

# Lecture #18. 게임 패키징

2D 게임 프로그래밍

이대현 교수

# 학습 내용

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- PyInstaller 를 이용한 실행 파일 building
- Installer의 제작


















# mygame.py가 실행되기 위해 필요로 하는 것들... (1)

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- 여러분이 작성한 000.py
- 리소스: image, json, font 파일 등등

# mygame.py가 실행되기 위해 필요로 하는 것들...(2)

- Pico2d 데이터 파일
- SDL 라이브러리 DLL

 libFLAC-8	dll
 libfreetype-6	dll
 libjpeg-9	dll
 libmikmod-2	dll
 libmodplug-1	dll
 libogg-0	dll
 libpng16-16	dll
 libtiff-5	dll
 libvorbis-0	dll
 libvorbisfile-3	dll
 libwebp-4	dll
 SDL2	dll
 SDL2_image	dll
 SDL2_mixer	dll
 SDL2_ttf	dll
 smpeg2	dll
 zlib1	dll

## pico2d update( 콘솔창에서 )

```
pip uninstall pico2d  
pip install pico2d
```

시작

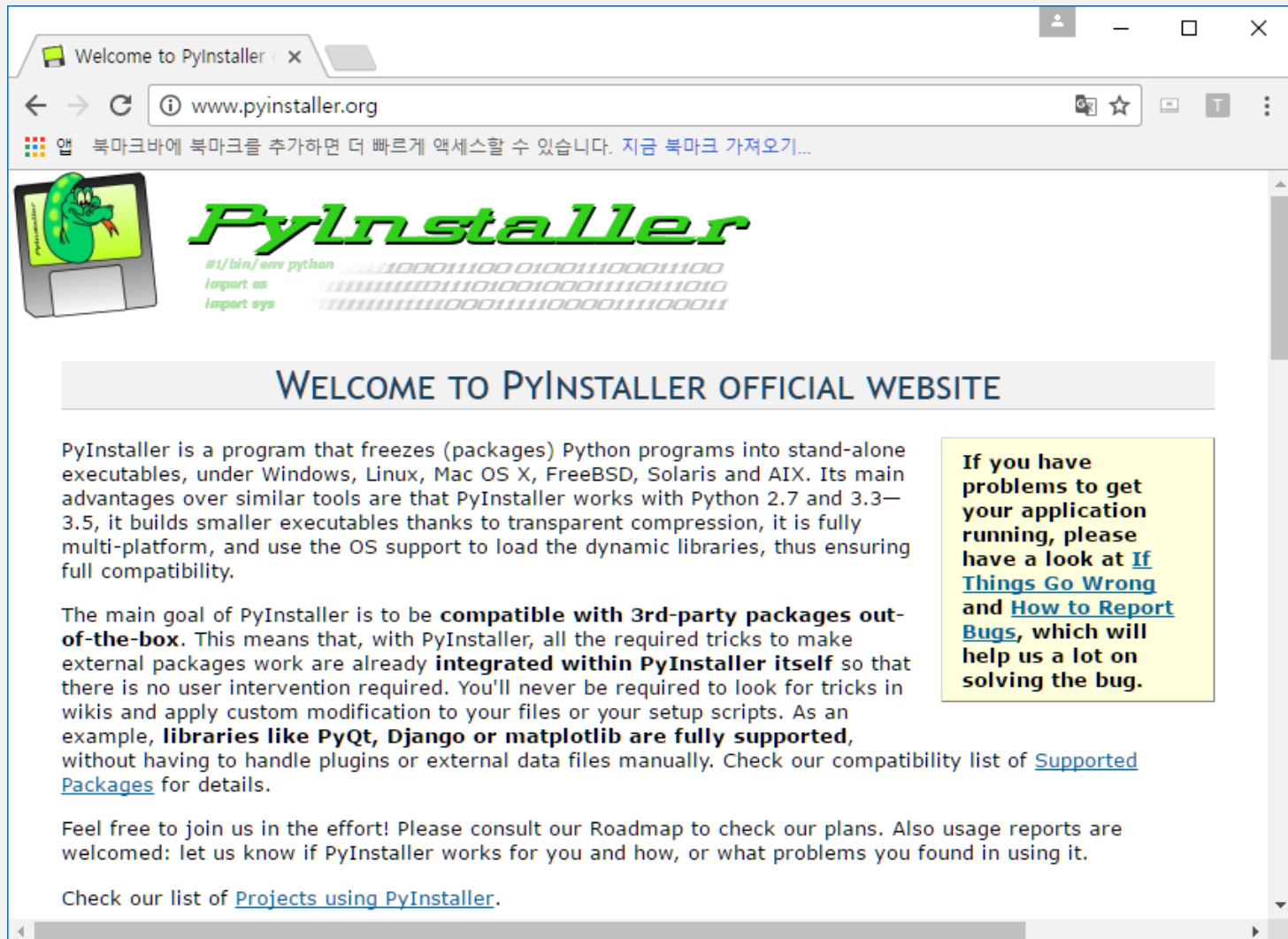


mygame.py 를

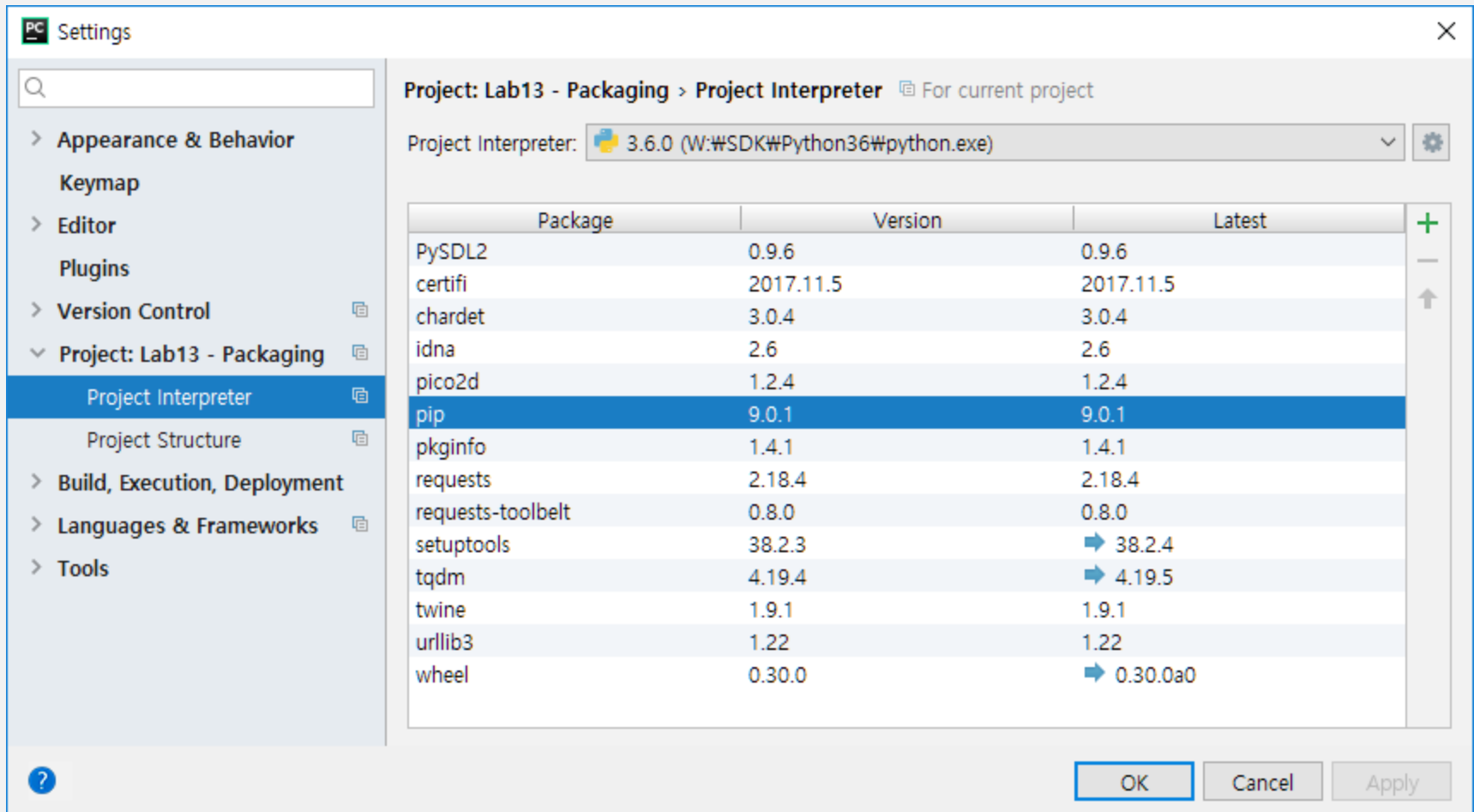
Mygame.exe 로 변환

# PyInstaller

■ <http://www.pyinstaller.org/>




# PyCharm: pip 설치 확인



Settings

Project: Lab13 - Packaging > Project Interpreter For current project

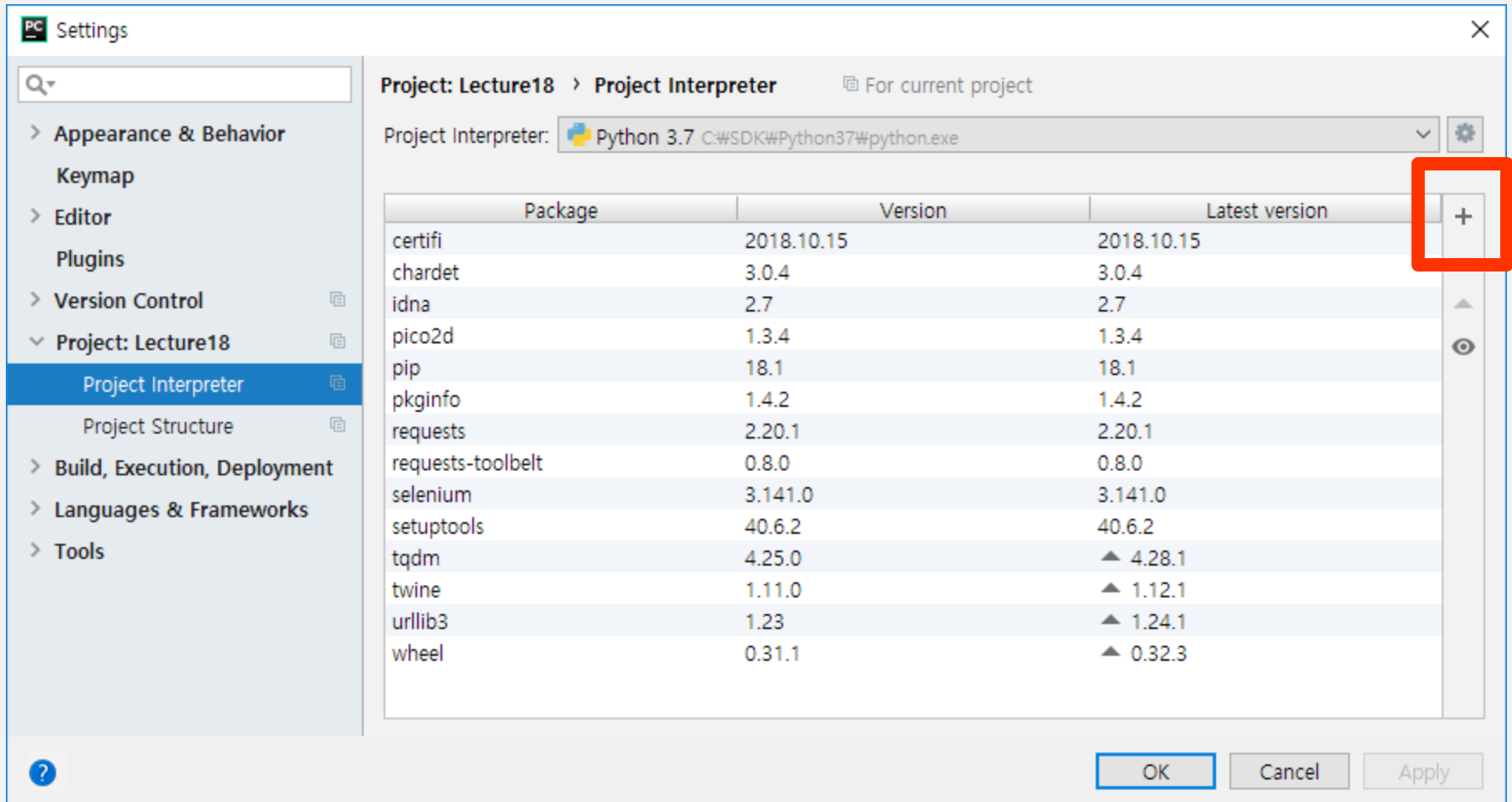
Project Interpreter:  3.6.0 (W:\SDK\Python36\python.exe)

Package	Version	Latest
PySDL2	0.9.6	0.9.6
certifi	2017.11.5	2017.11.5
chardet	3.0.4	3.0.4
idna	2.6	2.6
pico2d	1.2.4	1.2.4
<b>pip</b>	<b>9.0.1</b>	<b>9.0.1</b>
pkginfo	1.4.1	1.4.1
requests	2.18.4	2.18.4
requests-toolbelt	0.8.0	0.8.0
setuptools	38.2.3	➡ 38.2.4
tqdm	4.19.4	➡ 4.19.5
twine	1.9.1	1.9.1
urllib3	1.22	1.22
wheel	0.30.0	➡ 0.30.0a0

