo
eject
eject.util-linux
elfedit
embed6x
encode_keychange
encodeinttest
enough
env
mkfifo
mkpasswd
mmc
modepr
modete
moduti
mouse-
mpical
mpris-
mpuloa
ms_pri
msgatt
msgcat
msgcmp
msgcom
msgcon
msgen
msgexe
msgfil
msgfmt
msggre
```

아래와 같이 wifi.sh 라는 파일을 하나 작성하도록 한다.



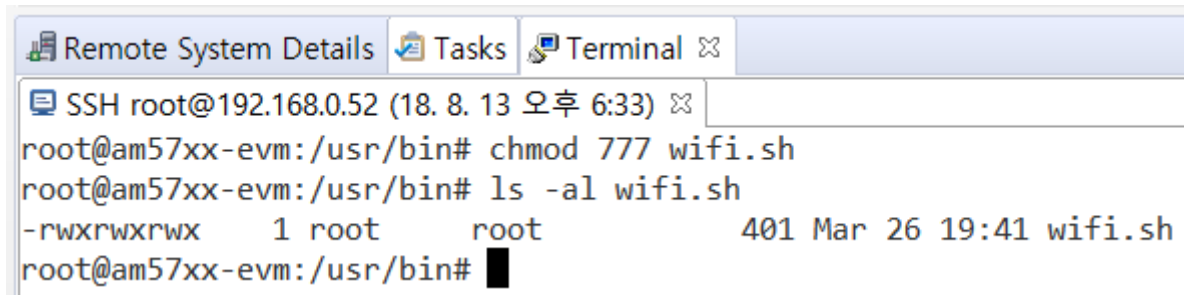
The image shows two screenshots of a terminal window. The top screenshot shows the command `vi wifi.sh` being entered in the terminal. The bottom screenshot shows the contents of the `wifi.sh` script being displayed, which includes setting environment variables, echoing a message, and checking for the existence of a file.

```
Remote System Details Tasks Terminal ✕  
SSH root@192.168.0.52 (18. 8. 13 오후 6:33) ✕  
root@am57xx-evm:/usr/bin# vi wifi.sh
```

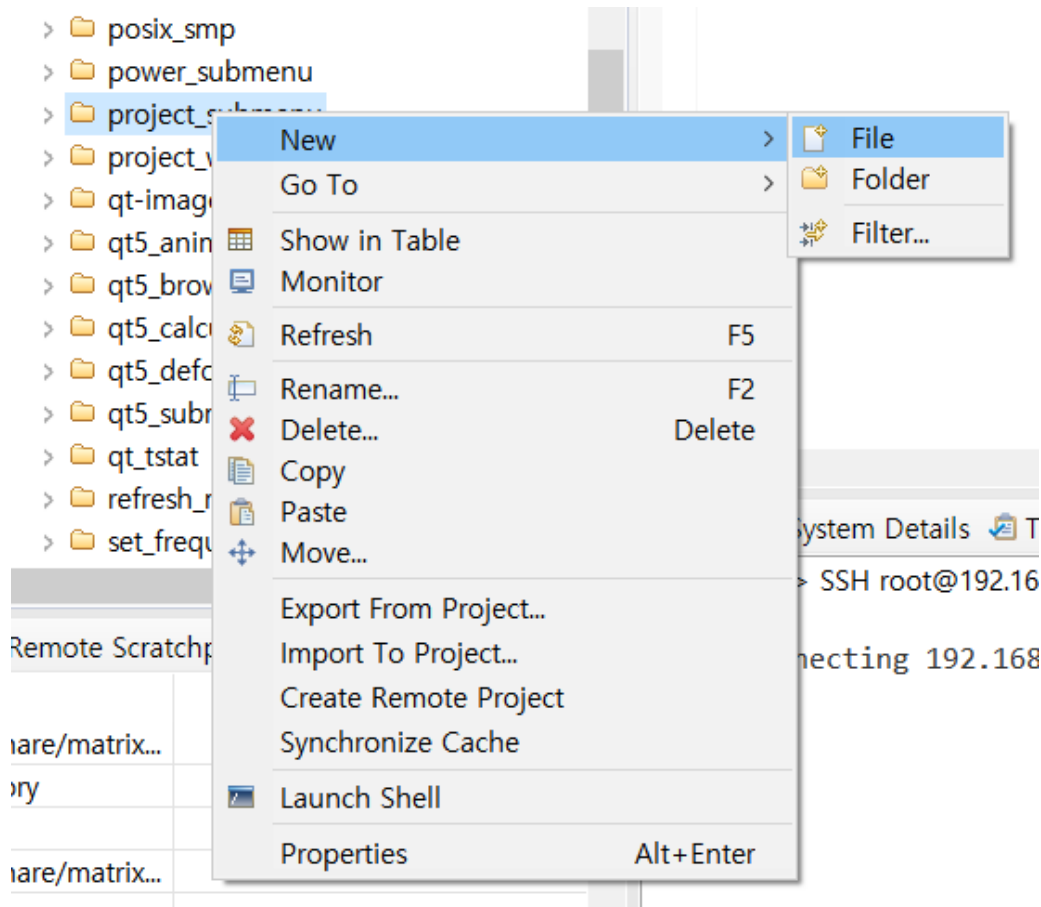
```
Remote System Details Tasks Terminal ✕  
