

오픈소스 소프트웨어 실습

Open-Source Software Lab

#13

실습 담당 조교 연락처

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오픈소스 소프트웨어 활용

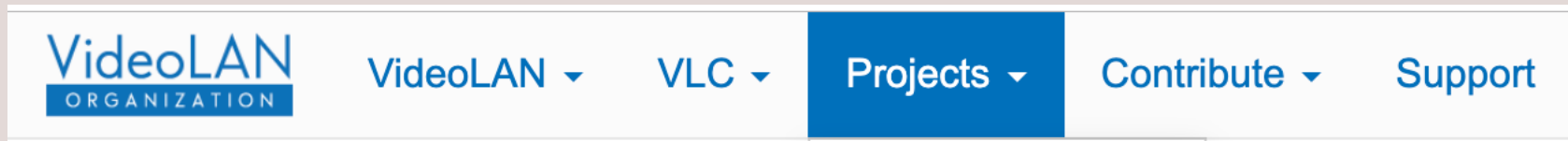
- Music Player 만들기
- VLC Opensource code (python)



<https://www.videolan.org/vlc/index.ko.html>

오픈소스 소프트웨어 활용

VLC Opensource Library (<https://www.videolan.org/projects/>)



FOR DEVELOPERS

libdvdcss

The reference open-source cross-platform library for DVD CSS decryption.

libaacs

A research project for implementing the AACs standard.

libbdplus

A research project for implementing the bdplus standard.

libdvdnv

The reference open-source cross-platform library for DVD menu handling.

libbluray

The reference open-source cross-platform library for Blu-Ray Discs access.

libdvbcsa

A cross-platform library to decrypt and encrypt using the DVB-CSA algorithm.

libdvread

The reference open-source cross-platform library for DVD video images.

libdvbpsi

Parse TS and DVB tables without headaches.

libdca

A cross-platform library to decode Dts Coherent Audio codec.

libVLC

The **Cross-Platform** multimedia framework. Bring VLC power into your app.

biTStream

A cross-platform development library to abstract access to binary structures such as found in MPEG or DVB.

libcloudstorage

A cross-platform development library to abstract access to cloud storage services like Google Drive or Dropbox.

오픈소스 소프트웨어 활용

<https://www.videolan.org/vlc/index.ko.html>

VLC 미디어 재생기의 공식 다운로드

Windows

VLC 다운: **Windows**
VLC 다운: **Windows Store**
VLC 다운: **Windows Phone**

Apple Platforms

VLC 다운: **Mac OS X**
VLC 다운: **iOS**
VLC 다운: **Apple TV**

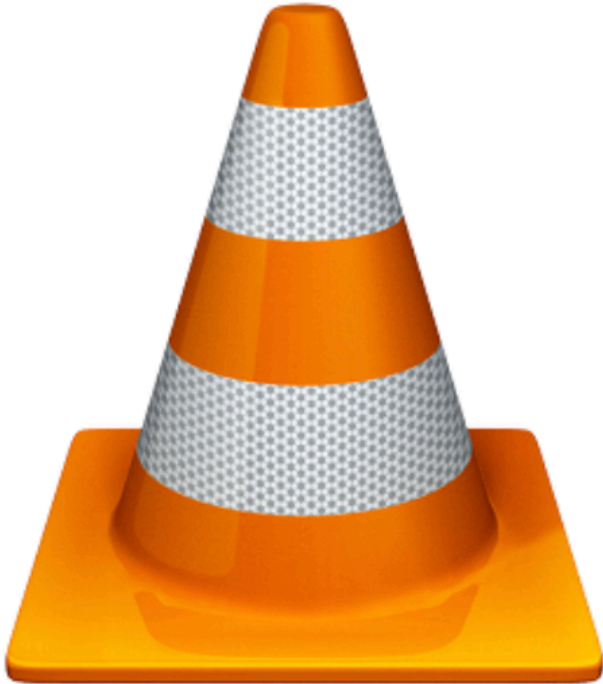
소스

여기에서도 직접 얻을 수 있습니다 **소스 코드**.