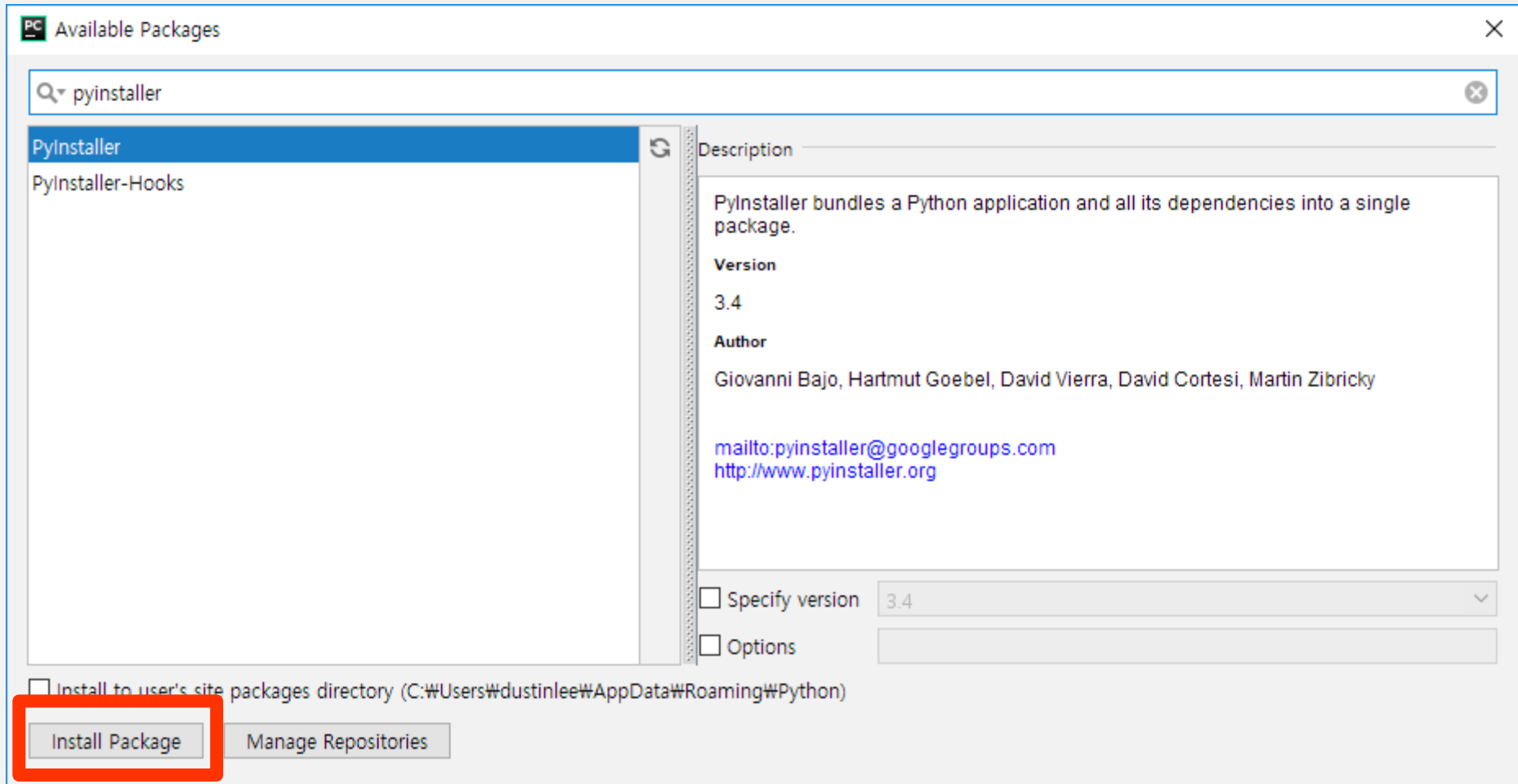
OK Cancel Apply



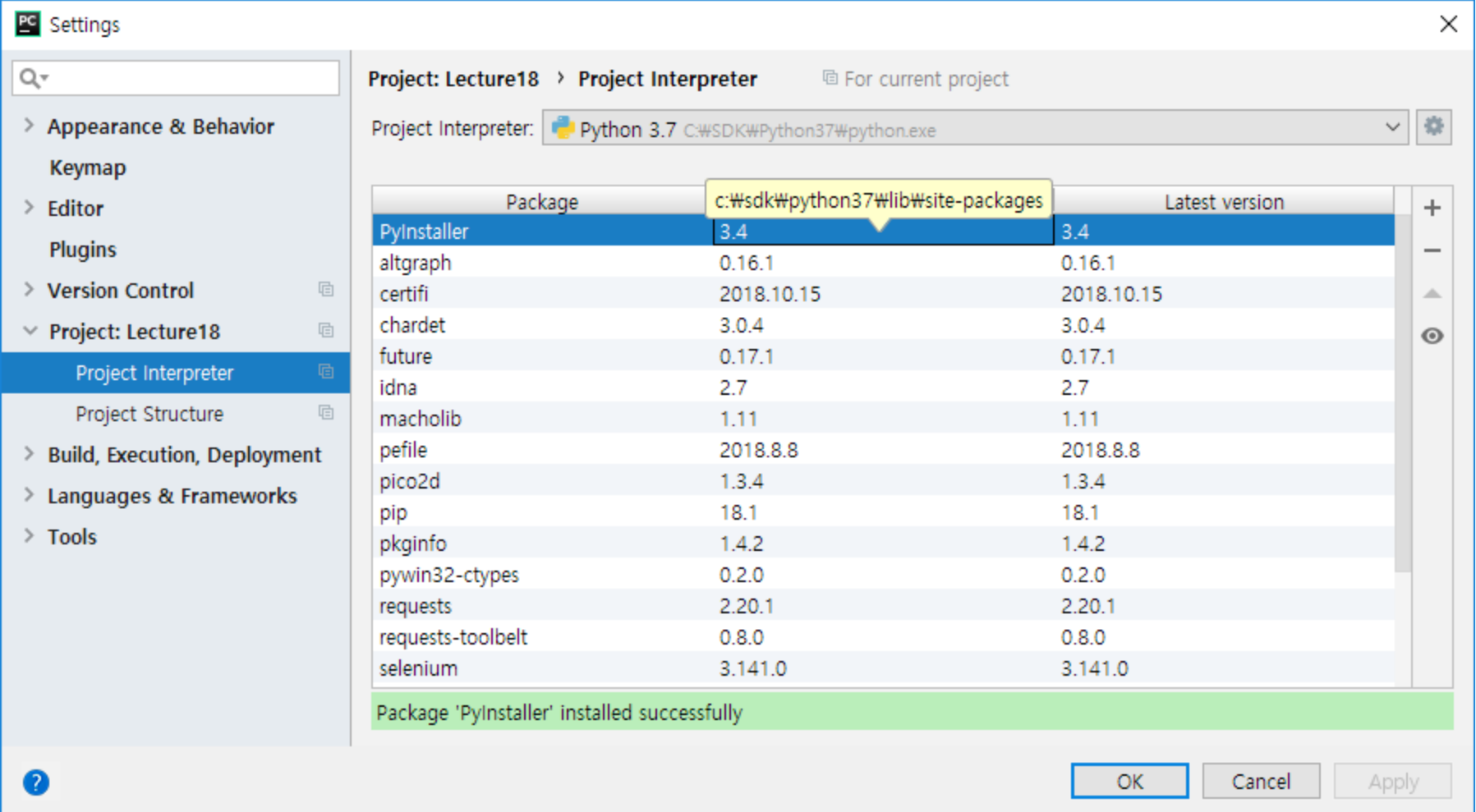
# PyCharm: pip 설치 및 version upgrade



# PyCharm: PyInstaller 설치



# PyCharm: PyInstaller 설치 확인



Settings

Project: Lecture18 > Project Interpreter For current project

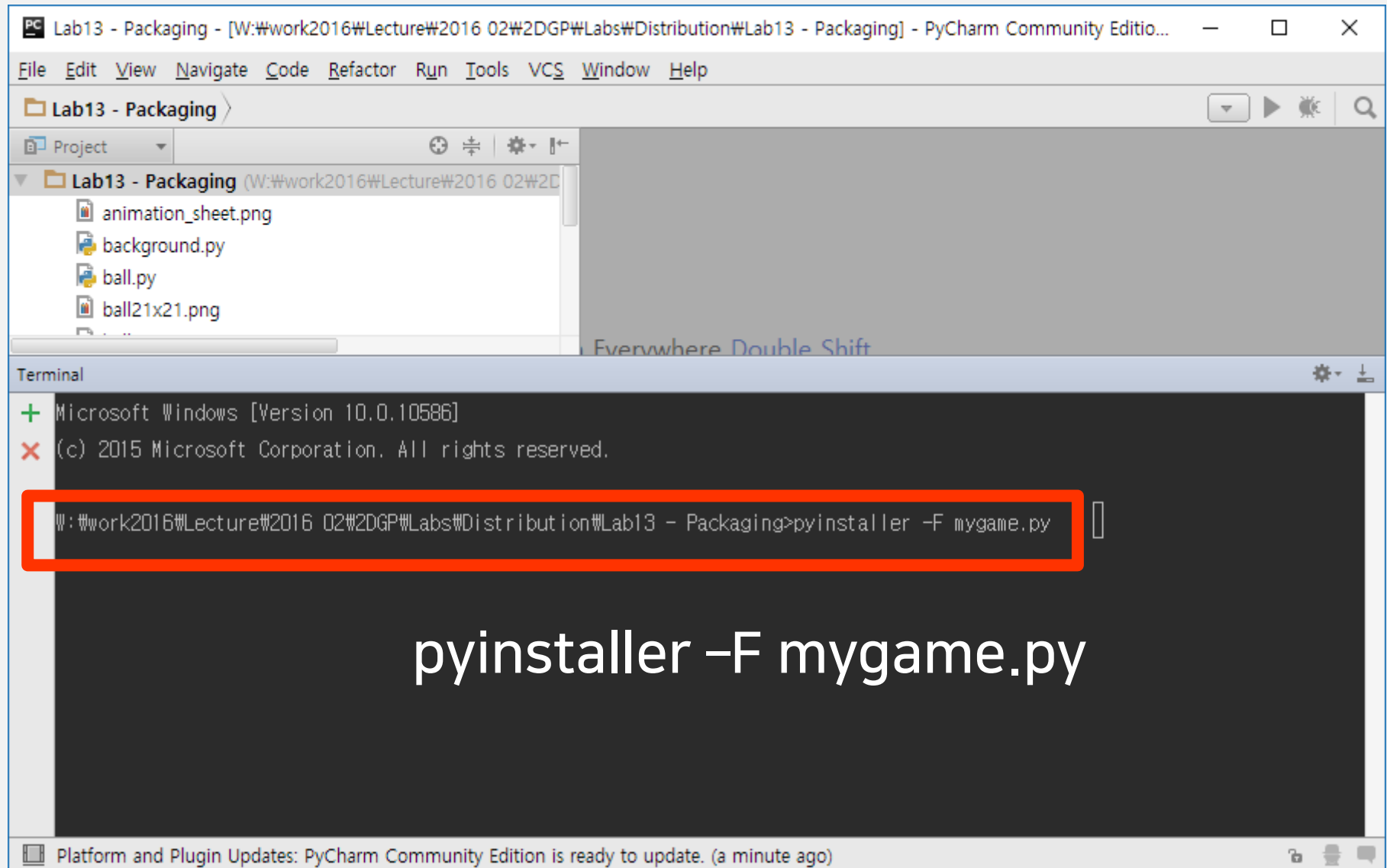
Project Interpreter: Python 3.7 C:\SDK\Python37\python.exe

Package	c:\sdk\python37\lib\site-packages	Latest version
PyInstaller	3.4	3.4
altgraph	0.16.1	0.16.1
certifi	2018.10.15	2018.10.15
chardet	3.0.4	3.0.4
future	0.17.1	0.17.1
idna	2.7	2.7
macholib	1.11	1.11
pefile	2018.8.8	2018.8.8
pico2d	1.3.4	1.3.4
pip	18.1	18.1
pkginfo	1.4.2	1.4.2
pywin32-ctypes	0.2.0	0.2.0
requests	2.20.1	2.20.1
requests-toolbelt	0.8.0	0.8.0
selenium	3.141.0	3.141.0

