LAB 4

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Q) Write a python script to print hello world. Convert the script into executable (use pyinstaller or py2exe - any of your choice).

Ans:

secure - Notepad

File Edit Format View Help

```
print('Hello World!')
```

C:\Users\shiva\Desktop>pyinstaller secure.py

C:\Users\shiva\Desktop>pyinstaller secure.py
211 INFO: PyInstaller: 4.3
212 INFO: Python: 3.9.1
212 INFO: Platform: Windows-10-10.0.19041-SP0
216 INFO: wrote C:\Users\shiva\Desktop\secure.spec
219 INFO: UPX is not available.
228 INFO: Extending PYTHONPATH with paths
['C:\\Users\\shiva\\Desktop', 'C:\\Users\\shiva\\Desktop']
241 INFO: checking Analysis
241 INFO: Building Analysis because Analysis-00.toc is non existent
241 INFO: Initializing module dependency graph...
244 INFO: Caching module graph hooks...
251 WARNING: Several hooks defined for module 'win32ctypes.core'. Please take care they do not conflict.
256 INFO: Analyzing base_library.zip ...
6404 INFO: Processing pre-find module path hook distutils from
'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks\\pre_find_module_path\\hook-distutils.py'.
6405 INFO: distutils: retargeting to non-venv dir 'd:\\python\\python391\\lib'
12298 INFO: Caching module dependency graph...

12569 INFO: running Analysis Analysis-00.toc
12590 INFO: Adding Microsoft.Windows.Common-Controls to dependent assemblies of final executable
  required by d:\python\python391\python.exe
12684 WARNING: lib not found: api-ms-win-core-path-l1-1-0.dll dependency of d:\python\python391\python39.dll
12715 INFO: Analyzing C:\Users\shiva\Desktop\secure.py
12729 INFO: Processing module hooks...
12729 INFO: Loading module hook 'hook-difflib.py' from 'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks'...
12731 INFO: Loading module hook 'hook-distutils.py' from 'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks'...
12732 INFO: Loading module hook 'hook-distutils.util.py' from 'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks'...
12735 INFO: Loading module hook 'hook-encodings.py' from 'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks'...
12879 INFO: Loading module hook 'hook-heapq.py' from 'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks'...
12881 INFO: Loading module hook 'hook-lib2to3.py' from 'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks'...
13082 INFO: Loading module hook 'hook-multiprocessing.util.py' from 'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks'...
13086 INFO: Loading module hook 'hook-pickle.py' from 'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks'...
13090 INFO: Loading module hook 'hook-sysconfig.py' from 'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks'...
13091 INFO: Loading module hook 'hook-xml.etree.cElementTree.py' from 'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks'...
13093 INFO: Loading module hook 'hook-xml.py' from 'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks'...
13210 INFO: Loading module hook 'hook-_tkinter.py' from 'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks'...
13603 INFO: checking Tree
13603 INFO: Building Tree because Tree-00.toc is non existent
13605 INFO: Building Tree Tree-00.toc
13780 INFO: checking Tree
13780 INFO: Building Tree because Tree-01.toc is non existent

13782 INFO: Building Tree Tree-01.toc
13963 INFO: checking Tree
13964 INFO: Building Tree because Tree-02.toc is non existent
13966 INFO: Building Tree Tree-02.toc
14011 INFO: Looking for ctypes DLLs
14043 INFO: Analyzing run-time hooks ...
14046 INFO: Including run-time hook
'd:\\python\\python391\\lib\\site-packages\\PyInstaller\\hooks\\rthooks\\pyi_rth_mu
ltiprocessing.py'
14056 INFO: Looking for dynamic libraries
14513 INFO: Looking for eggs
14513 INFO: Using Python library d:\python\python391\python39.dll
14515 INFO: Found binding redirects:
[]
14536 INFO: Warnings written to
C:\Users\shiva\Desktop\build\secure\warn-secure.txt
14587 INFO: Graph cross-reference written to
C:\Users\shiva\Desktop\build\secure\xref-secure.html
14617 INFO: checking PYZ
14617 INFO: Building PYZ because PYZ-00.toc is non existent
14619 INFO: Building PYZ (ZlibArchive)
C:\Users\shiva\Desktop\build\secure\PYZ-00.pyz
15221 INFO: Building PYZ (ZlibArchive)
C:\Users\shiva\Desktop\build\secure\PYZ-00.pyz completed successfully.
15246 INFO: checking PKG
15246 INFO: Building PKG because PKG-00.toc is non existent
15247 INFO: Building PKG (CArchive) PKG-00.pkg
15292 INFO: Building PKG (CArchive) PKG-00.pkg completed successfully.
15297 INFO: Bootloader
d:\python\python391\lib\site-packages\PyInstaller\bootloader\Windows-64bit\run.
exe
15297 INFO: checking EXE
15298 INFO: Building EXE because EXE-00.toc is non existent
15299 INFO: Building EXE from EXE-00.toc
15313 INFO: Copying icons from
['d:\\python\\python391\\lib\\site-packages\\PyInstaller\\bootloader\\images\\icon-c
onsole.ico']

