**Lecture – Software Life Cycle**

SLIDE

Example 01 - Software Life Cycle (Application Phase) Cont…

Steps – Converting addition-v1.1.ipynb Software into an Executable File

- **Step 02: Use your System Settings to Step by Step Convert Program into an Executable File**
  - **In Sha Allah, in the next Slides, I will follow the following Two Stage Process to show how addition-v1.1.ipynb Software will be converted into an Executable File**
  - **Stage 01: Convert addition-v1.1.ipynb File into addition-v1.1.py File**
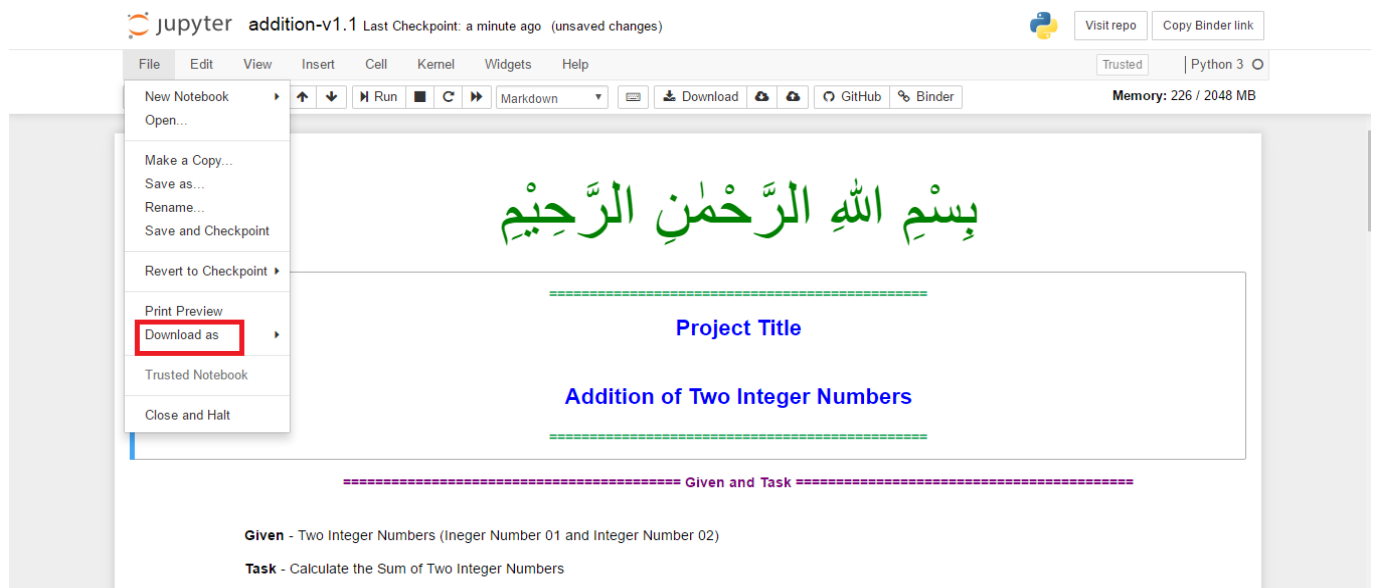   - **Step 01: Open Jupyter Notebook 5.5.0 IDE**
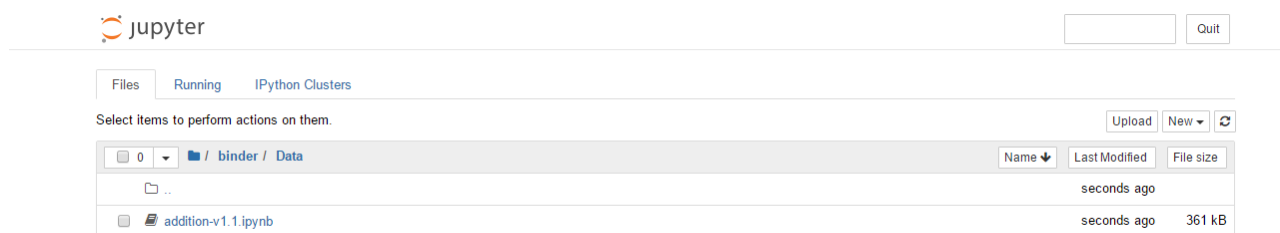
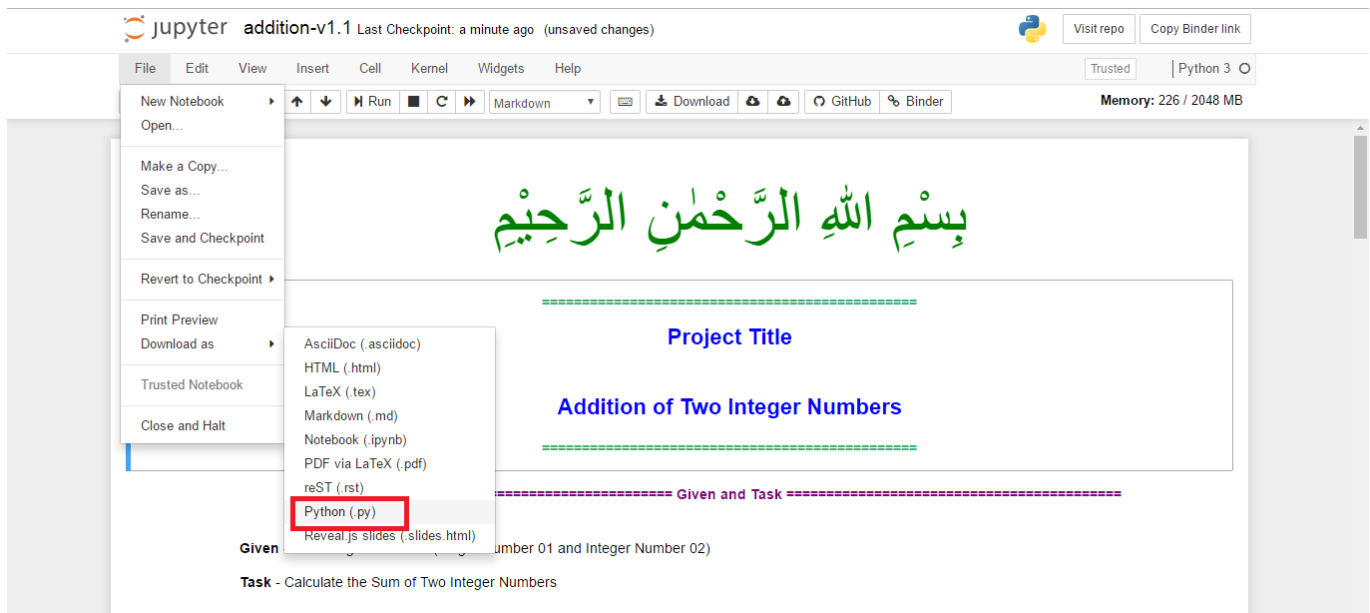- **Step 02: Open addition-v1.1.ipynb**