GNU/Linux

VLC 다운: **Debian GNU/Linux**
VLC 다운: **Ubuntu**
VLC 다운: **Mint**
VLC 다운: **openSUSE**
VLC 다운: **Gentoo Linux**
VLC 다운: **Fedora**
VLC 다운: **Arch Linux**
VLC 다운: **Slackware Linux**
VLC 다운: **ALT Linux**
VLC 다운: **Red Hat Enterprise Linux**

오픈소스 소프트웨어 활용



VLC media player source code

VLC is a free and open source cross-platform multimedia player and framework that plays most multimedia files as well as DVDs, Audio CDs, VCDs, and various streaming protocols.

Tarballs

Latest VLC source code tarball (3.0.6):

[VLC source code tar.xz source package](#)

Required libraries:

[Contrib libraries tarballs](#)

Older versions

Older versions can be found by browsing [our FTP archive](#)

Git

More information about the Git source code repository is available on the [developer's website](#).

How to compile?

Please have a look at VLC's sub-page on the [developers website](#). There are detailed descriptions for most systems, supported by VLC. If something is not mentioned there, searching the [forum](#) is worth a try.

오픈소스 소프트웨어 활용

Developer zone

Welcome!

Welcome to the new VideoLAN developers web site!

As you might have seen, if you come often enough, this website has been merged with the main VideoLAN website.

Wiki

You will find here basic information about the most famous VideoLAN projects.

A lot of information, like those concerning SVN/git repository, documentation, HowTos have migrated to the [wiki](#).

There is a [Developer's Corner](#) on this wiki where you will find a lot of information.

Getting Involved

We need you, so if you can, - developer or not -, please [help us](#).

Don't forget to see us on [IRC](#) or on the [Mailing-lists](#).

Help

If you need help, you can use a few means to get information:

[Dev Wiki](#)

[Forums](#)

[Mailing-lists](#)

[IRC on irc.videolan.org #videolan](#)

오픈소스 소프트웨어 활용

<https://wiki.videolan.org/>

Welcome to **VideoLAN's Wiki**,

The reference documentation and tips on VideoLAN's projects.



Users

[Documentation](#)
[VLC Support Guide](#)
[Knowledge Base](#)
[FAQ](#)
[Report a bug](#)
[Join the project](#)

Developers

[Compile VLC](#)
[Develop on VLC](#)
[Control, Extend VLC](#)
[Use libVLC SDK](#)
[x264](#)

오픈소스 소프트웨어 활용

Welcome to VLC Developers Corner,

A directory of everything to do with the development of VideoLAN's projects.

Check [VLC's page](#) to get info on VLC.

https://wiki.videolan.org/Developers_Corner

Coding on VLC

- [Get started at coding on VLC](#)
- Get the [Source Code](#) and [Compile VLC](#)
- You might be interested in our [Mini Projects](#) or [Janitorial projects](#)
- Read our [Hacker's Guide](#)
 - [Introduction to VLC's core](#)
 - [How to write a module](#)
 - [How VLC modules load](#)
- [Code documentation](#) 📖
- [Code Conventions](#)