Package 'PyInstaller' installed successfully

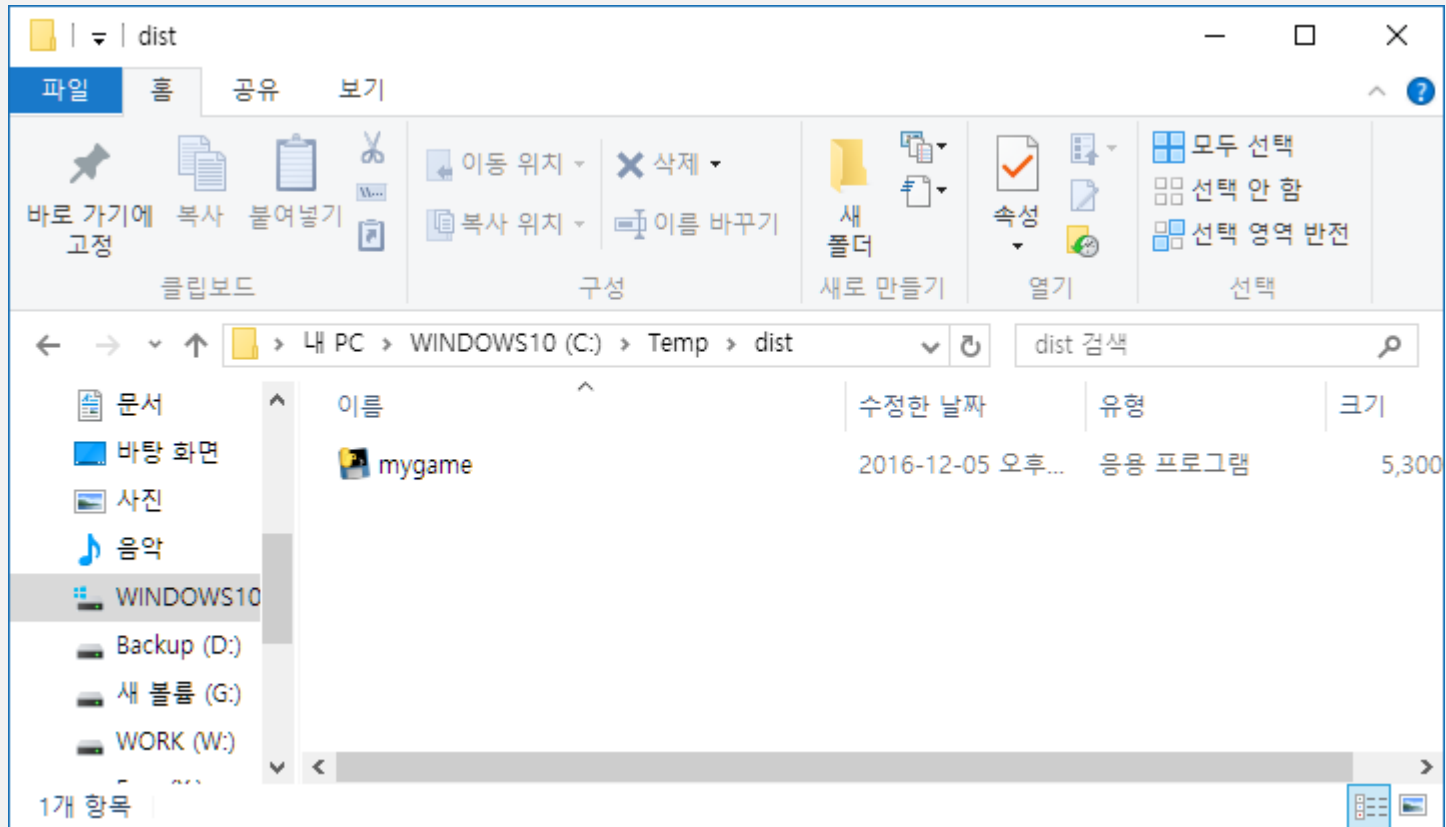
OK Cancel Apply

# View → Tool Windows → Terminal 을 열고,



pyinstaller -F mygame.py

# dist 폴더에 만들어진, mygame.exe



여기서 그냥 단독 실행하면, 제대로 실행이 되지 않음.  
Mygame.exe가 필요로 하는 외부 파일을 찾을 수 없기 때문.

# 리소스 및 필요 DLL 을 dist 폴더로 복사해야 함.

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## ■ Pico2d 라이브러리 파일

- /pico2d 폴더에 담겨 있음.

## ■ 게임에 따라 필요한 리소스 파일

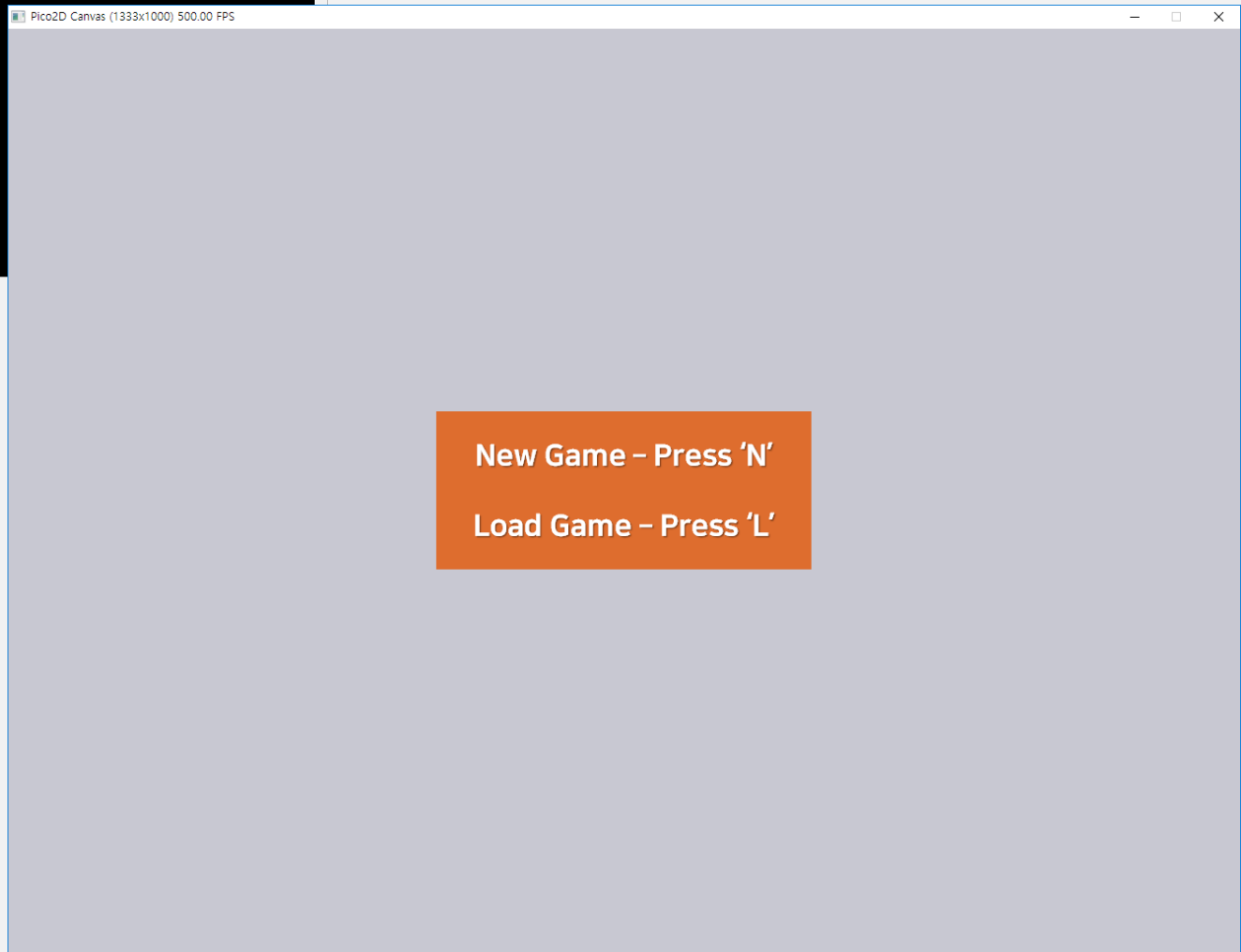
- 현재 실습 파일의 경우,
  - 폰트 - ENCR10B.TTF
  - 메뉴 이미지 - menu.png
  - 애니메이션 스프라이트 이미지 - animation\_sheet.png
  - 좀비 데이터 JSON 파일 - zombie\_data.json

# dist 폴더: 여기서 mygame.exe 을 클릭하면 실행!

Work (W:) > workCoding > 2DGP-Master > Labs > Lecture18 > dist >				
<input type="checkbox"/> 이름	수정한 날짜	유형	크기	
 pico2d	2018-11-27 오전...	파일 폴더		
 zombiefiles	2018-11-27 오전...	파일 폴더		
 animation_sheet.png	2018-10-23 오전...	알씨 PNG 파일	64KB	
 ENCR10B.TTF	2018-09-15 오후...	트루타입 글꼴 파일	43KB	
 menu.png	2018-11-25 오후...	알씨 PNG 파일	11KB	
 mygame.exe	2018-11-27 오전...	응용 프로그램	5,815KB	
 zombie_data.json	2018-11-26 오전...	JSON File	1KB	

# 실행 결과

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# 콘솔창을 없애려면?

