

Secure Coding Lab - 4

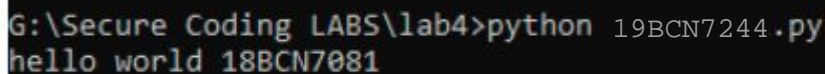
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19BCN7244

Mid-Level

- Write a python programme to print Hello World.

Python script :

```
print('hello world 19BCN7244')
```



A screenshot of a terminal window with a black background and green text. The prompt is 'G:\Secure Coding LABS\lab4>python 19BCN7244.py' and the output is 'hello world 18BCN7081'.

- Convert the script into executable (use pyinstaller or py2exe – any of your choice).

```
G:\Secure Coding LABS\lab4>pyinstaller -F 19BCN7244.py
401 INFO: PyInstaller: 4.2
401 INFO: Python: 3.9.0
417 INFO: Platform: Windows-10-10.0.19041-SP0
417 INFO: wrote G:\Secure Coding LABS\lab4\19BCN7244.spec
417 INFO: UPX is not available.
432 INFO: Extending PYTHONPATH with paths
['G:\\Secure Coding LABS\\lab4', 'G:\\Secure Coding LABS\\lab4']
517 INFO: checking Analysis
517 INFO: Building Analysis because Analysis-00.toc is non
existent
517 INFO: Initializing module dependency graph...
533 INFO: Caching module graph hooks...
533 WARNING: Several hooks defined for module
'win32ctypes.core'. Please take care they do not conflict.
571 INFO: Analyzing base_library.zip ...
7244 INFO: Processing pre-find module path hook distutils from
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\
\\lib\\site-packages\\PyInstaller\\hooks\\pre_find_module_path\\h
ook-distutils.py'.
7245 INFO: distutils: retargeting to non-venv dir
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\
\\lib'
13460 INFO: Caching module dependency graph...
13590 INFO: running Analysis Analysis-00.toc
```

13597 INFO: Adding Microsoft.Windows.Common-Controls to
dependent assemblies of final executable
required by
c:\users\SRINEHA\appdata\local\programs\python\python39\python.e
xe
13742 WARNING: lib not found: api-ms-win-core-path-l1-1-0.dll
dependency of
c:\users\SRINEHA\appdata\local\programs\python\python39\python39
.dll
13785 INFO: Analyzing G:\Secure Coding LABS\lab4\19BCN7244.py
13808 INFO: Processing module hooks...
13809 INFO: Loading module hook 'hook-difflib.py' from
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\
\\lib\\site-packages\\PyInstaller\\hooks'...
13811 INFO: Excluding import of doctest from module difflib
13812 INFO: Loading module hook 'hook-distutils.py' from
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\
\\lib\\site-packages\\PyInstaller\\hooks'...
13815 INFO: Loading module hook 'hook-distutils.util.py' from
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\
\\lib\\site-packages\\PyInstaller\\hooks'...
13818 INFO: Excluding import of lib2to3.refactor from module
distutils.util
13819 INFO: Loading module hook 'hook-encodings.py' from
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\
\\lib\\site-packages\\PyInstaller\\hooks'...
13929 INFO: Loading module hook 'hook-heapq.py' from
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\
\\lib\\site-packages\\PyInstaller\\hooks'...
13933 INFO: Excluding import of doctest from module heapq
13933 INFO: Loading module hook 'hook-lib2to3.py' from
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\
\\lib\\site-packages\\PyInstaller\\hooks'...
13994 INFO: Loading module hook 'hook-multiprocessing.util.py'
from
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\
\\lib\\site-packages\\PyInstaller\\hooks'...
13997 INFO: Excluding import of test.support from module
multiprocessing.util
13998 INFO: Excluding import of test from module
multiprocessing.util
14000 INFO: Loading module hook 'hook-pickle.py' from
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\
\\lib\\site-packages\\PyInstaller\\hooks'...
14002 INFO: Excluding import of argparse from module pickle
14002 INFO: Loading module hook 'hook-sysconfig.py' from
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\
\\lib\\site-packages\\PyInstaller\\hooks'...