15325 INFO: Writing RT_GROUP_ICON 0 resource with 104 bytes

15325 INFO: Writing RT_ICON 1 resource with 3752 bytes

15326 INFO: Writing RT_ICON 2 resource with 2216 bytes

15328 INFO: Writing RT_ICON 3 resource with 1384 bytes

15329 INFO: Writing RT_ICON 4 resource with 37019 bytes

15329 INFO: Writing RT_ICON 5 resource with 9640 bytes

15330 INFO: Writing RT_ICON 6 resource with 4264 bytes

15330 INFO: Writing RT_ICON 7 resource with 1128 bytes

15353 INFO: Appending archive to EXE

C:\Users\shiva\Desktop\build\secure\secure.exe

15875 INFO: Building EXE from EXE-00.toc completed successfully.

15883 INFO: checking COLLECT

15884 INFO: Building COLLECT because COLLECT-00.toc is non existent

15885 INFO: Building COLLECT COLLECT-00.toc

16747 INFO: Building COLLECT COLLECT-00.toc completed successfully.

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15885 INFO: Building COLLECT COLLECT-00.toc
16747 INFO: Building COLLECT COLLECT-00.toc completed successfully.
```

Q)Scheduling a task named as python execution :-
Ans:

```
C:\Users\shiva>schtasks /create /sc weekly /d mon /tn "python execution" /tr "C:\Users\
shiva\Desktop\dist" /st 13:00
SUCCESS: The scheduled task "python execution" has successfully been created.
```

Q) Schedule a task named "Executer" on your machine to run Calculator for every five minutes starting from the specified start time with no end
Ans:

```
C:\Users\shiva>schtasks /create /sc minute /mo 5 /tn "Executer" /tr "C:\Windows\System32
\calc.exe" /st 13:00
SUCCESS: The scheduled task "Executer" has successfully been created.
```

Q) Schedule a task named "Executer2" to run notepad starting at 5:00PM and automatically terminating at 5:40PM hours every day
Ans:

```
C:\Users\shiva>schtasks /create /sc daily /tn "Executer2" /tr "C:\Windows\System32\Notepad.exe"
 /st 17:00 /ET 17:40
SUCCESS: The scheduled task "Executer2" has successfully been created.
```

Q)
Powercfg:- also called power schemes - to use the available sleep states, to control the power states of individual devices, and to analyze the system for common energy-efficiency and battery-life problems.

Energy command:- Analyzes the system for common energy-efficiency and battery-life problems.

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

Energy efficiency problems were found.

7 Errors
9 Warnings
78 Informational

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

Lastwake command:- reports the information about what woke the system from the last sleep transition.

```
C:\WINDOWS\system32>powercfg/lastwake
Wake History Count - 0
```

Hibernate:- enables and disables the hibernate feature.

```
C:\WINDOWS\system32>powercfg/hibernate on

C:\WINDOWS\system32>powercfg/hibernate off
```

/a :- reports the sleep states in available system.

```
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.
```
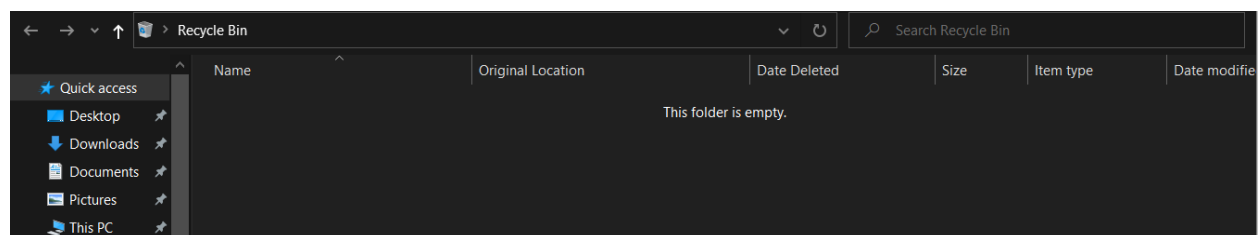
Emptying the recycle bin :-

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

←	→	∨	↑	🗑	> Recycle Bin			∨	↻	🔎 Search Recycle Bin		
				⌃	Name	⌃	Original Location	Date Deleted		Size	Item type	Date modifie
⭐ Quick access												
🖥 Desktop	📌					This folder is empty.						
⬇ Downloads	📌											
📄 Documents	📌											
🖼 Pictures	📌											
💻 This PC	📌											

To lock the pc ,type rundll32.exe user32.dll, LockWorkStation.After typing this and clicking enter,pc will automatically get locked.

Defragmenting a disk:-

```
C:\WINDOWS\system32>defrag /?