VLC development links

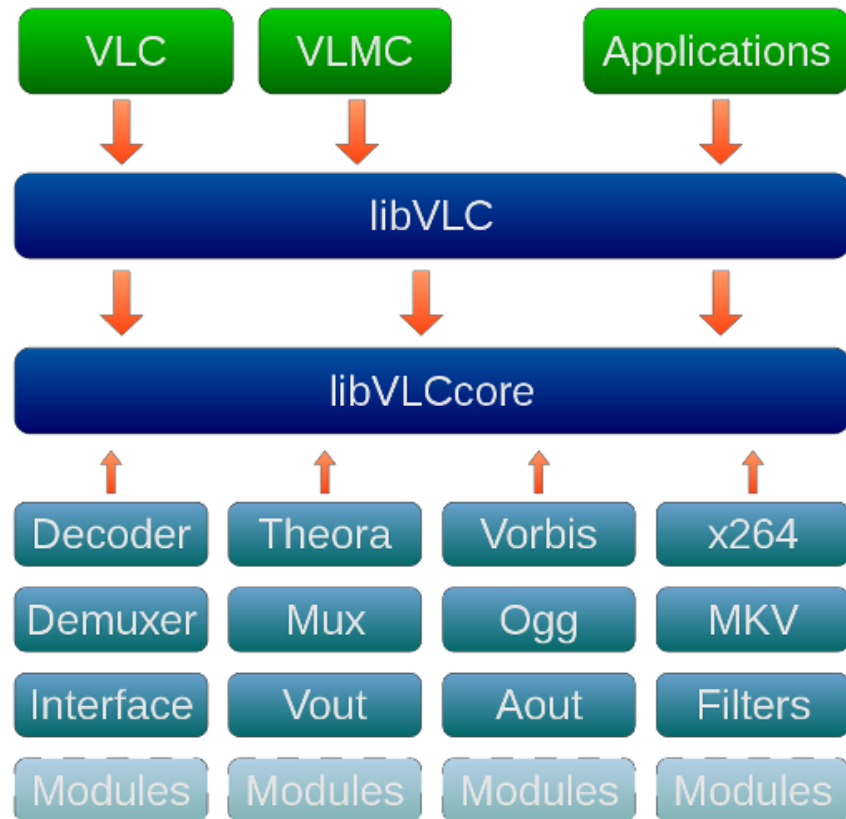
- [Trac](#) 📖 list of bugs
- vlc-devel [mailing list](#) 📖, mailing list.
- [Translation information and stats](#) 📖
- [Open Hub](#) 📖 statistics
- [Jenkins](#) 📖 (Automatic builds)
- [Nightly builds](#)
- Launchpad ([recent bug changes](#) 📖) ([all bugs](#) 📖)
- [code.videolan.org](#) 📖
- [git.videolan.org](#) 📖

오픈소스 소프트웨어 활용

libVLC

libVLC is the core engine and the interface to the multimedia framework on which **VLC media player** is based.

It allows developers to create a wide range of multimedia applications using the **VLC features**.



오픈소스 소프트웨어 활용

- ◆ Black board 에서 python-vlc-master.zip 과 library.zip을 받고 압축해제

Origin of python-vlc open source (<https://github.com/oaubert/python-vlc>)

```
(ftp://192.168.0.116:21) (ID: 1111222333 ,PW: 1111)
```

- ## ◆ 자신의 컴퓨터에 설치되어 있는 파이썬을 확인한다

(윈도우 > cmd 검색 후 python --version 명령)

```
C:\Users\pheni>python --version
Python 3.7.3
```

(mac > terminal 에서 python --version 명령)

```
(base) gaming@phoenix-MacBookPro:~ phenix$ python --version
Python 3.7.3
```

Python 설치

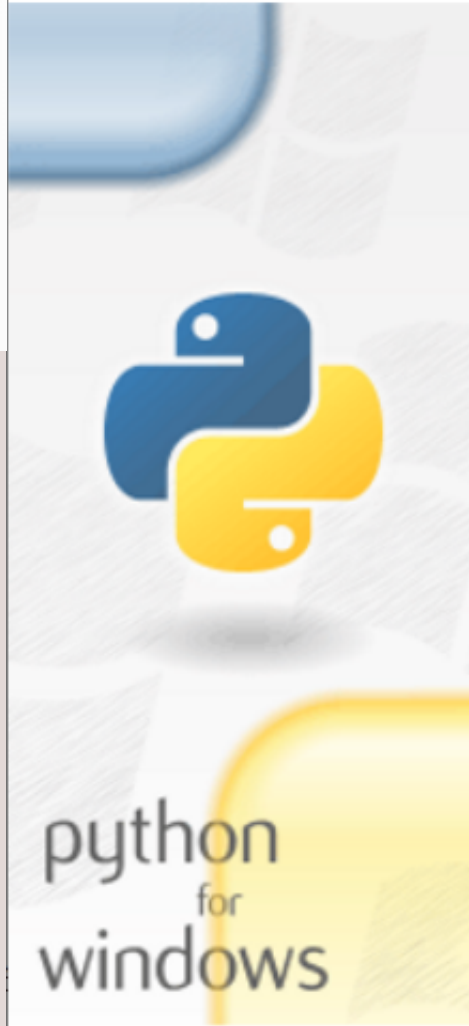
<https://www.python.org/>

Download

Python source code and installers are available for download for all versions!

