**Lecture – Software Life Cycle**

**SLIDE**

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

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

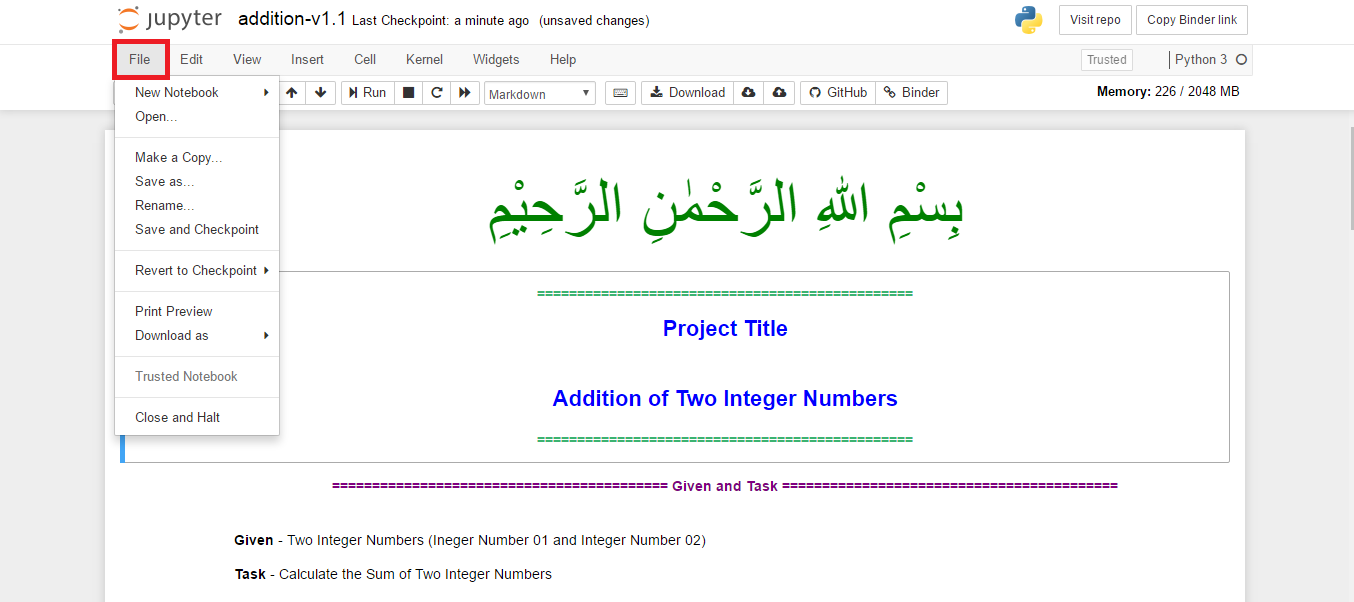
* **Step 02: Use your System Settings to Step by Step Convert Program into an Executable File**
  + **In Sha Allah, in the next Slides, I will follow the following Two Stage Process to show how addition-v1.1.ipynb Software will be converted into an Executable File**
  + **Stage 01: Convert addition-v1.1.ipynb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

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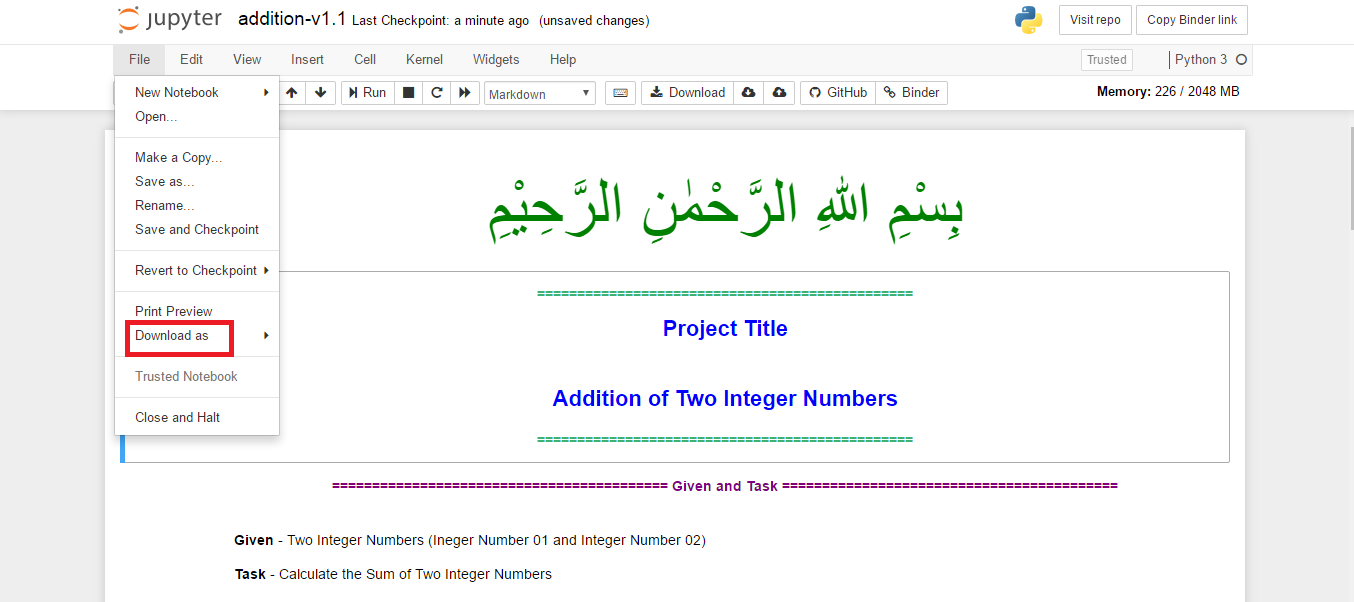
* + - **Step 02: Open addition-v1.1.ipynb**