SSH root@192.168.0.52 (8/14/18 10:49 AM) ✕  
#!/bin/sh  
  
ROOTDIR="/home/root"  
WORKSPACE="$ROOTDIR/workspace"  
WIFIScript="$WORKSPACE/auto_wifi.sh"  
  
echo "Bootstrapping Wi-Fi"  
  
if [ -e "$WIFIScript" ]  
then  
    cd $WORKSPACE  
    $WIFIScript  
else  
    echo "There are no $WIFIScript"  
    exit 1  
fi  
  
echo "Wi-Fi Bootstrapping Success"  
~  
~  
~  
~  
- wifi.sh [Modified] 1/18 5%
```

실행을 할 수 있도록 권한을 준다.

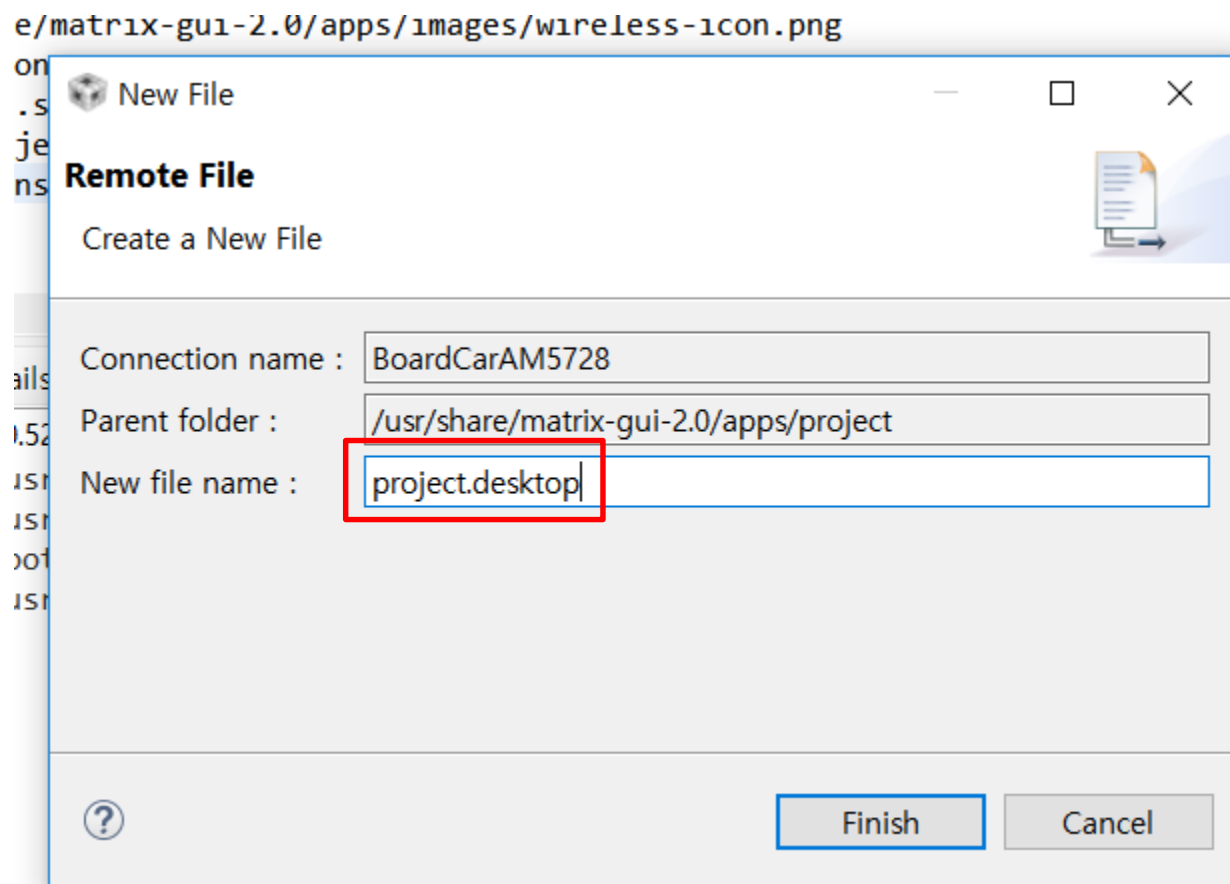


```
Remote System Details Tasks Terminal
SSH root@192.168.0.52 (18. 8. 13 오후 6:33)
root@am57xx-evm:/usr/bin# chmod 777 wifi.sh
root@am57xx-evm:/usr/bin# ls -al wifi.sh
-rwxrwxrwx  1 root    root          401 Mar 26 19:41 wifi.sh
root@am57xx-evm:/usr/bin#
```

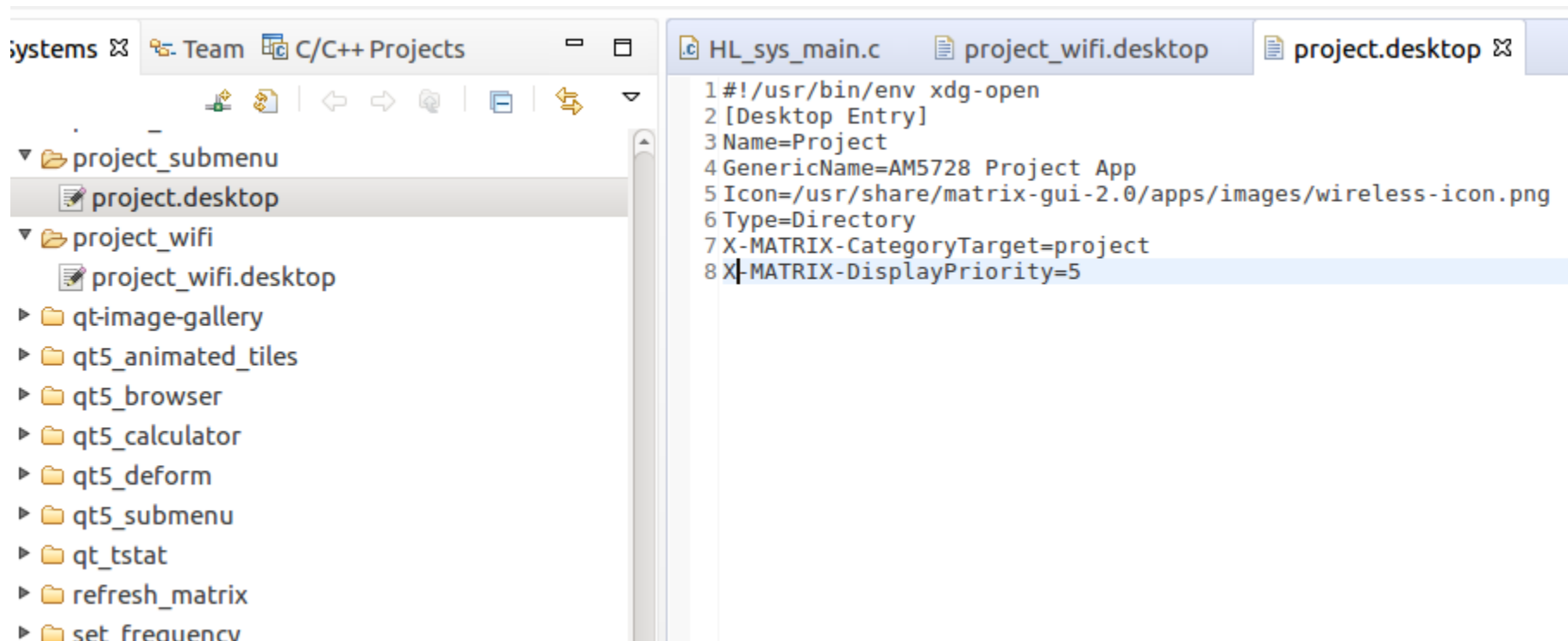
project\_submenu 디렉토리를 우클릭하고 New -> File 을 누른다.



아래와 같이 project.desktop 이라는 파일을 만들도록 한다.