Latest: Python 3.7.3

Python 3.7.3 (32-bit) Setup



Install Python 3.7.3 (32-bit)

Select Install Now to install Python with default settings, or choose Customize to enable or disable features.



Install Now

C:\Users\pheni\AppData\Local\Programs\Python\Python37-32

Includes IDLE, pip and documentation
Creates shortcuts and file associations



Customize installation

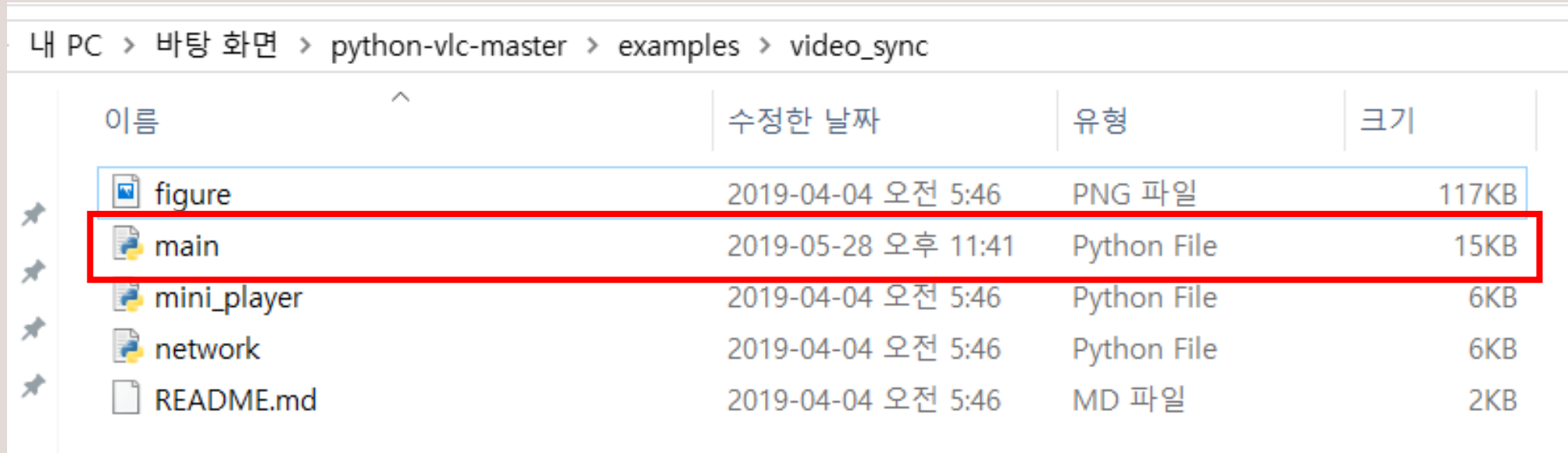
Choose location and features

- ☒ Install launcher for all users (recommended)
- ☒ Add Python 3.7 to PATH

Cancel

오픈소스 소프트웨어 활용

◆ Open python-vlc-master/examples/video_sync/main.py



내 PC > 바탕 화면 > python-vlc-master > examples > video_sync

이름	수정한 날짜	유형	크기
figure	2019-04-04 오전 5:46	PNG 파일	117KB
main	2019-05-28 오후 11:41	Python File	15KB
mini_player	2019-04-04 오전 5:46	Python File	6KB
network	2019-04-04 오전 5:46	Python File	6KB
README.md	2019-04-04 오전 5:46	MD 파일	2KB

