



SCP 2021 Summer Project

이지훈

1주차_목차



환경구축

QT Creator

Wireshark



Pcap-test

예제

argc, argv

Next week



환경구축 - QT Creator

```
sudo apt-get update
```

```
sudo apt-get install build-essential
```

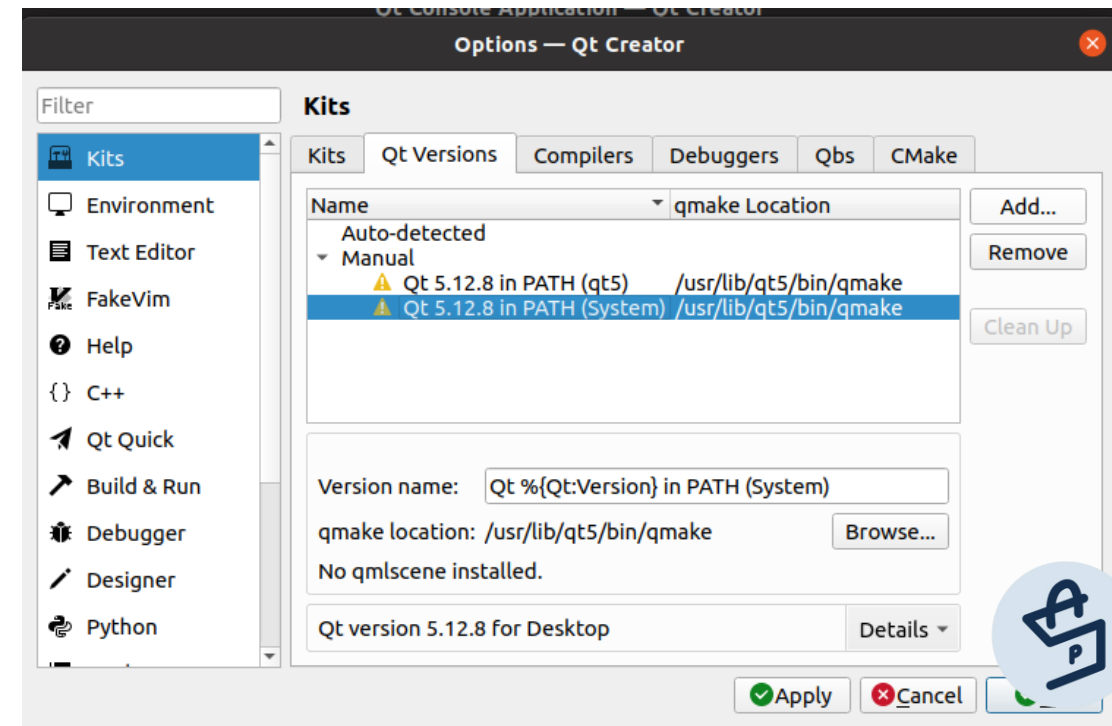
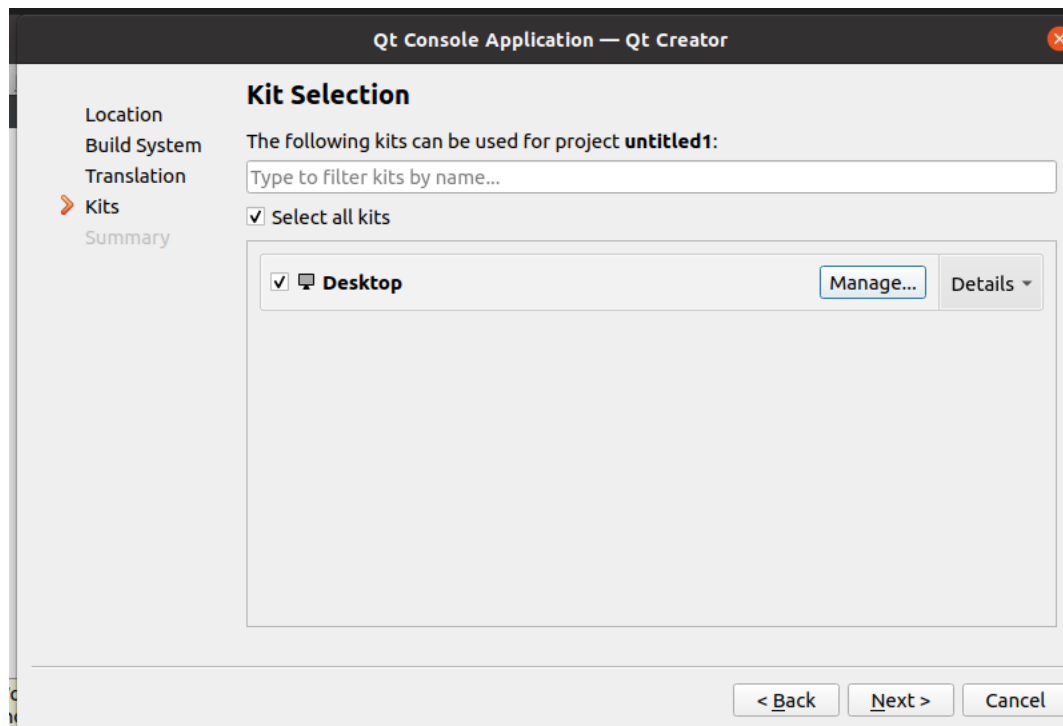
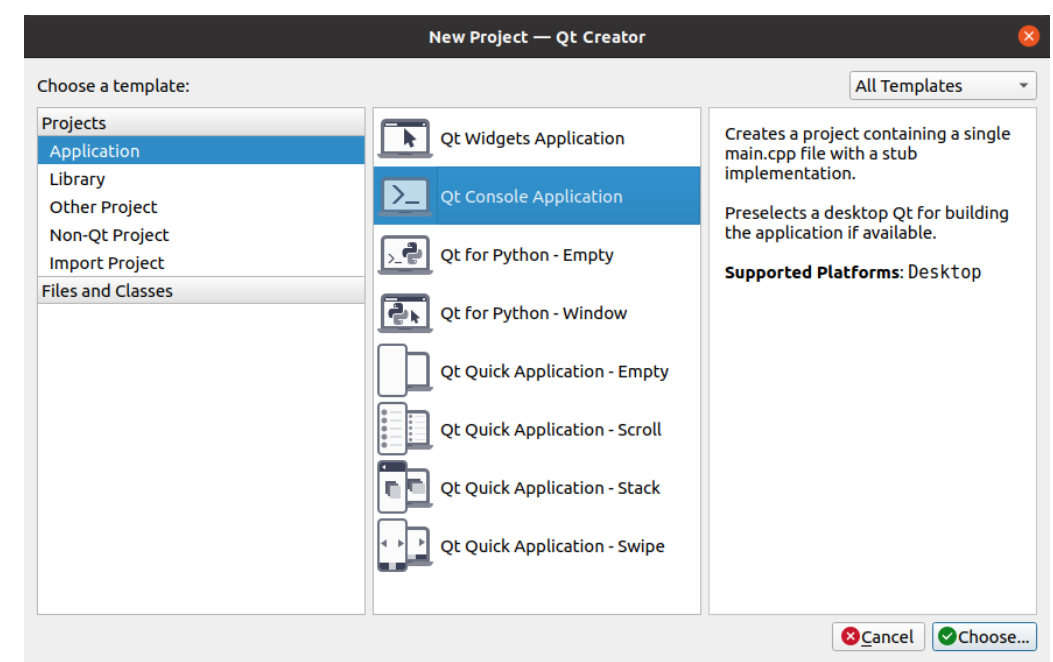
```
sudo apt-get install qtcreator
```

```
sudo apt-get install qt5-default
```

