

Game Development



Pertemuan*6





Key Subjects



This guide goes into the following topics in depth:

1. Packaging python file to exe

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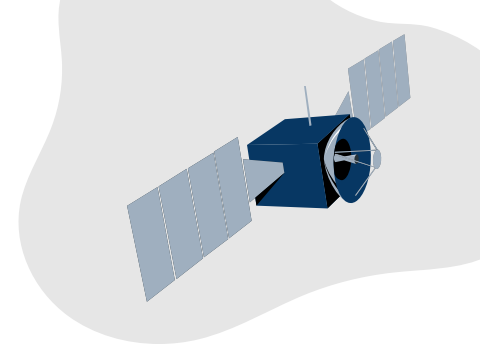
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Python file to .exe



cx_Freeze



Instalasi :

-> pip install cx_Freeze

Cara running package:

- Penggunaan package ini berbeda dengan sebelumnya. Kita harus membuat script baru berisi setup yang digunakan untuk konversi .py ke .exe. Biasanya diberi nama setup.py
- Setelah setup.py selesai dibuat, maka jalankan dengan perintah sebagai berikut :
 - python setup.py bdist_msi, jika ingin mengkonversi ke windows
 - python setup.py bdist_dmg, jika ingin konversi ke Mac



cx_Freeze



Anaconda Prompt - python setup.py bdist_msi

```
copying D:\Anaconda3\Library\bin\libGLESv2.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libGLESv2.dll
copying D:\Anaconda3\Library\bin\libexslt.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libexslt.dll
copying D:\Anaconda3\Library\bin\libxslt.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libxslt.dll
copying D:\Anaconda3\Library\bin\libxml2.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libxml2.dll
copying D:\Anaconda3\Library\bin\iconv.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\iconv.dll
copying D:\Anaconda3\Library\bin\charset.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\charset.dll
copying D:\Anaconda3\Library\bin\libicaf.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libicaf.dll
copying D:\Anaconda3\Library\bin\libifcoremd.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libifcoremd.dll
copying D:\Anaconda3\Library\bin\libifcorert.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libifcorert.dll
copying D:\Anaconda3\Library\bin\libifportmd.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libifportmd.dll
copying D:\Anaconda3\Library\bin\libimalloc.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libimalloc.dll
copying D:\Anaconda3\Library\bin\libiomp5md.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libiomp5md.dll
copying D:\Anaconda3\Library\bin\libiompstubs5md.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libiompstubs5md.dll
copying D:\Anaconda3\Library\bin\libirngmd.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libirngmd.dll
copying D:\Anaconda3\Library\bin\libjpeg.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libjpeg.dll
copying D:\Anaconda3\Library\bin\liblz4.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\liblz4.dll
copying D:\Anaconda3\Library\bin\liblzma.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\liblzma.dll
copying D:\Anaconda3\Library\bin\libmmd.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libmmd.dll
copying D:\Anaconda3\Library\bin\libmpx.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libmpx.dll
copying D:\Anaconda3\Library\bin\libpng16.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libpng16.dll
copying D:\Anaconda3\Library\bin\libsodium.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libsodium.dll
copying D:\Anaconda3\Library\bin\libssl-1_1-x64.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libssl-1_1-x64.dll
copying D:\Anaconda3\Library\bin\libtiff.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libtiff.dll
copying D:\Anaconda3\Library\bin\libzstd.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libzstd.dll
copying D:\Anaconda3\Library\bin\libtiffxx.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libtiffxx.dll
copying D:\Anaconda3\Library\bin\libzmq-mt-4_3_1.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libzmq-mt-4_3_1.dll
copying D:\Anaconda3\Library\bin\libzmq.dll -> build\exe.win-amd64-3.7\lib\numpy_mkl\libzmq.dll
```



cx_Freeze



Berikut adalah contoh kode yang ada pada setup.py

```
import sys
from cx_Freeze import setup, Executable

#masukkan package yang digunakan -> pygame
#masukkan juga assets yang digunakan sesuai dengan direktori masing-masing
build_exe_options = {"packages": ["pygame"],
                    "include_files": ["ball.png", "paddle.png",
                                     "pong.ogg", "score.ogg"]}

# base="Win32GUI" hanya digunakan untuk aplikasi berbasis windows
base = None
if sys.platform == "win32":
    base = "Win32GUI"

setup(
    name = "guifoo",
    version = "0.1",
    description = "Pong Game Example!",
    options = {"build_exe": build_exe_options},
    executables = [Executable("pong1_sprites.py", base=base)]
)
```