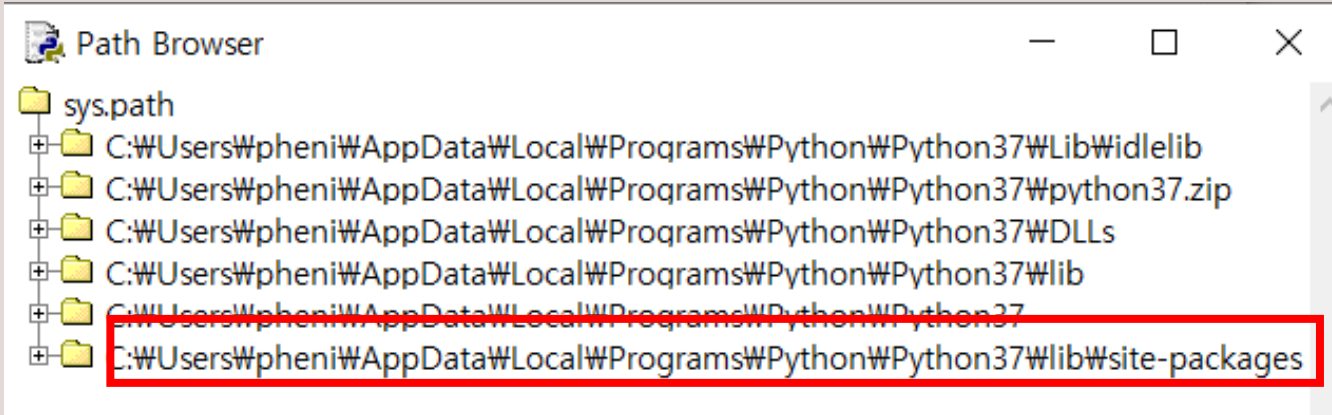
(윈도우 > IDLE 검색 후 실행 -> file -> open -> main.py)

(mac > PyCharm 실행 후 python-vlc-master 폴더를 프로젝트로 지정)