- **Step 03: Convert addition-v1.1.ipynb File into addition-v1.1.py File**
  - **Step 3.1: Click on File Menu**
    - **A drop-down menu will be displayed**
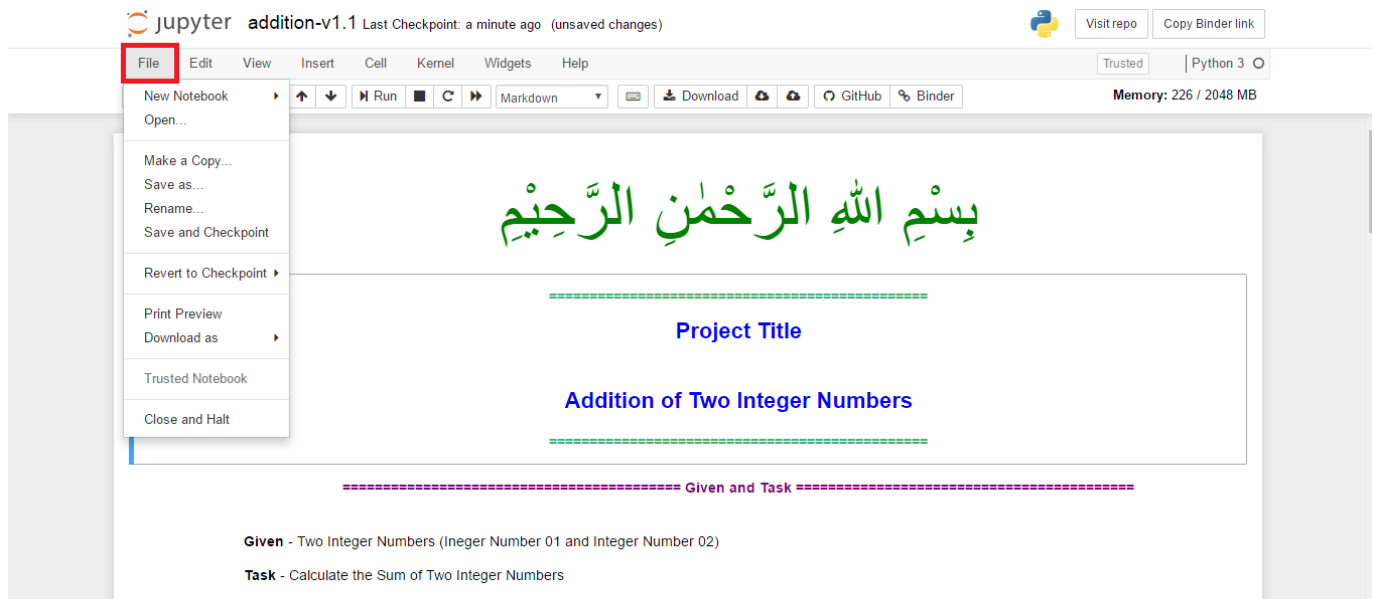
- **Step 3.2: From the drop down, Click on Download as**