14066 INFO: Loading module hook 'hook-xml.etree.cElementTree.py' from
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\lib\\site-packages\\PyInstaller\\hooks'...

14069 INFO: Loading module hook 'hook-xml.py' from
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\lib\\site-packages\\PyInstaller\\hooks'...

14290 INFO: Loading module hook 'hook-_tkinter.py' from
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\lib\\site-packages\\PyInstaller\\hooks'...

14562 INFO: checking Tree

14562 INFO: Building Tree because Tree-00.toc is non existent

14564 INFO: Building Tree Tree-00.toc

14658 INFO: checking Tree

14659 INFO: Building Tree because Tree-01.toc is non existent

14662 INFO: Building Tree Tree-01.toc

14775 INFO: checking Tree

14775 INFO: Building Tree because Tree-02.toc is non existent

14779 INFO: Building Tree Tree-02.toc

14816 INFO: Looking for ctypes DLLs

14849 INFO: Analyzing run-time hooks ...

14852 INFO: Including run-time hook
'c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\lib\\site-packages\\PyInstaller\\hooks\\rthooks\\pyi_rth_multiprocessing.py'

14876 INFO: Looking for dynamic libraries

15221 INFO: Looking for eggs

15221 INFO: Using Python library
c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39\\python39.dll

15224 INFO: Found binding redirects:
[]

15229 INFO: Warnings written to G:\\Secure Coding
LABS\\lab4\\build\\19BCN7244\\warn-19BCN7244.txt

15299 INFO: Graph cross-reference written to G:\\Secure Coding
LABS\\lab4\\build\\19BCN7244\\xref-19BCN7244.html

15359 INFO: checking PYZ

15359 INFO: Building PYZ because PYZ-00.toc is non existent

15361 INFO: Building PYZ (ZlibArchive) G:\\Secure Coding
LABS\\lab4\\build\\19BCN7244\\PYZ-00.pyz

15898 INFO: Building PYZ (ZlibArchive) G:\\Secure Coding
LABS\\lab4\\build\\19BCN7244\\PYZ-00.pyz completed successfully.

15930 INFO: checking PKG

15930 INFO: Building PKG because PKG-00.toc is non existent

15931 INFO: Building PKG (CArchive) PKG-00.pkg

18229 INFO: Building PKG (CArchive) PKG-00.pkg completed
successfully.

18232 INFO: Bootloader

```
c:\users\SRINEHA\appdata\local\programs\python\python39\lib\site-  
-packages\PyInstaller\bootloader\Windows-64bit\run.exe  
18233 INFO: checking EXE  
18235 INFO: Building EXE because EXE-00.toc is non existent  
18235 INFO: Building EXE from EXE-00.toc  
18368 INFO: Copying icons from  
['c:\\users\\SRINEHA\\appdata\\local\\programs\\python\\python39  
\\lib\\site-packages\\PyInstaller\\bootloader\\images\\icon-cons  
ole.ico']  
18442 INFO: Writing RT_GROUP_ICON 0 resource with 104 bytes  
18443 INFO: Writing RT_ICON 1 resource with 3752 bytes  
18445 INFO: Writing RT_ICON 2 resource with 2216 bytes  
18447 INFO: Writing RT_ICON 3 resource with 1384 bytes  
18447 INFO: Writing RT_ICON 4 resource with 37019 bytes  
18448 INFO: Writing RT_ICON 5 resource with 9640 bytes  
18449 INFO: Writing RT_ICON 6 resource with 4264 bytes  
18449 INFO: Writing RT_ICON 7 resource with 1128 bytes  
18463 INFO: Updating manifest in G:\Secure Coding  
LABS\lab4\build\19BCN7244\run.exe.rawka8ta  
18528 INFO: Updating resource type 24 name 1 language 0  
18533 INFO: Appending archive to EXE G:\Secure Coding  
LABS\lab4\dist\19BCN7244.exe  
18633 INFO: Building EXE from EXE-00.toc completed successfully.
```

```
G:\Secure Coding LABS\lab4>pyinstaller -F 19BCN7244.py  
401 INFO: PyInstaller: 4.2  
401 INFO: Python: 3.9.0  
417 INFO: Platform: Windows-10-10.0.19041-SP0  
417 INFO: wrote G:\Secure Coding LABS\lab4\19BCN7244.spec  
417 INFO: UPX is not available.  
432 INFO: Extending PYTHONPATH with paths  
['G:\\Secure Coding LABS\\lab4', 'G:\\Secure Coding LABS\\lab4']  
517 INFO: checking Analysis
```

```
16652 INFO: Updating manifest in G:\Secure Coding LABS\lab4\build\19BCN7244\run.exe.ss  
16907 INFO: Updating resource type 24 name 1 language 0  
16922 INFO: Appending archive to EXE G:\Secure Coding LABS\lab4\dist\18BCN7081.exe  
18041 INFO: Building EXE from EXE-00.toc completed successfully.
```