Defrag <Volumes> <Operations> [<Options>]

Volumes:
  /C | /AllVolumes      On each volume run only the preferred operations from
                        the given list of operations.
  /E | /VolumesExcept <volume paths>
                        Perform all the given operations on each volume except.
                        those specified. If the exception list is empty, this
                        behaves as /AllVolumes.
  volume paths          Specifies the drive letter followed by a colon, mount point
                        or volume name. More than one volume can be specified.  Run
                        all the given operations on each specified volume..

Operations:
  /A | /Analyze         Perform analysis.
  /B | /BootOptimize    Perform boot optimization to increase boot performance.
  /D | /Defrag          Perform traditional defrag (this is the default). On a tiered
                        volume, traditional defrag is performed only on the Capacity
                        tier.
  /G | /TierOptimize    On tiered volumes, optimize files to reside on the appropriate
                        storage tier.
  /K | /SlabConsolidate On thinly provisioned volumes, perform slab consolidation to
                        increase slab usage efficiency.
  /L | /Retrim          On thinly provisioned volumes, perform retrim to release free
                        slabs. On SSDs perform retrim to improve write performance.
  /O | /Optimize        Perform the proper optimization for each media type.
  /T | /TrackProgress   Track progress of a running operation for a given volume. An
                        instance can show progress only for a single volume. To see
                        progress for another volume launch another instance.
  /U | /PrintProgress   Print the progress of the operation on the screen.
  /V | /Verbose         Print verbose output containing the fragmentation statistics.
  /X | /FreespaceConsolidate
                        Perform free space consolidation, moves free space towards
                        the end of the volume (even on thin provisioned volumes). On
                        tiered volumes consolidation is performed only on the Capacity
                        tier.

Options:
  /H | /NormalPriority  Run the operation at normal priority (default is low).
  /I | /MaxRuntime n    Available only with TierOptimize. Tier optimization would
                        run for at most n seconds on each volume.
       /LayoutFile <file path>
                        Available only with BootOptimize. This file contains the list
                        of files to be optimized.  The default location is
                        %windir%\Prefetch\layout.ini.
  /M | /MultiThread [n] Run the operation on each volume in parallel in the background.
                        For TierOptimize, at most n threads optimize the storage tiers
                        in parallel. Default value of n is 8. All other optimizations
                        ignore n.
       /OnlyPreferred   When volumes are specified explicitly, defrag performs all
                        the given operations on each specified volume.  This switch
                        lets defrag run only the preferred operations, from the
                        given list of operations, on each specified volume.

Examples:
  Defrag C: /U /V
  Defrag C: D: /TierOptimize /MultiThread
  Defrag C:\mountpoint /Analysis /U
  Defrag /C /H /V
```
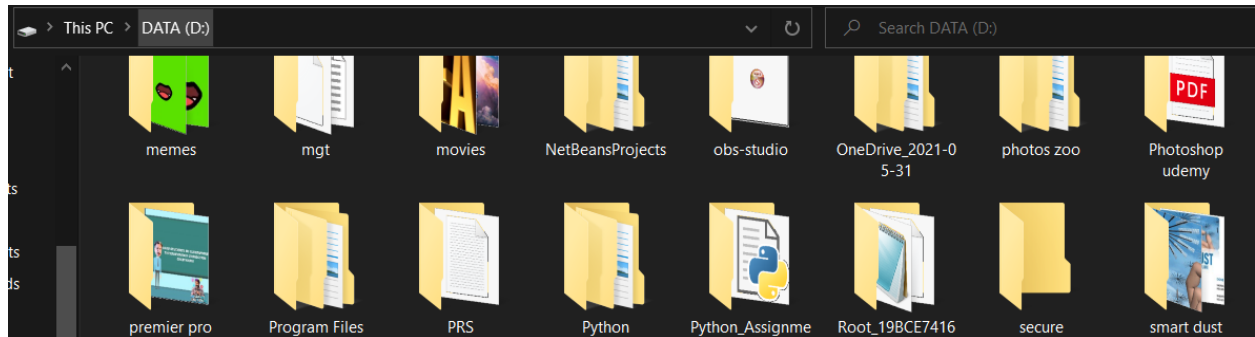
Schedule a task to defragment any of your local disk daily at 10AM

```
C:\WINDOWS\system32>schtasks /create /sc daily /tn "defrag" /tr "defrag C:" /st 10:00
SUCCESS: The scheduled task "defrag" has successfully been created.
```

The attrib command displays or changes the file attributes for a file or folder. It's run from the command prompt in all versions of Windows. Using attrib command, secure folder is hided.The command used is :-

C:\Users\shiva>attrib +h +s +r /S /D D:\secure

C:\Users\shiva>attrib -h -s -r /S /D D:\secure