- **Step 3.3: A Sub-menu appears. Click on Python (.py)**

- **Step 3.4: A new Tab will Open and addition-v1.1.py File starts downloading**
  - **Stage 02: Convert addition-v1.1.py File into addition-v1.1.exe File**
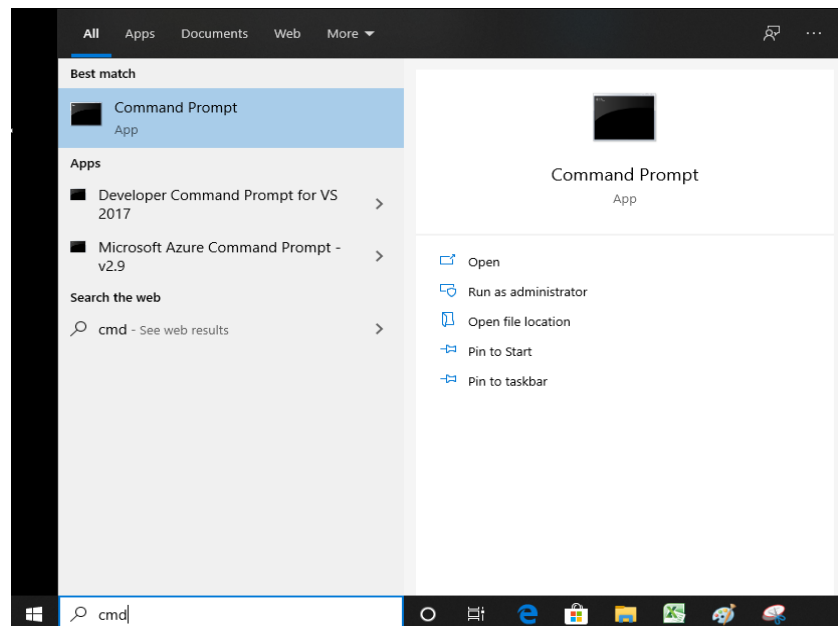   - **Step 01: Click on the Start button in the Task Bar**