◆ Video_sync 폴더에 mp3파일 복사

오픈소스 소프트웨어 활용

◆ Python 환경설정



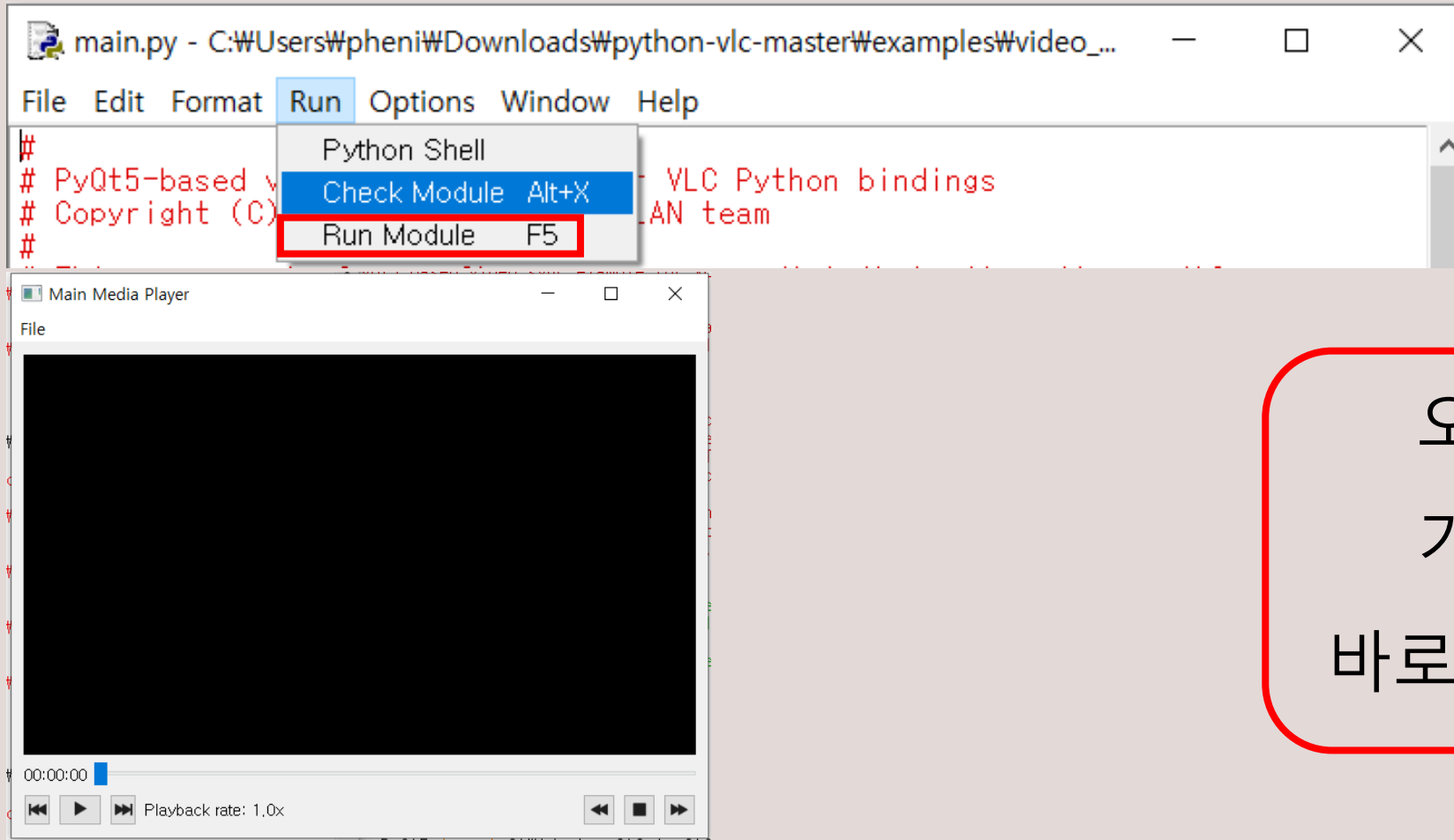
(윈도우 > IDLE -> file -> path browser)

- ◆ Browser에서 보이는 Site-packages 폴더로 이동하여 library.zip에서 압축 풀 파일들 복사(mp3 파일 제외)

오픈소스 소프트웨어 활용

◆ 오픈소스 실행

실행한 main.py 동작시켜보기



오픈소스는
기본적으로
바로 동작이 가능

오픈소스 소프트웨어 활용

◆ 오픈소스 수정

```
def open_file(self):  
    """Open a media file in a MediaPlayer  
    """  
    dialog_txt = "Choose Media File"  
    file = 'Desmeon - Hellcat [NCS Release].mp3'  
    '''filename = QtWidgets.QFileDialog.getOpenFileName(self, dialog_txt, os.path.expanduser('~'))  
    if not filename[0]:  
        return  
  
    # getOpenFileName returns a tuple, so use only the actual file name  
    self.media = self.instance.media_new(filename[0])'''  
    self.media = self.instance.media_new(file)  
    # Put the media in the media player  
    self.mediaplayer.set_media(self.media)
```

파일 경로 추가 > file = "mp3 파일 이름"

기존 코드 주석화 (python은 """세개로 감싸면 됨)

새로운 media 추가 > self.media = self.instance.media_new(file)

오픈소스 소프트웨어 활용

◆ 오픈소스 수정

```
def main():  
    """Entry point for our simple vlc player  
    """  
    app = QtWidgets.QApplication(sys.argv)  
    player = Player()  
  
    = Server("localhost", 10000, player.data_queue)  
    player.open_file()  
    player.show()  
    player.resize(640, 480)  
    sys.exit(app.exec_())  
    player.play()
```

수정한 def 실행코드 추가 > player.open_file()

저장 후 동작

오픈소스 소프트웨어 활용

◆ 과제 ◆

새로 작성한 main.py를 지난주 제작한 자신의 github에 올리고 확인
(메일 제출 x)



끝