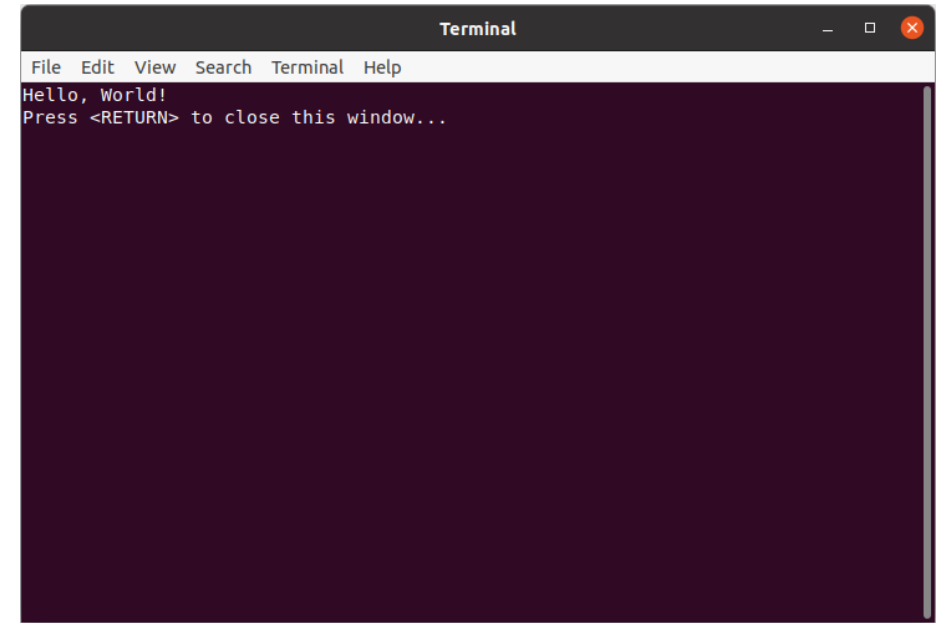
```
sudo apt-get install qt5-doc qt5-doc-html qtbase5-doc-html qtbase5-examples
```