- **Step 02: Search for Command Line Prompt (CMD)**
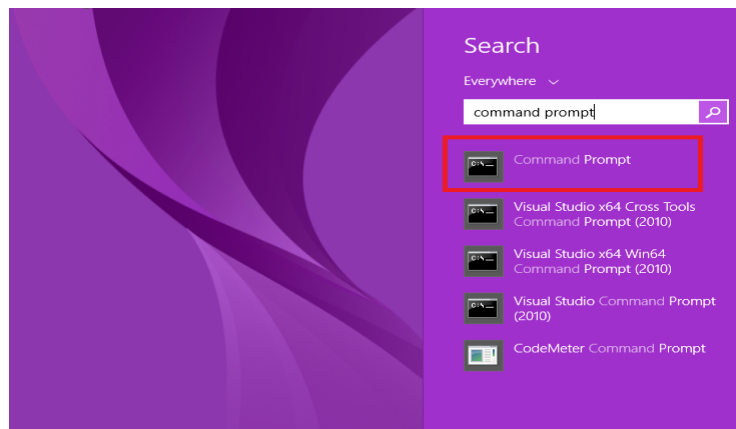 - **If you are using Windows 8/8.1 Pro, Search button will appear as shown below**
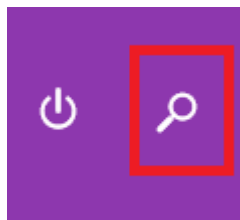
OR

- **Step 02: Search for Command Line Prompt (CMD)**
  - **Note**

- **If you are using Windows 10, Search** button will appear as shown in below figure

- **Step 03: Click on Command Prompt**

- **Step 04: Command Prompt** window will appear on your **Computer Screen**

- **Step 05: Navigate to the Folder where Python (.py) File is placed using the following Command**
  - **In my case, it is placed on Desktop**
  - **Step 5.1: Click on Enter key**

<div style="border:1px solid black; padding:5px;">
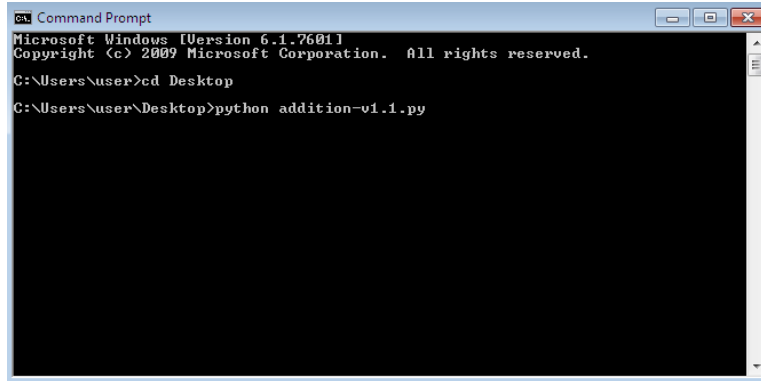
cd Desktop

</div>

  - **Step 5.2: The cmd will enter to the Desktop Folder**
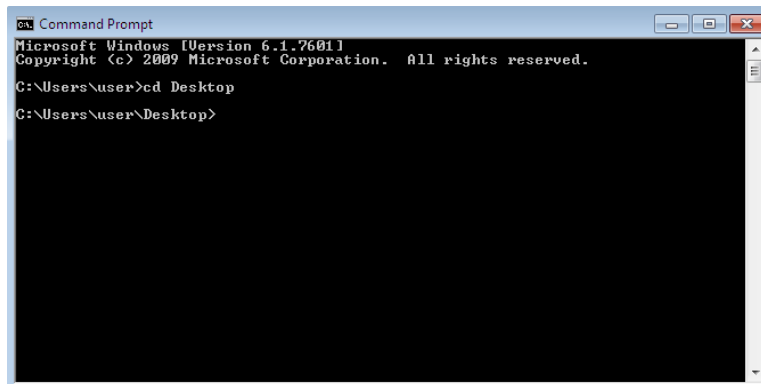
- **Step 06: Write the following Command on cmd. It will execute the Program in Python (.py) File**
  - **Step 6.1: Press Enter key**
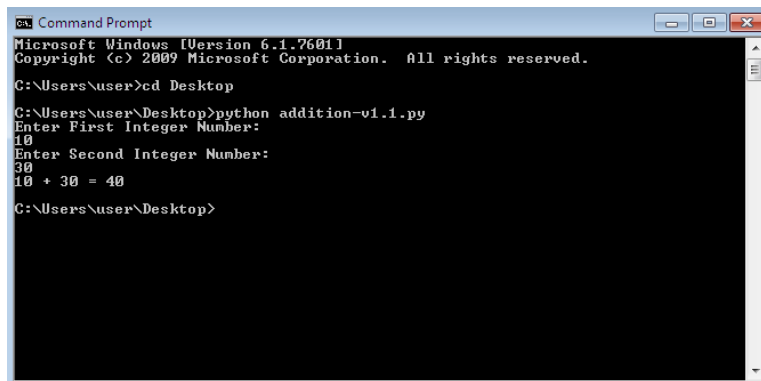
<div style="border:1px solid black; padding:5px;">

python addition-v1.1.py

</div>

- **Step 6.2: The addition-v1.1.py Software will be executed (see Figure below)**