Local Disk (G:) > Secure Coding LABS > lab4			
Name	Date modified	Type	Size
19BCN7244.exe	27-02-2021 12:54	Application	6,689 KB
19BCN7244.py	27-02-2021 13:01	Python File	1 KB

- Schedule a task named "Python execution" to run the above executable on the first Monday of every month.

```
G:\Secure Coding LABS\lab4>schtasks /create /sc monthly /mo first /d mon /tn "Python Execution" /tr "19BCN7244.exe"
SUCCESS: The scheduled task "Python Execution" has successfully been created.
```

```
G:\Secure Coding LABS\lab4>schtasks /create /sc monthly /mo first /d mon /tn "Python Execution" /tr "19BCN7244.exe"
SUCCESS: The scheduled task "Python Execution" has successfully been created.
G:\Secure Coding LABS\lab4>
```

Intermediate

- Schedule a task named "Executor" on your machine to run calculator for every five minutes starting from the specified start time with no end

```
C:\Windows\system32>schtasks /create /sc minute /mo 5 /tn "Executor" /tr "Calculator.exe" /st 17:30
SUCCESS: The scheduled task "Executor" has successfully been created.
```

```
C:\Windows\system32>schtasks /create /sc minute /mo 5 /tn "Executor" /tr "Calculator.exe" /st 17:30
SUCCESS: The scheduled task "Executor" has successfully been created.
C:\Windows\system32>
```

- Schedule a task named "Executor2" to run notepad starting at 5:00PM and automatically terminating at 5:40PM hours every day

```
C:\Windows\system32>schtasks /create /sc daily /tn "Executor2" /tr "notepad.exe" /st 17:00 /et 17:40
SUCCESS: The scheduled task "Executor2" has successfully been created.
```

```
C:\Windows\system32>schtasks /create /sc daily /tn "Executor2" /tr "notepad.exe" /st 17:00 /et 17:40
SUCCESS: The scheduled task "Executor2" has successfully been created.

C:\Windows\system32>
```

Advanced

- Schedule a task to defragment any of your local disk daily at 10AM

```
C:\Windows\system32>schtasks /create /sc daily /tn "Defragment E
Daily 18BCN7081" /tr "defrag.exe E:" SUCCESS: The scheduled task
"Defragment E Daily 19BCN7244" has successfully been created.
```

```
C:\Windows\system32>schtasks /create /sc daily /tn "Defragment E Daily 19BCN7244" /tr "defrag.exe E:"
SUCCESS: The scheduled task "Defragment E Daily 18BCN7081" has successfully been created.

C:\Windows\system32>
```

Attrib Commands

+r = This assigns the read-only file attribute to the file or directory.
-r = This removes the read-only attribute.
+s = This assigns the system file attribute to the file or directory.
-s = This removes the system attribute.
+h = This assigns the hidden file attribute to the file or directory.
-h = This removes the hidden attribute.
+c = This assigns the compressed file attribute to the file or directory.
-c = This removes the compressed attribute.

```
C:\>attrib
A SHR          C:\bootmgr
A SH           C:\BOOTNXT
A SH          C:\DumpStack.log.tmp
A SH I        C:\hiberfil.sys
A SH          C:\pagefile.sys
A SH          C:\swapfile.sys
```

```
E:\>attrib
A              E:\19BCN7244.exe
A              E:\19BCN7244.pdf
A              E:\19BCN7244.txt
```

```
E:\>attrib +r +h 19BCN7244.exe
E:\>attrib +s 19BCN7244.pdf
```

```
E:\>attrib
A      HR      E:\19BCN7244.exe
A      S      E:\19BCN7244.pdf
A      E:\19BCN7244.txt
```

```
E:\>attrib -r -h 19BCN7244.exe
E:\>attrib -s 19BCN7244.pdf
E:\>attrib
A      E:\19BCN7244.exe
A      E:\19BCN7244.pdf
A      E:\19BCN7244.txt
```