---

`Pyinstaller -F --windowed mygame.py`

# 파이썬 코드 최적화

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```
python -OO -m Pyinstaller -F mygame.py
```

시스템



Installer를 이용한  
설치 파일 제작

# Inno Setup 의 설치

innosetup - Google Search x Inno Setup Downloads x +

← → ↻ ⓘ 주의 요함 | www.jrsoftware.org/isdl.php ☆ | 대한

5.5: First version used by [Microsoft Visual Studio Code](#) and [Embarcadero Delphi](#).

- 5.5: Support for Restart Manager and new Windows 8 features
- 5.5: Support for Windows 8.1 and Windows 10
- 5.5: Support for dual signing (SHA1 & SHA256)
- 5.6: Improved support for high DPI systems

[What's new in this version?](#)

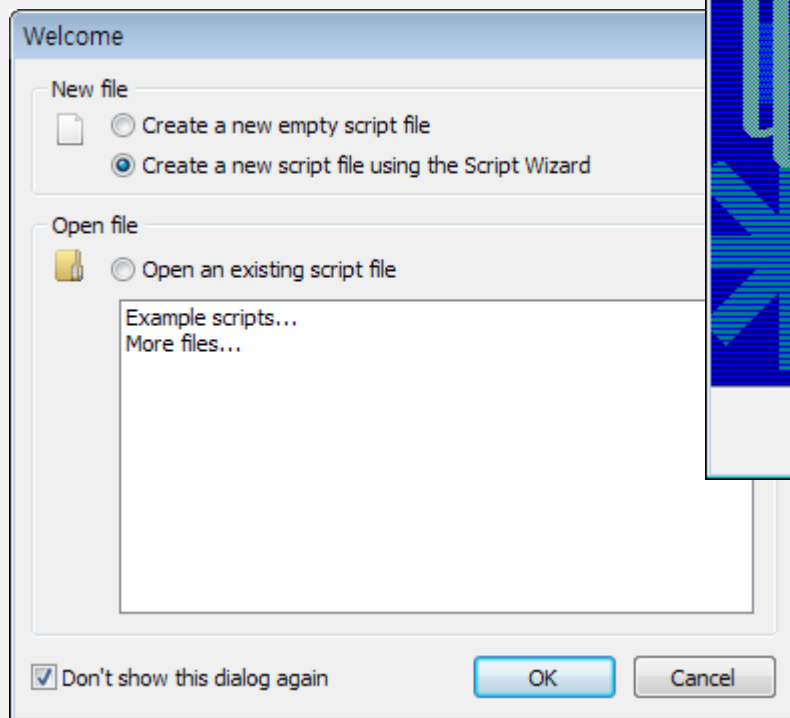
Filename	Download Sites	DLs	Date	Description
innosetup-5.6.1.exe	<a href="#">Random site</a> <a href="#">US</a>	440,423	2018-06-14	Inno Setup <b>self-installing package</b> .
innosetup-5.6.1-unicode.exe	<a href="#">Random site</a> <a href="#">US</a> <a href="#">Netherlands</a>	80,951	2018-06-14	Unicode Inno Setup <b>self-installing package</b> .