- **Step 07: Now install pyinstaller by using the following Command**
    - **Step 7.1: Press Enter Key**

pip install pyinstaller

- **Step 08: Verify installation of pyinstaller by using the following Command**
  - **Step 8.1: Press Enter Key**

```
pyinstaller –version
```


  - **Step 8.2: The pyinstaller version will be displayed**
    - **In my case, it is 4.2**

- **Step 09: In order to convert a Python (.py) File to an Executable (.exe) File write following Command**
  - **Step 9.1: Press Enter key**

```
pyinstaller addition-v1.1.py
```

- **It starts Building Analysis**

- **Step 10: After successful Analysis, Following Folders will be displayed on the navigated Folder (where .py File is placed)**
  - **build**
  - **dist**
  - **addition-v1.1.spec**

build
dist
addition-v1.1.py
addition-v1.1.spec
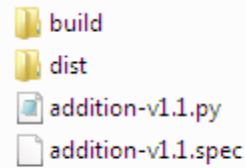
- **Step 11: Click on dist Folder**
  - **The addition-v1.1.exe Folder will be located**

Convert .py File to .exe ▸ dist ▸
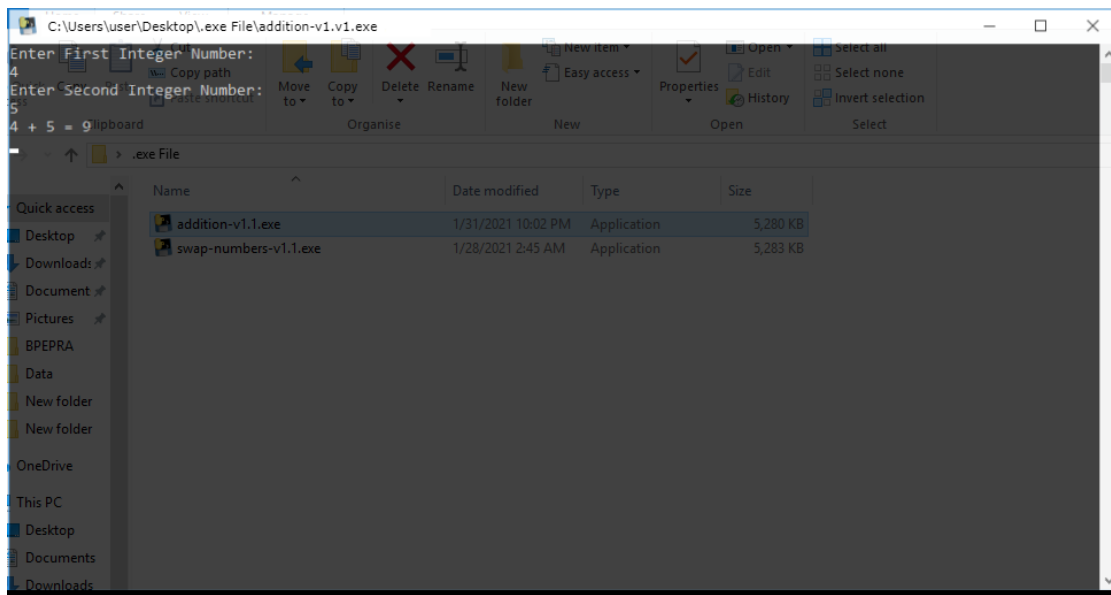
Include in library ▾   Share with ▾   Burn   New folder
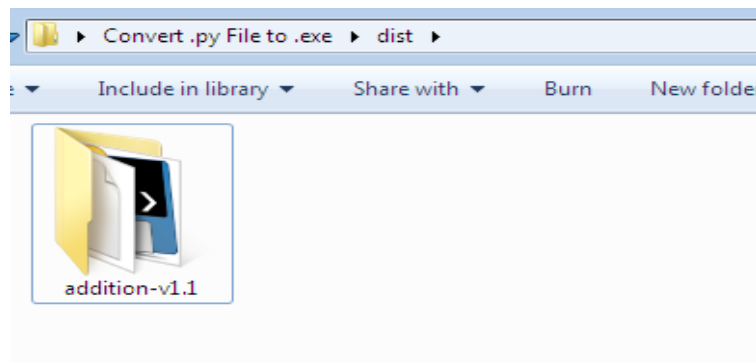
addition-v1.1