Write a script to perform the following jobs

- To lock your PC(Win + L)

CMD Script:

```
rundll32.exe user32.dll, LockWorkStation
```

```
C:\Users\SRINEHA>rundll32.exe user32.dll, LockWorkStation
C:\Users\SRINEHA>
```

- To clear your recycle bin

CMD Script:

```
rmdir /s %systemdrive%\$Recycle.bin
```

```
C:\Windows\system32>rmdir /s %systemdrive%\$Recycle.bin
C:\$Recycle.bin, Are you sure (Y/N)? y
C:\Windows\system32>
```


Powercfg

Powercfg is a very powerful command for managing and tracking how your computer uses energy

```
C:\Windows\system32>powercfg /energy
Enabling tracing for 60 seconds...
Observing system behavior...
Analyzing trace data...
Analysis complete.

Energy efficiency problems were found.

3 Errors
4 Warnings
60 Informational

See C:\Windows\system32\energy-report.html for more details.
```

Examines the system for common energy-efficiency and battery life problems.

```
C:\Windows\system32>powercfg /lastwake
Wake History Count - 1
Wake History [0]
  Wake Source Count - 1
  Wake Source [0]
    Type: Fixed Feature
    Power Button
```

shows the information about what woke the system from the last sleep transition.

```
C:\Windows\system32>powercfg /hibernate on
C:\Windows\system32>powercfg /hibernate off
```

Will turn hibernate feature on and off.


```
C:\Windows\system32>powercfg /a
The following sleep states are available on this system:
    Standby (S3)

The following sleep states are not available on this system:
    Standby (S1)
        The system firmware does not support this standby state.

    Standby (S2)
        The system firmware does not support this standby state.

    Hibernate
        Hibernation has not been enabled.

    Standby (S0 Low Power Idle)
        The system firmware does not support this standby state.

    Hybrid Sleep
        Hibernation is not available.

    Fast Startup
        Hibernation is not available.
```

shows the sleep states in available system

```
C:\Windows\system32>powercfg /devicequery s1_supported
Root Print Queue
Volume Manager
WAN Miniport (PPPOE)
OneNote (Desktop)
Generic software component
Microsoft Basic Display Driver
Generic PnP Monitor
Microsoft Print to PDF
WAN Miniport (PPTP)
Microsoft Hyper-V Virtualization Infrastructure Driver
USB Root Hub (USB 3.0)
WAN Miniport (IKEv2)
Composite Bus Enumerator
Microsoft Virtual Drive Enumerator
Microsoft Storage Spaces Controller
Microsoft Kernel Debug Network Adapter
Fax
OneNote for Windows 10
Stereo Mix (Realtek High Definition Audio)
UMBus Root Bus Enumerator
Charge Arbitration Driver
ACPI x64-based PC
WAN Miniport (Network Monitor)
WAN Miniport (IP)
Microsoft XPS Document Writer
Microsoft Basic Render Driver
USB Root Hub (USB 3.0) (001)
WAN Miniport (SSTP)
Realtek Bluetooth 4.2 Adapter
Microsoft Wi-Fi Direct Virtual Adapter
Microsoft Wi-Fi Direct Virtual Adapter #2
AMD High Definition Audio Device
NDIS Virtual Network Adapter Enumerator
Speaker/Headphone (Realtek High Definition Audio)
Generic USB Hub
Synaptics Service binaries
Microphone Array (Realtek High Definition Audio)
Microsoft System Management BIOS Driver
Plug and Play Software Device Enumerator
Remote Desktop Device Redirector Bus
WAN Miniport (IPv6)
```

To list the devices that supports waking PC from S1 state