Dokumentasi lebih lanjut lihat web berikut :

https://cx-freeze.readthedocs.io/en/latest/setup_script.html



Pyinstaller



Instalasi :

-> pip install pyinstaller

Cara running package:

- Masuk direktori penyimpanan file melalui command prompt
- Kemudian tuliskan pyinstaller namafilename.py
- Tambahkan --onefile jika ingin menggabungkan semua dependencies yang ada menjadi 1 file instalasi
- Tambahkan -hidden-import jika ingin menambahkan package lain kedalam file instalasi

```
(base) F:\TUGAS VOKASI\MAKUL\GameDev>cd praktikum
(base) F:\TUGAS VOKASI\MAKUL\GameDev\praktikum>cd 6
(base) F:\TUGAS VOKASI\MAKUL\GameDev\praktikum\6>pyinstaller --onefile col_detect2.py
```



Pyinstaller



```
Anaconda Prompt
46734 INFO: Building PYZ because PYZ-00.toc is non existent
46736 INFO: Building PYZ (ZlibArchive) F:\TUGAS VOKASI\MAKUL\GameDev\praktikum\5\pong_game\build\pong11_sprites\PYZ-00.p
yz
48464 INFO: Building PYZ (ZlibArchive) F:\TUGAS VOKASI\MAKUL\GameDev\praktikum\5\pong_game\build\pong11_sprites\PYZ-00.p
yz completed successfully.
48496 INFO: checking PKG
48497 INFO: Building PKG because PKG-00.toc is non existent
48498 INFO: Building PKG (CArchive) PKG-00.pkg
185584 INFO: Building PKG (CArchive) PKG-00.pkg completed successfully.
185593 INFO: Bootloader d:\anaconda3\lib\site-packages\PyInstaller\bootloader\Windows-64bit\run.exe
185593 INFO: checking EXE
185594 INFO: Building EXE because EXE-00.toc is non existent
185594 INFO: Building EXE from EXE-00.toc
185664 INFO: Copying icons from ['d:\anaconda3\lib\site-packages\PyInstaller\bootloader\images\icon-console.ico']

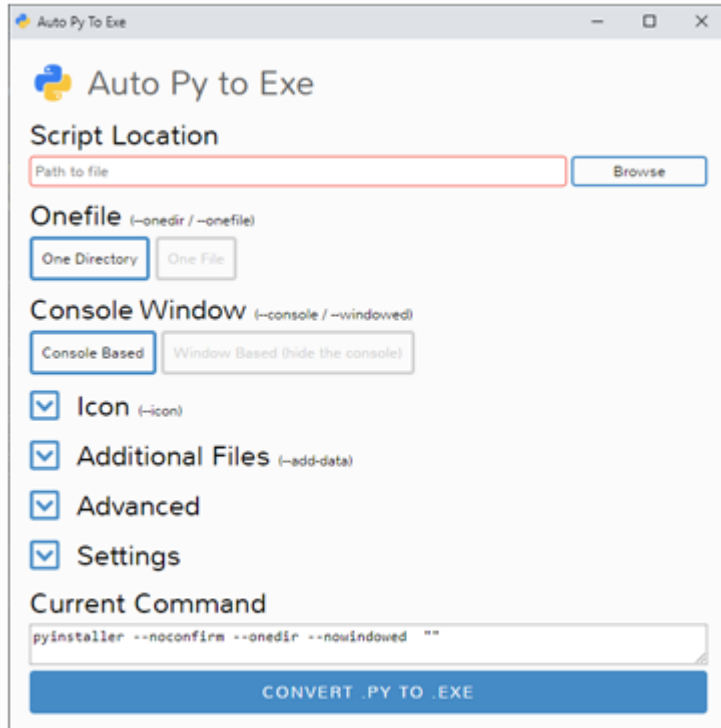
185817 INFO: Writing RT_GROUP_ICON 0 resource with 104 bytes
185817 INFO: Writing RT_ICON 1 resource with 3752 bytes
185820 INFO: Writing RT_ICON 2 resource with 2216 bytes
185820 INFO: Writing RT_ICON 3 resource with 1384 bytes
185821 INFO: Writing RT_ICON 4 resource with 37019 bytes
185822 INFO: Writing RT_ICON 5 resource with 9640 bytes
185823 INFO: Writing RT_ICON 6 resource with 4264 bytes
185823 INFO: Writing RT_ICON 7 resource with 1128 bytes
185960 INFO: Updating manifest in F:\TUGAS VOKASI\MAKUL\GameDev\praktikum\5\pong_game\build\pong11_sprites\run.exe.33p00
4_n
186091 INFO: Updating resource type 24 name 1 language 0
186108 INFO: Appending archive to EXE F:\TUGAS VOKASI\MAKUL\GameDev\praktikum\5\pong_game\dist\pong11_sprites.exe
315664 INFO: Building EXE from EXE-00.toc completed successfully.
(base) F:\TUGAS VOKASI\MAKUL\GameDev\praktikum\5\pong_game>
```