환경구축 -QT Creator

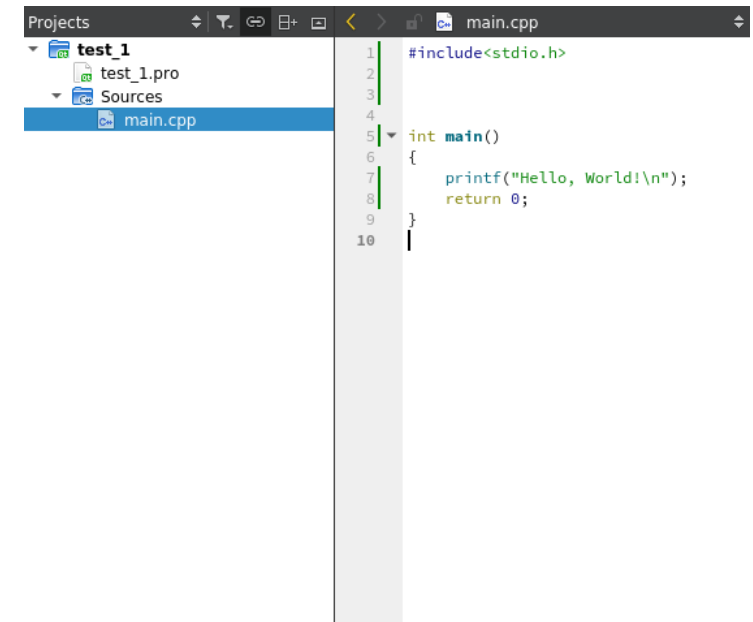


환경구축 -QT Creator



A screenshot of a terminal window titled "Terminal". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal output shows "Hello, World!" followed by "Press <RETURN> to close this window...".

```
File Edit View Search Terminal Help
Hello, World!
Press <RETURN> to close this window...
```



A screenshot of the Qt Creator IDE. The left sidebar shows a project tree with "test_1" expanded, containing "test_1.pro" and "Sources". Under "Sources", "main.cpp" is selected. The main editor area shows the code in "main.cpp" with line numbers 1 through 10. The code includes a header and a main function that prints "Hello, World!".