project.desktop 을 아래와 같이 작성하도록 한다.





Matlab Launcher v2 p1



Project



ARM



3D



Power



Browser



MachineVision



Ethernet



Qt5



Settings



Touch



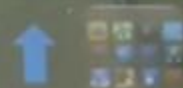
Video Analytics Demo



USB



## Settings Submenu p1



Matrix Shutdown



Refresh Matrix



Task Info



System Info



System Shutdown



Terminal



Network Settings



Memory



Refresh Matrix



## Refresh Matrix

### Purpose:

The Refresh Matrix icon is a quick way to load new applications into Matrix.



Refresh Matrix

Refreshing Matrix

/usr/share/matrix-gui-2.0

Refresh Complete

Script Complete



Map Launcher v2 p1



Project



ARM



3D



Power



Browser



MachineVision



Ethernet



Qt5



Settings



Touch



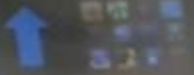
Video Analytics Demo



USB



Project Submenu p1



Wi-Fi

Wi-Fi

Bootstrapping Wi-Fi

Please provide the following information.

The device has been successfully configured.

TI Module: y

Chip Flavor: 1837

Number of 2.4GHz Antennas Fitted: 1

Number of 5GHz Antennas Fitted: 1

Diversity Support: y

SIS040 Support: y

Japanese Standards Applied: n

Class 2 Permissive Change (C2PC) Applied: n

/home/root/workspace

/usr/share/wl18xx

adding wlan1 interface

Configuration file: /usr/share/wl18xx/hostapd.conf

wlan1: interface state UNINITIALIZED->COUNTRY\_UPDATE

Using interface wlan1 with hwaddr 50:33:8b:64:97:d9 and ssid "SitaraAP"

wlan1: interface state COUNTRY\_UPDATE->ENABLED

wlan1: AP-ENABLED

Wi-Fi Bootstrapping Success

Script Complete



사용 중



현재 네트워크



SitaraAP

연결됨

사용 가능한 네트워크



KOITT\_01



KOITT\_실습실02



KOITT\_실습실03



KOITT\_안내데스크



KOITT02-5G



SK\_WiFiB09



TONY-STARK



jeitv2



oxy\_egg\_5GHz



네트워크 추가