- <https://pyinstaller.readthedocs.io/en/stable/usage.html>





Auto-py-to-exe



Instalasi :

`pip install auto-py-to-exe`

Cara running modul :


- Masuk direktori penyimpanan file melalui command prompt
- Kemudian tuliskan auto-py-to-exe
- Jendela modul akan terbuka seperti gambar di samping



Auto-py-to-exe

```
205614 INFO: Looking for dynamic libraries
207007 INFO: Looking for eggs
207013 INFO: Using Python library d:\anaconda3\python37.dll
207023 INFO: Found binding redirects:
[ ]
207053 INFO: Warnings written to C:\Users\FADIL\AppData\Local\Temp\tmps1cpx4tq\build\movement\warn-movement
207230 INFO: Graph cross-reference written to C:\Users\FADIL\AppData\Local\Temp\tmps1cpx4tq\build\movement
207405 INFO: checking PYZ
207413 INFO: Building PYZ because PYZ-00.toc is non existent
207421 INFO: Building PYZ (ZlibArchive) C:\Users\FADIL\AppData\Local\Temp\tmps1cpx4tq\build\movement\PYZ-00.p
209179 INFO: Building PYZ (ZlibArchive) C:\Users\FADIL\AppData\Local\Temp\tmps1cpx4tq\build\movement\PYZ-00.p
209224 INFO: checking PKG
209230 INFO: Building PKG because PKG-00.toc is non existent
209241 INFO: Building PKG (CArchive) PKG-00.pkg
360699 INFO: Building PKG (CArchive) PKG-00.pkg completed successfully.
360734 INFO: Bootloader d:\anaconda3\lib\site-packages\PyInstaller\bootloader\Windows-64bit\runw.exe
360745 INFO: checking EXE
360766 INFO: Building EXE because EXE-00.toc is non existent
360775 INFO: Building EXE from EXE-00.toc
360820 INFO: Copying icons from ['d:\anaconda3\lib\site-packages\PyInstaller\bootloader\images\icon-w
361007 INFO: Writing RT_GROUP_ICON 0 resource with 104 bytes
361021 INFO: Writing RT_ICON 1 resource with 3752 bytes
361029 INFO: Writing RT_ICON 2 resource with 2216 bytes
361037 INFO: Writing RT_ICON 3 resource with 1384 bytes
361053 INFO: Writing RT_ICON 4 resource with 38188 bytes
361062 INFO: Writing RT_ICON 5 resource with 9640 bytes
361071 INFO: Writing RT_ICON 6 resource with 4264 bytes
361083 INFO: Writing RT_ICON 7 resource with 1128 bytes
361109 INFO: Updating manifest in C:\Users\FADIL\AppData\Local\Temp\tmps1cpx4tq\build\movement\runw.exe.bzcl1
362392 INFO: Updating resource type 24 name 1 language 0
362420 INFO: Appending archive to EXE C:\Users\FADIL\AppData\Local\Temp\tmps1cpx4tq\application\movement.exe
517180 INFO: Building EXE from EXE-00.toc completed successfully.

Moving project to: C:\Users\FADIL\output
Complete.
```

Name	Date modified	Type	Size
 movement.exe	28/09/2021 18:07	Application	226.090 KB

<https://pypi.org/project/auto-py-to-exe/>

Something wrong with your exe? Read this post on how to fix common issues for possible solutions.

CLEAR OUTPUT

OPEN OUTPUT FOLDER

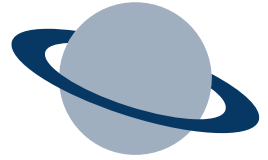
Tugas Gamedev



Mempersiapkan dokumentasi pembuatan game yang akan dipresentasikan minggu depan tanggal 6 Oktober 2021



Tugas Praktikum



Membuat file instalasi game

- Konversi dari file python ke file instalasi
- Gunakan salah satu package yang diberikan sebelumnya
- File_name.py -> file_name.exe





**A PICTURE IS WORTH
A THOUSAND WORDS**