[Third-Party Files](#) page for some useful tools, and translations of Setup into other languages.

## QuickStart Pack

The Inno Setup QuickStart Pack includes Inno Setup itself and additionally includes an option to install the Inno Script Studio script editor. This script editor is not official and is not required for general usage, but makes Inno Setup easier to use. See the [Third-Party Files](#) page for more information.

# 실행: File->New



Inno Setup Script Wizard

**Application Information**

Please specify some basic information about your application.

**Application name:**

MyGame

**Application version:**

1.5

Application publisher:

KPU

Application website:

http://www.kpu.ac.kr

**bold = required**

< Back   Next >   Cancel

Inno Setup Script Wizard

**Application Folder**

Please specify folder information about your application.

**Application destination base folder:**

Program Files folder

**Application folder name:**

MyGame

☒ Allow user to change the application folder

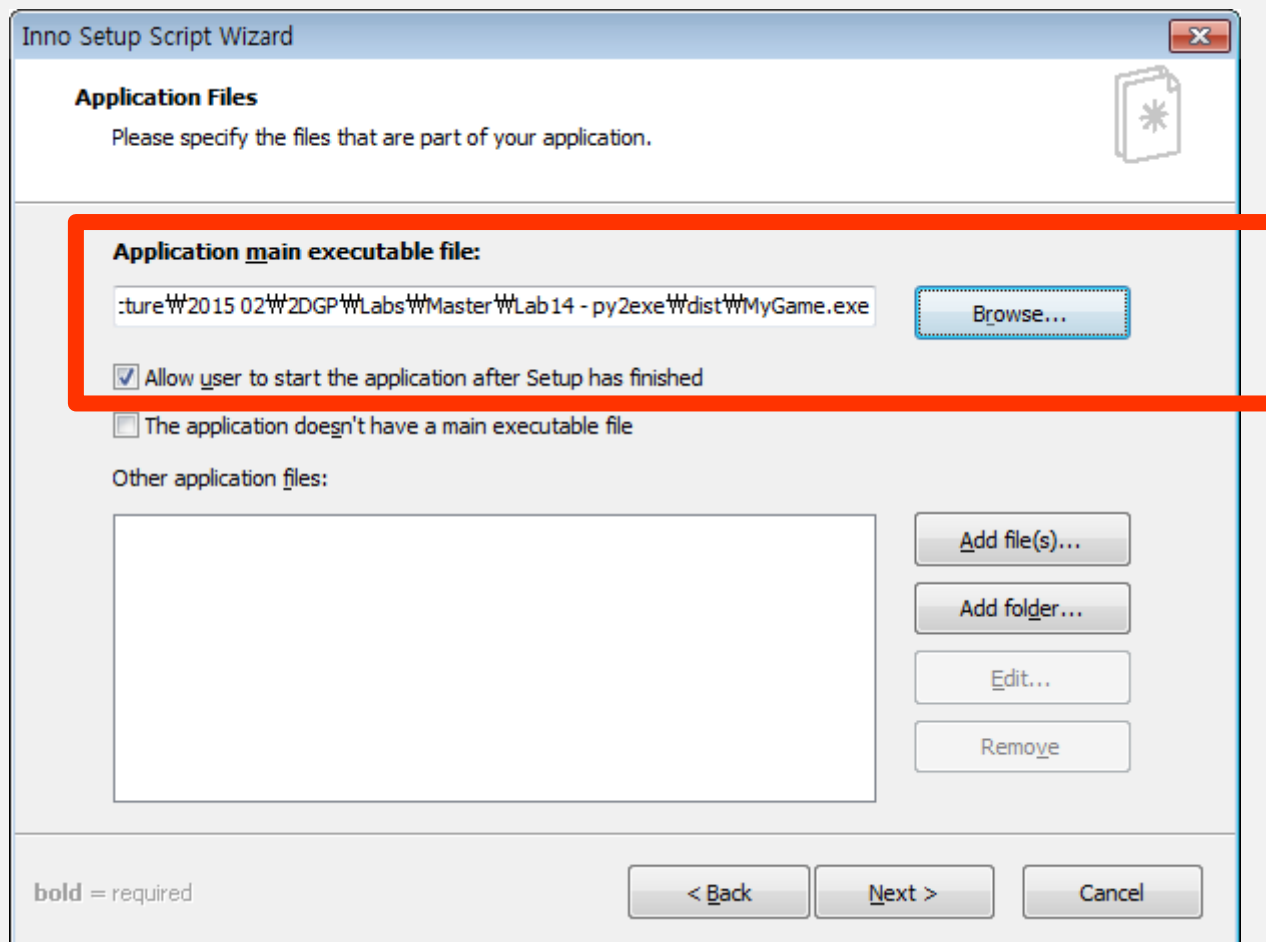
Other:

☐ The application doesn't need a folder

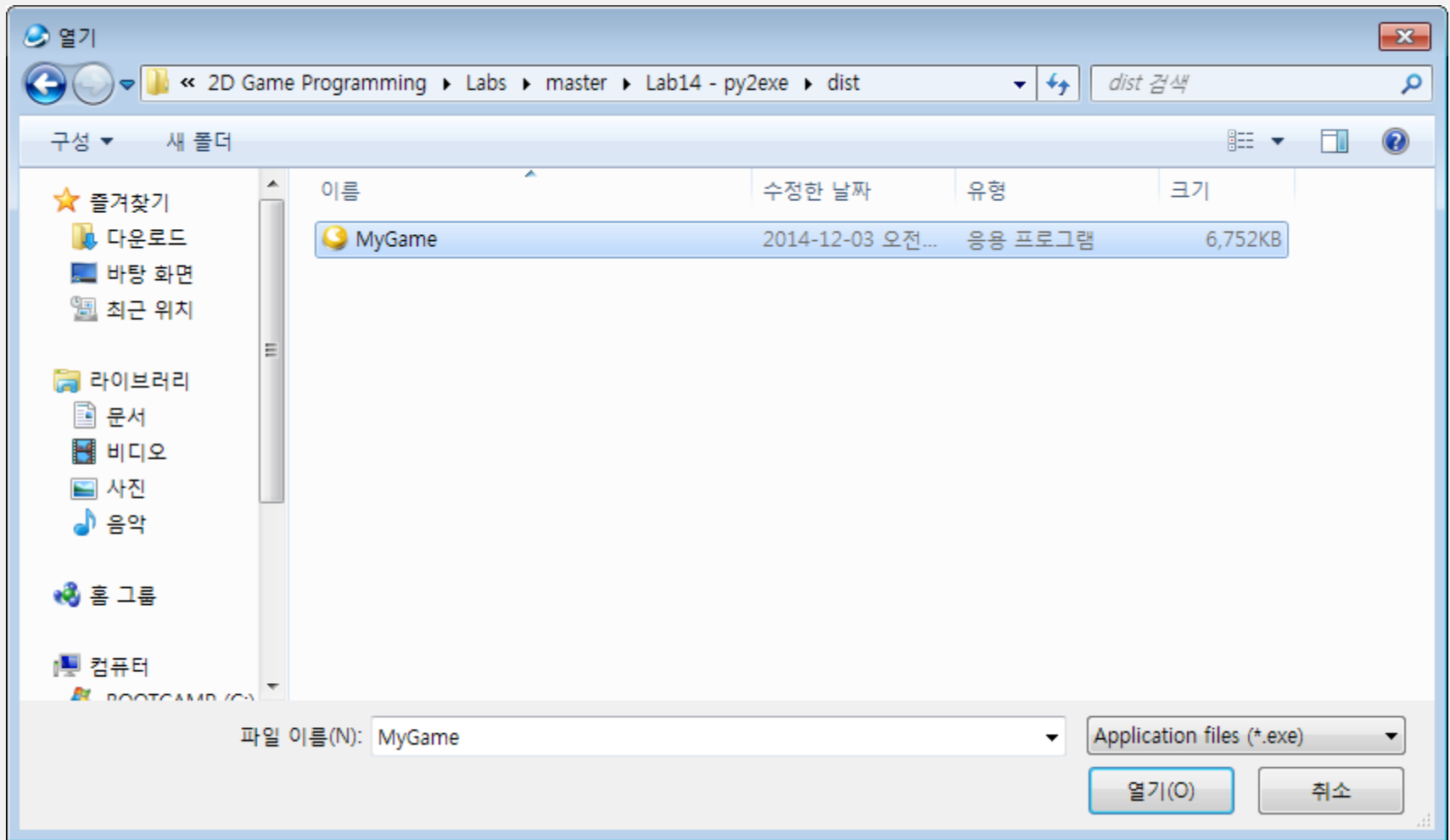
**bold = required**

< Back Next > Cancel

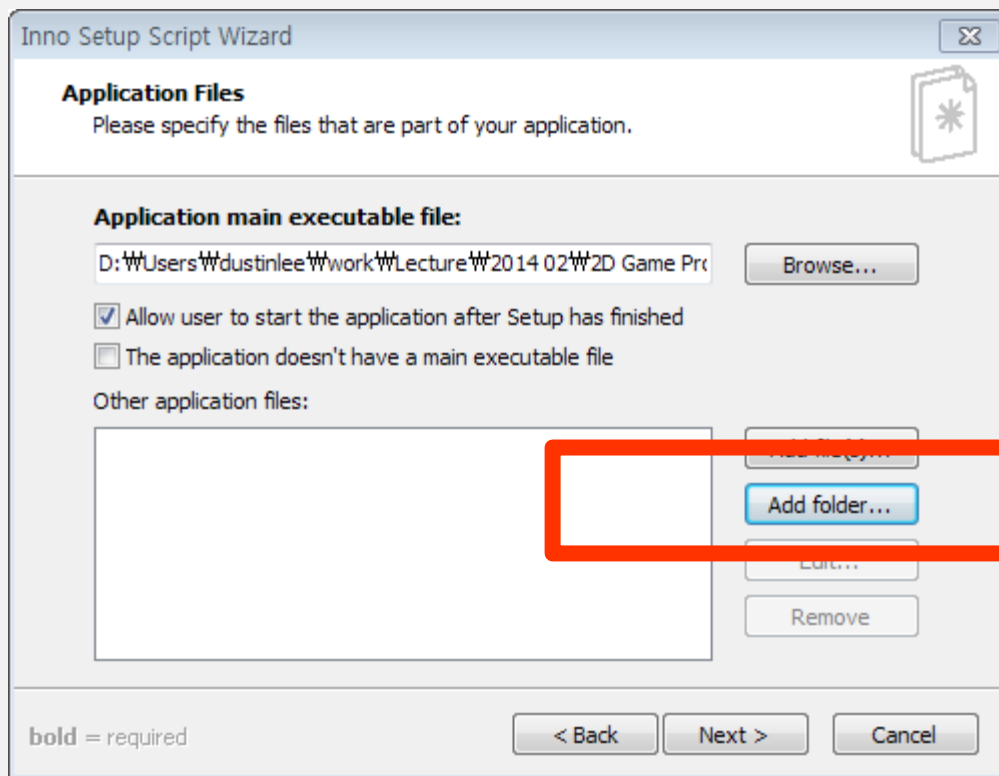
# exe 파일의 추가

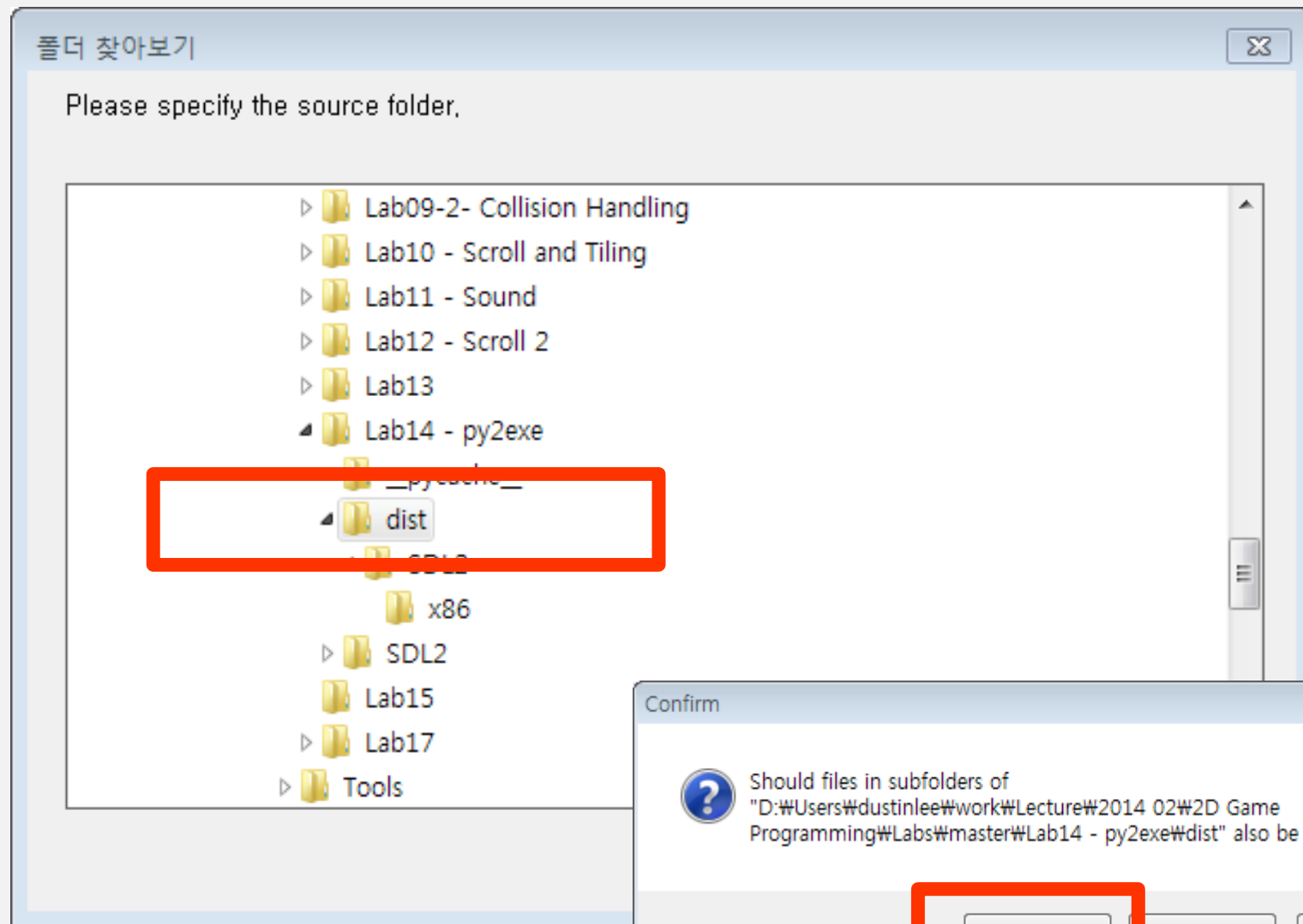







# 파일 폴더의 추가





Inno Setup Script Wizard

✕



**Application Shortcuts**  
Please specify which shortcuts should be created for your application.

☒ Create a shortcut to the main executable in the common Start Menu Program Application Start Menu folder name:  

MyGame

☒ Allow user to change the Start Menu folder name

☐ Allow user to disable Start Menu folder creation

☐ Create an Internet shortcut in the Start Menu folder

☐ Create an Uninstall shortcut in the Start Menu folder

Other shortcuts to the main executable:

☒ Allow user to create a desktop shortcut

☐ Allow user to create a Quick Launch shortcut on older versions of Windows

**bold** = required

< Back

Next >