- **Step 12: Click on addition-v1.1 Folder**
  - **Step 12.1: Inside addition-v1.1 Folder, there are almost 54 items**

- **Step 13: Double Click on addition-v1.1.exe**

- **Step 13.1: A new cmd will be displayed and Software will be executed**

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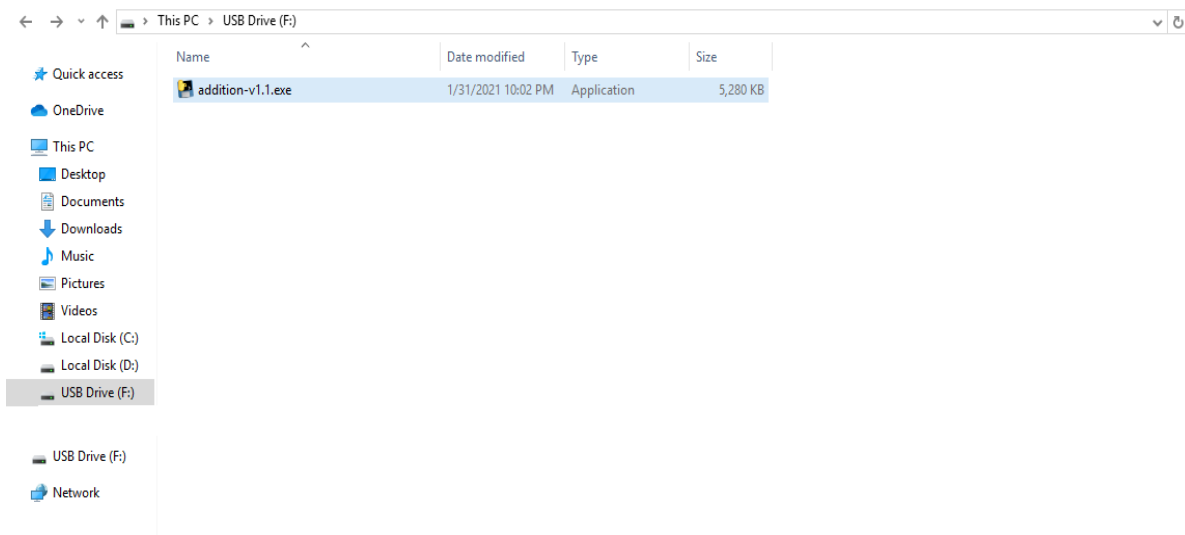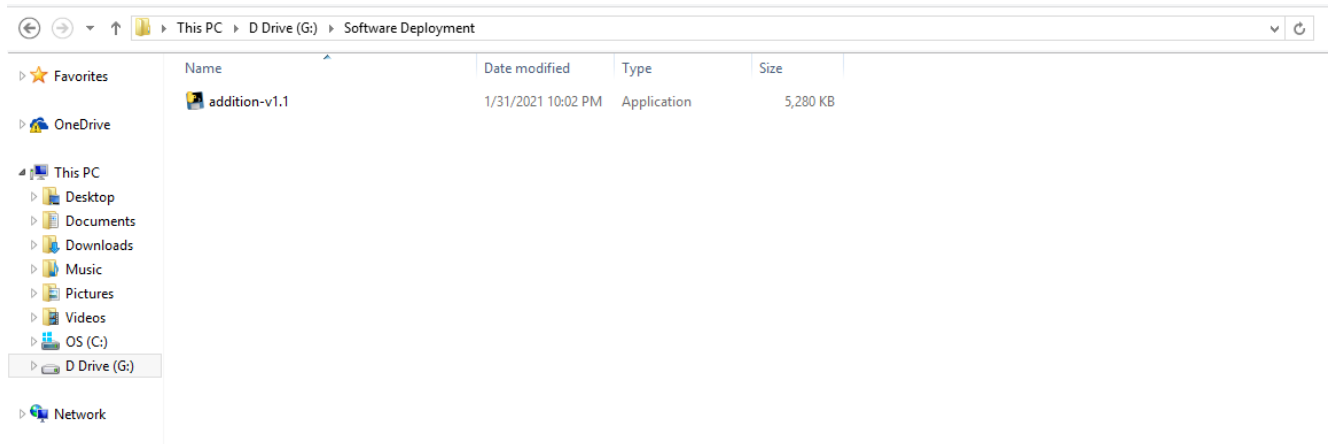**Example 01 - Software Life Cycle (Application Phase) Cont…**

