

## timesheet calculator

Import os and sys modules

In order to avoid errors in reading the path of the xls file after the exe is generated, use the function” `os.path.dirname(os.path.realpath(sys.executable))`” to read the root directory where the py,exe file is located.

```
import xlrd
import xlwt
import tkinter as tk
import os
import sys

filepath = os.path.join(os.path.dirname(os.path.realpath(sys.executable)), 'timesheet_input.xls')
```

Define the main function

Use `sys.argv[]` Reads the incoming parameters at runtime:

```
def main():
    window.mainloop()

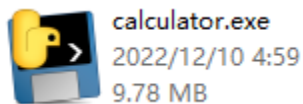
if __name__ == '__main__':
    try:
        if sys.argv[1] == 'create':
            create_table()
        elif sys.argv[1] == 'calculate':
            main()
        else:
            print('The parameter is wrong, please enter \'create\' to create the timesheet')
    except:
        main()
```

Use the pyinstaller tool to generate an executable file exe,

Enter the command in the shell: “`pyinstaller -F .\calculator.py`”

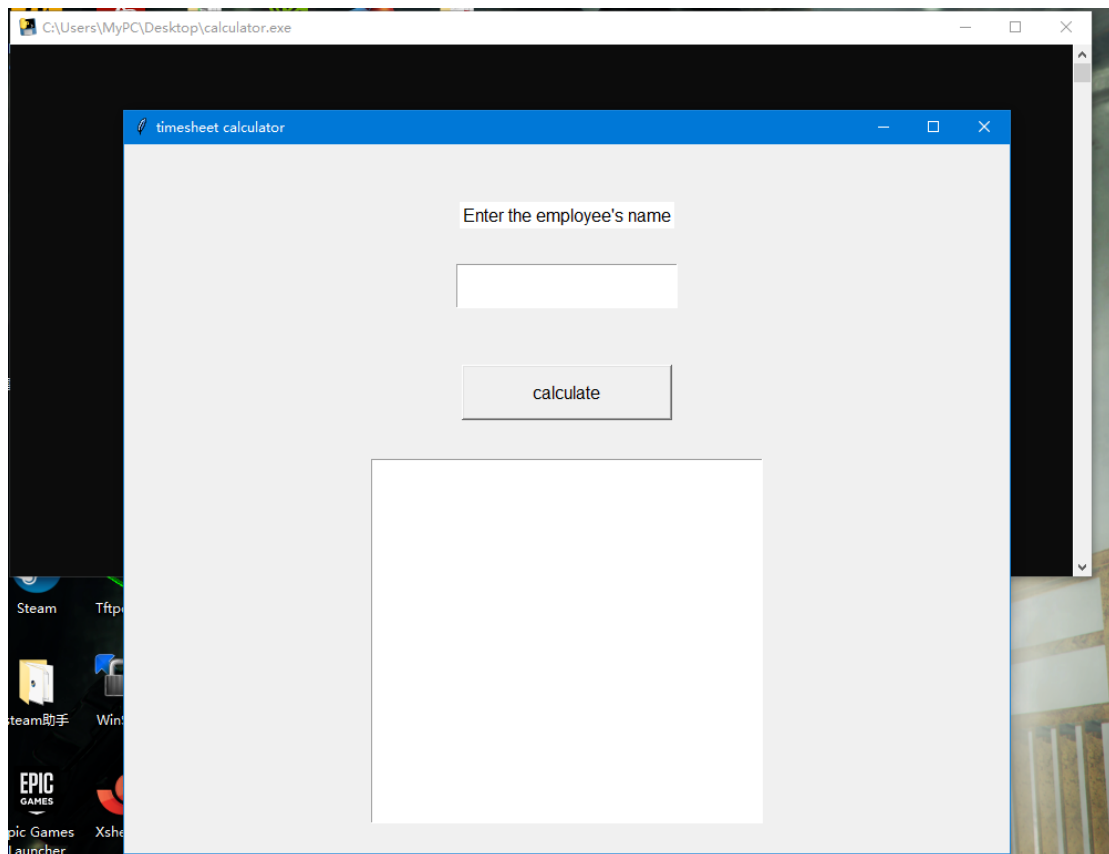
```
Windows PowerShell
PS C:\Users\MyPC\Desktop\研究生2\系统理论\1> pyinstaller -F .\calculator.py
494 INFO: PyInstaller: 5.7.0
495 INFO: Python: 3.11.0
517 INFO: Platform: Windows-10-10.0.19045-SP0
519 INFO: wrote C:\Users\MyPC\Desktop\研究生2\系统理论\1\calculator.spec
529 INFO: UPX is not available
532 INFO: Extending PYTHONPATH with paths
['C:\Users\MyPC\Desktop\研究生2\系统理论\1']
1386 INFO: checking Analysis
1387 INFO: Building Analysis because Analysis-00.toc is non existent
1387 INFO: Initializing module dependency graph...
1391 INFO: Caching module graph hooks...
1405 WARNING: Several hooks defined for module 'numpy'. Please take care they do not conflict.
1418 INFO: Analyzing base_library.zip ...
5053 INFO: Loading module hook 'hook-heapq.py' from 'C:\Program Files\Python311\Lib\site-packages\PyInstaller\hooks'.
5181 INFO: Loading module hook 'hook-encodings.py' from 'C:\Program Files\Python311\Lib\site-packages\PyInstaller\hooks'.
7490 INFO: Loading module hook 'hook-pickle.py' from 'C:\Program Files\Python311\Lib\site-packages\PyInstaller\hooks'.
9307 INFO: Caching module dependency graph...
9432 INFO: running Analysis Analysis-00.toc
9439 INFO: Adding Microsoft.Windows.Common-Controls to dependent assemblies of final executable
required by C:\Program Files\Python311\python.exe
9644 INFO: Analyzing C:\Users\MyPC\Desktop\研究生2\系统理论\1\calculator.py
10485 INFO: Processing module hooks...
10489 INFO: Loading module hook 'hook-tkinter.py' from 'C:\Program Files\Python311\Lib\site-packages\PyInstaller\hooks'.
10711 INFO: checking Tree
10711 INFO: Building Tree because Tree-00.toc is non existent
10711 INFO: Building Tree Tree-00.toc
10859 INFO: checking Tree
10859 INFO: Building Tree because Tree-01.toc is non existent
10860 INFO: Building Tree Tree-01.toc
10995 INFO: checking Tree
10996 INFO: Building Tree because Tree-02.toc is non existent
10996 INFO: Building Tree Tree-02.toc
11009 INFO: Looking for ctypes DLLs
11020 INFO: Analyzing run-time hooks ...
11023 INFO: Including run-time hook 'C:\Program Files\Python311\Lib\site-packages\PyInstaller\hooks\rthooks\pyi_rth_inspect.py'
11027 INFO: Including run-time hook 'C:\Program Files\Python311\Lib\site-packages\PyInstaller\hooks\rthooks\pyi_rth_tkinter.py'
11031 INFO: Looking for dynamic libraries
556 INFO: Extra DLL search directories (AddDllDirectory): []
556 INFO: Extra DLL search directories (PATH): ['C:\Program Files\VMware\VMware Workstation\bin\;', 'C:\Program Files\Python311\Scripts\;', 'C:\Program Files\Python311\;', 'c:\program files\microsoft mpi\bin\;', 'c:\program files\usb redirector client\;', 'c:\windows\system32\;', 'c:\windows\;', 'c:\windows\system32\wbem\;', 'c:\windows\system32\windowsservershell\;', 'c:\windows\system32\openssh\;', 'c:\users\myc\documents\ffmpeg\bin\;', 'c:\program files (x86)\paragon software\extfs for windows\;', 'c:\program files\nvidia corporation\nvidia nvdlisr\;', 'c:\program files (x86)\netsarang\sshell 7\;', 'c:\program files\dotnet\;', 'c:\program files (x86)\dotnet\;', 'c:\program files\matlab\r2022a\bin\;', 'C:\Program Files (x86)\NVIDIA Corporation\PhysX\Common\;', 'C:\WINDOWS\system32\;', 'C:\WINDOWS\;', 'C:\WINDOWS\System32\Wbem\;', 'C:\WINDOWS\System32\WindowsPowerShell\v1.0\;', 'C:\WINDOWS\System32\OpenSSH\;', 'C:\Program Files\Microsoft VS Code\bin\;', 'C:\Program Files\Git\cmd\;', 'C:\Users\MyPC\AppData\Local\Microsoft\WindowsApps\;', 'C:\Program Files\Bandizip\;', 'C:\Program Files\JetBrains\PyCharm\bin\']
12965 INFO: Looking for eggs
12966 INFO: Using Python library C:\Program Files\Python311\python311.dll
12967 INFO: Found binding redirects:
[]
12983 INFO: Warnings written to C:\Users\MyPC\Desktop\研究生2\系统理论\1\build\calculator\warn-calculator.txt
13007 INFO: Graph cross-reference written to C:\Users\MyPC\Desktop\研究生2\系统理论\1\build\calculator\xref-calculator.html
13059 INFO: checking PYZ
```