Cancel

Inno Setup Script Wizard

✕

**Application Documentation**

Please specify which documentation files should be shown by Setup during installation.



License file:

Browse...

Information file shown before installation:

Browse...

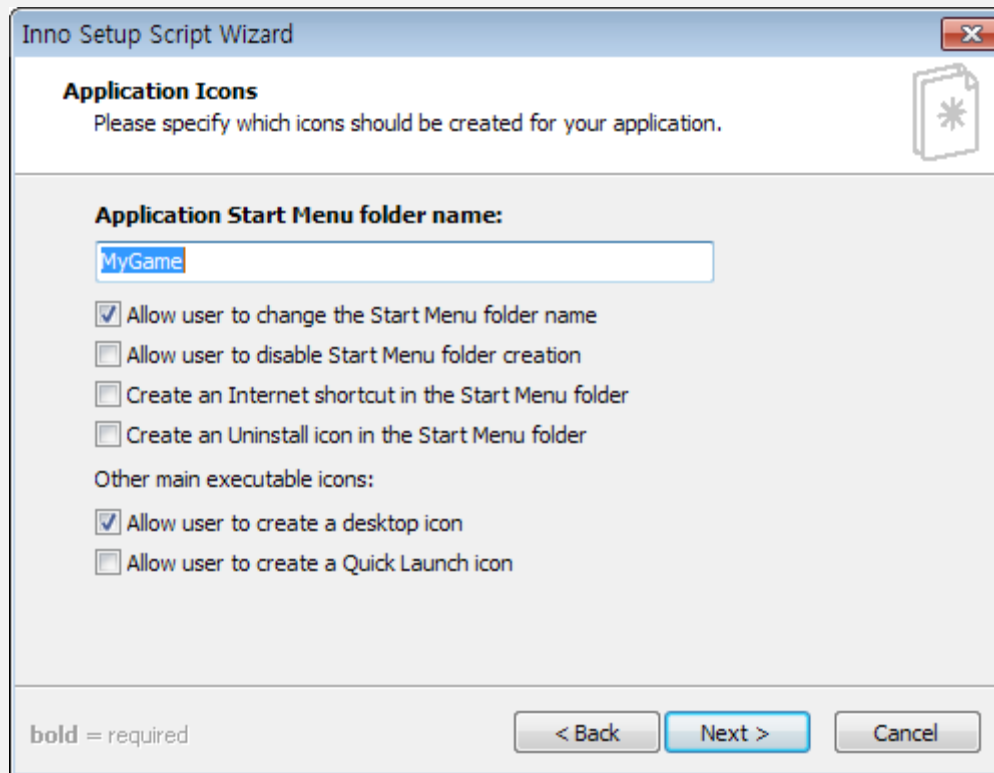
Information file shown after installation:

Browse...

< Back


Next >

Cancel



Inno Setup Script Wizard

✕



**Compiler Settings**

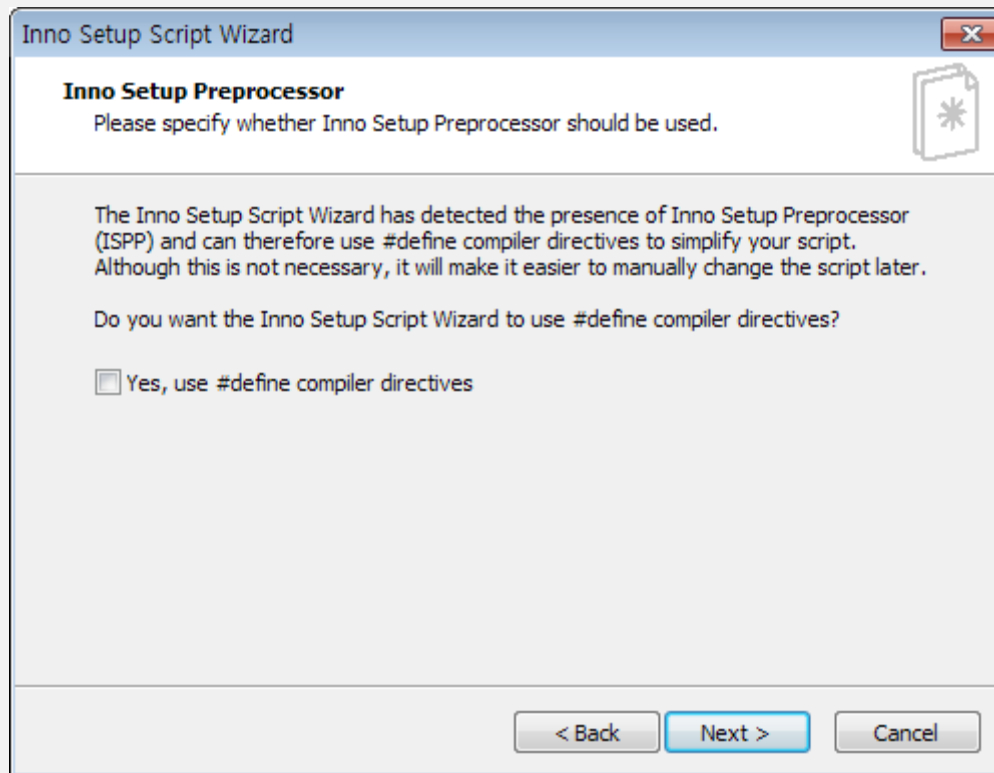
Please specify some basic compiler settings.

Custom compiler output folder:

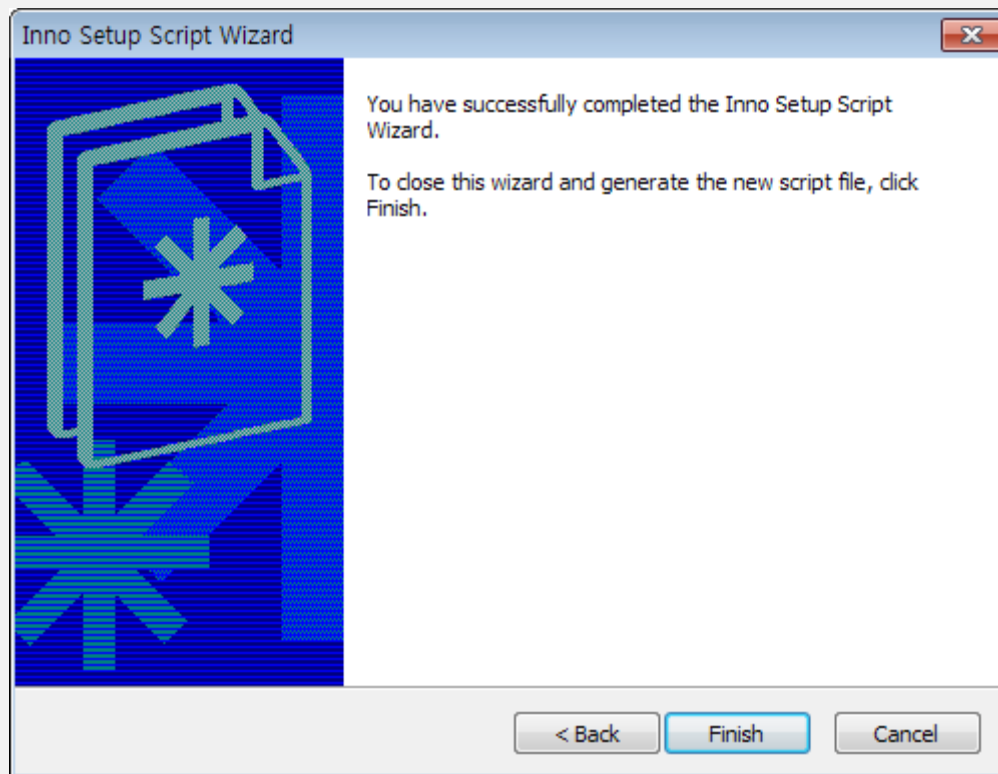
Compiler output base file name:

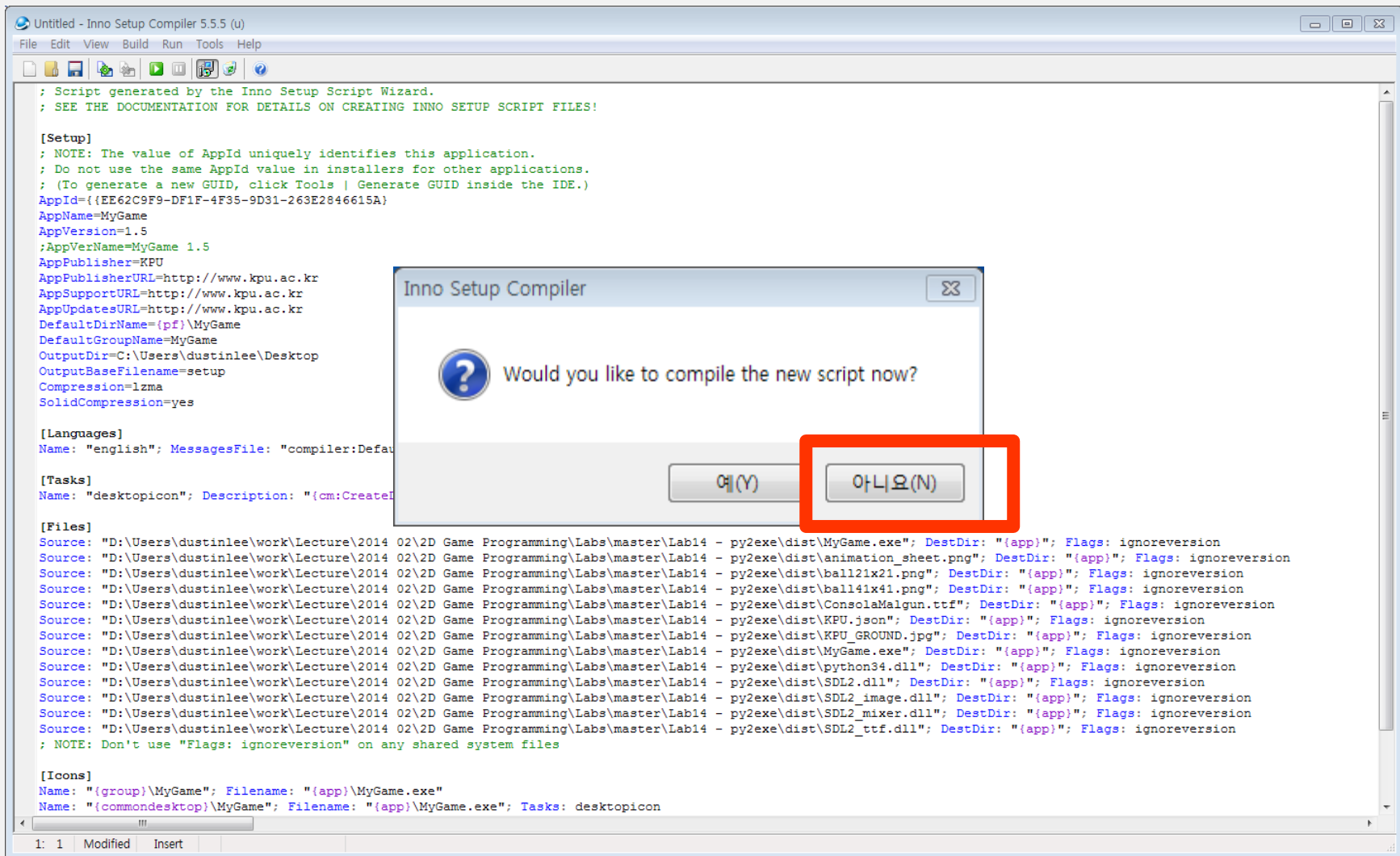
Custom Setup icon file:

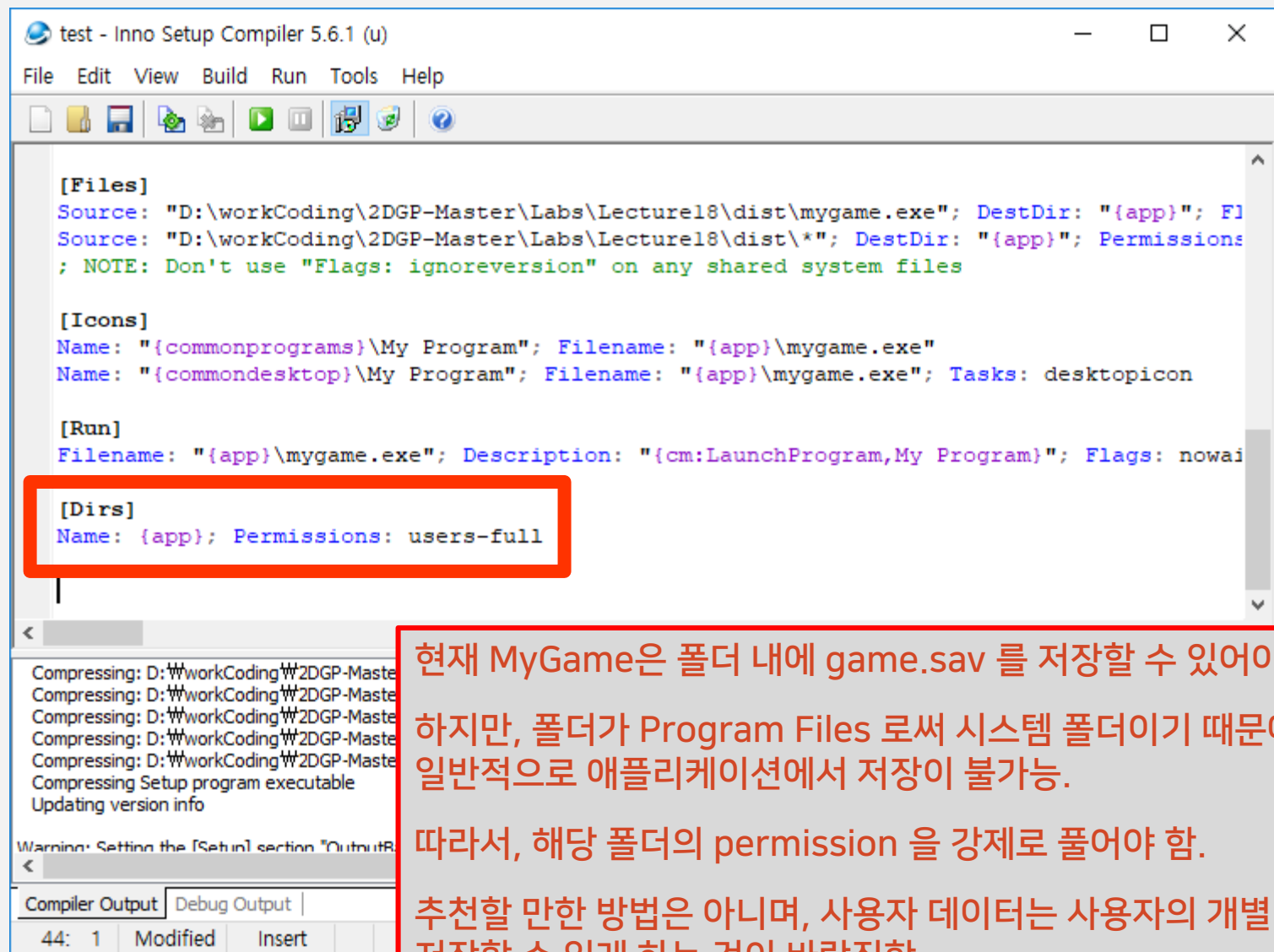
Setup password:









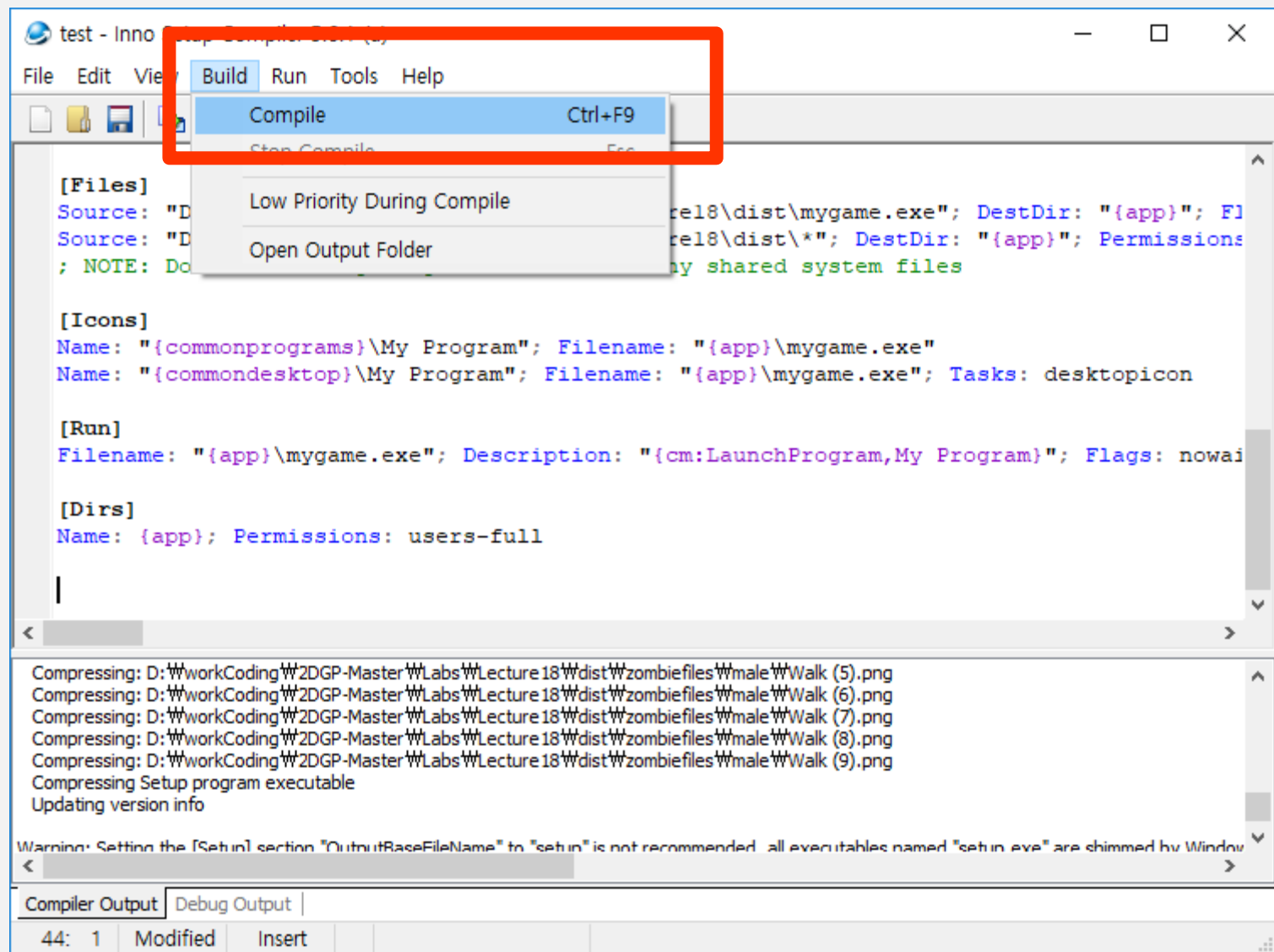


현재 MyGame은 폴더 내에 game.sav 를 저장할 수 있어야 함.

하지만, 폴더가 Program Files 로써 시스템 폴더이기 때문에, 일반적으로 애플리케이션에서 저장이 불가능.

따라서, 해당 폴더의 permission 을 강제로 풀어야 함.

추천할 만한 방법은 아니며, 사용자 데이터는 사용자의 개별 폴더에 저장할 수 있게 하는 것이 바람직함.



# 생성된 셋업 파일