Steps – Deploying the Executable File on Client Machine

- **Alhumdulilah, I have converted the .py file to .exe File and saved in my Laptop. In Sha Allah, now I will deploy the .exe File on the Clint Machine in the following Steps**
    - ○ **Step 01: I will Copy the addition-v1.1.exe File from my Laptop into a USB Drive**

- Step 02: From **my USB**, I will **Copy** addition-v1.1.exe File on **Client's Machine** at the following Path: **D:\Software Deployment\addition-v1.1.exe**

- Step 03: **Double Click** on the addition-v1.1.exe File
  - A Command Line Prompt will Open and **Deployed Software** will be **executed In Sha Allah** 🤖
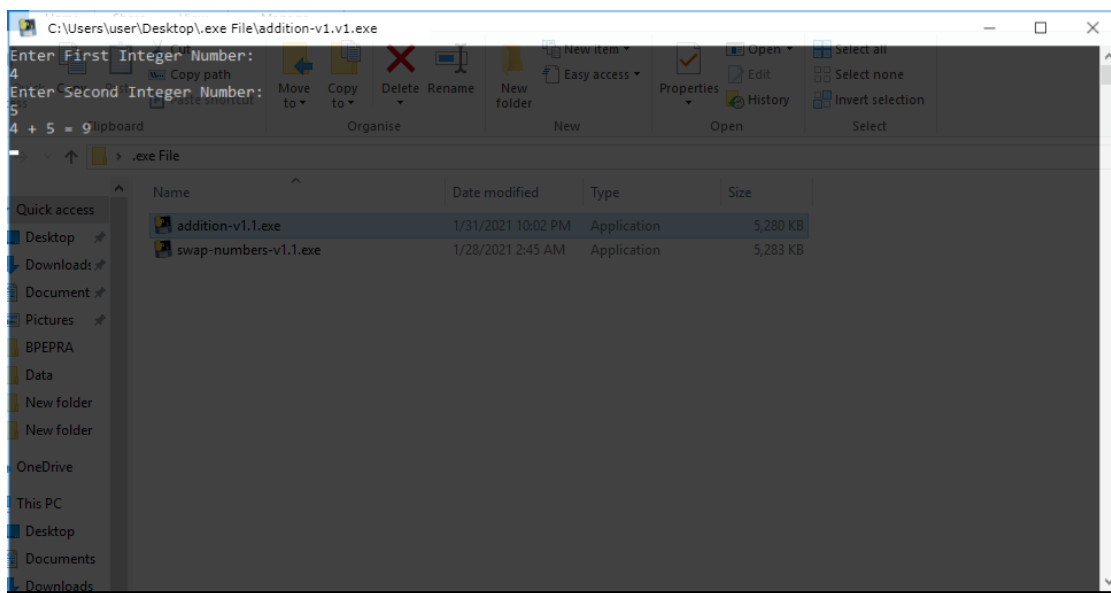
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Example 01 - Software Life Cycle (Feedback Phase)
- Step 01: After Software Deployment, take regular Feedback from
  - Domain Experts and Users on Deployed Software

- **Step 02: Make a List of Possible Improvements based on Feedback received**
- **Step 03: Improve your Software based on List of Possible Improvements (made in Step 02)**