Result:



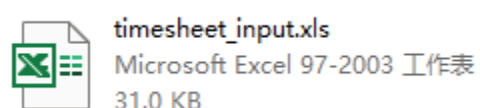
Substitute the parameter “calcuatue” to run, The calculator GUI interface will be started directly, which is equivalent to double-clicking to run:

```
Windows PowerShell
PS C:\Users\MyPC\Desktop> .\calculator.exe calculate
```

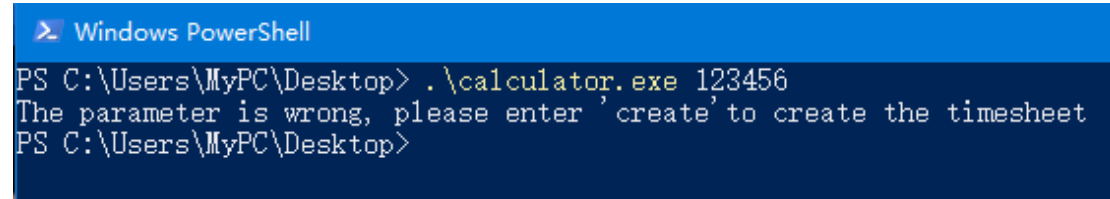


Substitute the parameter “[create](#)” to run, A blank timetable xls file will be created automatically:

```
Windows PowerShell
PS C:\Users\MyPC\Desktop> .\calculator.exe create
```



If you enter the wrong parameters at runtime, there will be the following prompt:

A screenshot of a Windows PowerShell terminal window. The title bar is blue and says "Windows PowerShell". The terminal has a dark blue background with white text. The prompt is "PS C:\Users\MyPC\Desktop>". The user has entered ".\calculator.exe 123456". The terminal displays an error message: "The parameter is wrong, please enter 'create' to create the timesheet". The prompt is repeated on the next line.

```
PS C:\Users\MyPC\Desktop> .\calculator.exe 123456
The parameter is wrong, please enter 'create' to create the timesheet
PS C:\Users\MyPC\Desktop>
```