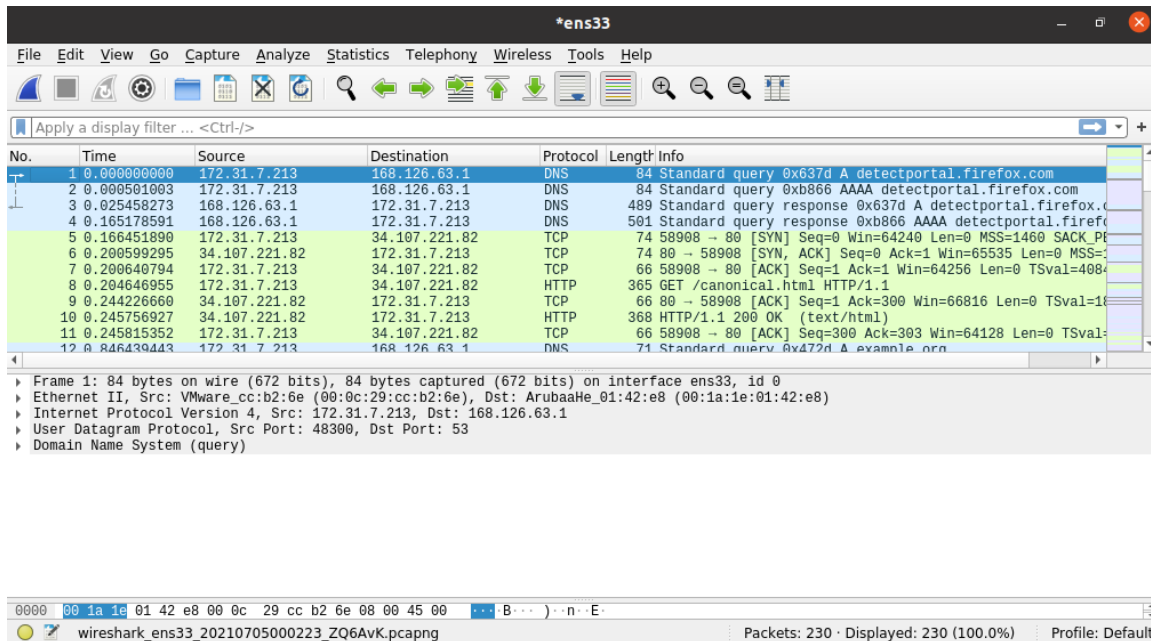
```
Projects
test_1
  test_1.pro
  Sources
    main.cpp
main.cpp
1 #include<stdio.h>
2
3
4
5 int main()
6 {
7     printf("Hello, World!\n");
8     return 0;
9 }
10
```



환경구축 - Wireshark

`sudo apt-get install wireshark`

`sudo wireshark`



Pcap-test

```
jh@ubuntu:~$ ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.31.7.213 netmask 255.255.240.0 broadcast 172.31.15.255
    inet6 fe80::3631:41e0:5494:657 prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:cc:b2:6e txqueuelen 1000 (Ethernet)
    RX packets 8016 bytes 2565823 (2.5 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 1367 bytes 188817 (188.8 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 566 bytes 59729 (59.7 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 566 bytes 59729 (59.7 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

- `sudo apt-get install net-tools`
 - `Ifconfig` -> 인터페이스 확인



Pcap-test - 예제

```
jh@ubuntu:~/build-untitled-Desktop-Debug$ sudo ./untitled ens33
110 bytes captured
110 bytes captured
110 bytes captured
110 bytes captured
110 bytes captured
110 bytes captured
92 bytes captured
92 bytes captured
92 bytes captured
92 bytes captured
110 bytes captured
110 bytes captured
110 bytes captured
^C
```

```
jh@ubuntu:~/build-untitled-Desktop-Debug$
```

출처 : gilgil

- `sudo apt-get install libpcap-dev`
 - Pcap 라이브러리 설치





Pcap-test - argc,argv

- `argc` : main 함수에 전달되는 정보의 개수
- `argv` : main 함수에 전달되는 실질적 정보

```
jh@ubuntu:~/build-untitled-Desktop-Debug$ sudo ./untitled ens33
[sudo] password for jh:
66 bytes captured
argc : 2, argv[0] : ./untitled, argv[1] : ens33
```



Pcap-test - Next week

1. Ethernet Header의 src mac / dst mac
2. IP Header의 src ip / dst ip
3. TCP Header의 src port / dst port
4. Payload Data

```
root@ubuntu:~/build-untitled-Desktop-Debug# ./untitled ens33
66 bytes captured, len : 66, res : 1, 0th packet
type : 8
dst : 70:5d:cc:5f:28:c0
src : 00:0c:29:cc:b2:6e
```

```
▶ Frame 1: 84 bytes on wire (672 bits), 84 bytes captured (672 bits) on interface ens33, id 0
▶ Ethernet II, Src: VMware_cc:b2:6e (00:0c:29:cc:b2:6e), Dst: ArubaaHe_01:42:e8 (00:1a:1e:01:42:e8)
▶ Internet Protocol Version 4, Src: 172.31.7.213, Dst: 168.126.63.1
▶ User Datagram Protocol, Src Port: 48300, Dst Port: 53
▶ Domain Name System (query)
```





Q & A