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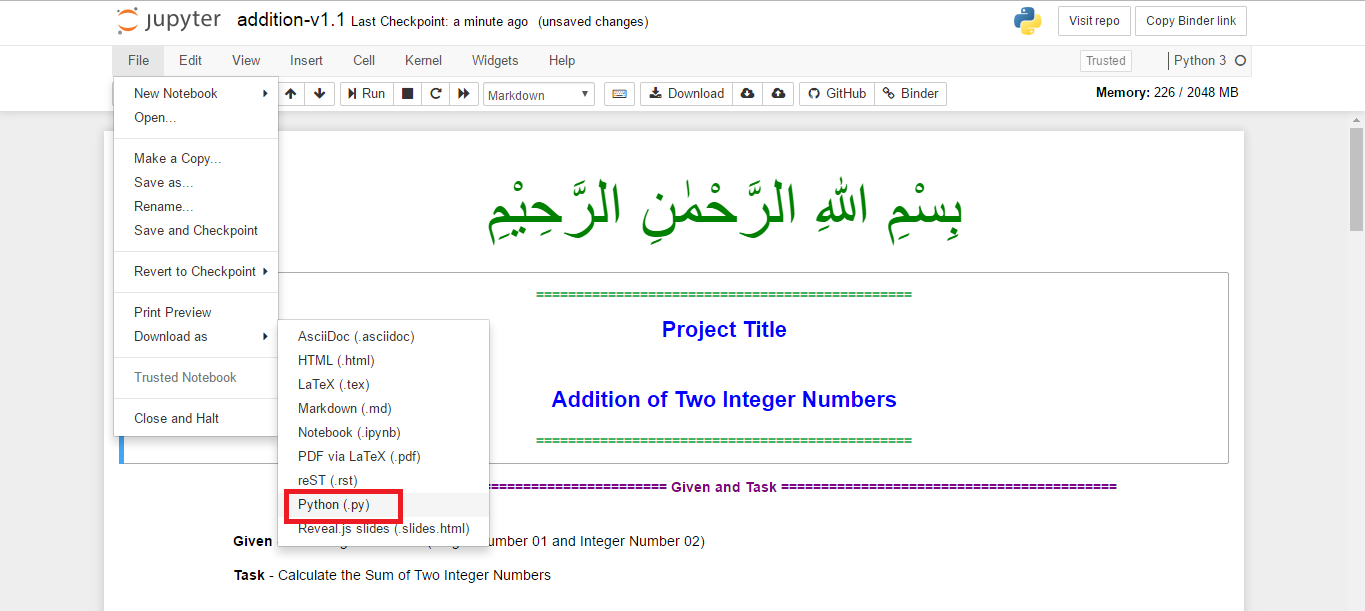
* + - **Step 03: Convert addition-v1.1.ipynb File into addition-v1.1.py File**
      * **Step 3.1: Click on File Menu**
        + **A drop-down menu will be displayed**

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* + - * **Step 3.2: From the drop down, Click on Download as**

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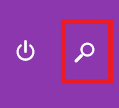
* + - * **Step 3.3: A Sub-menu appears. Click on Python (.py)**

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* + - * **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**

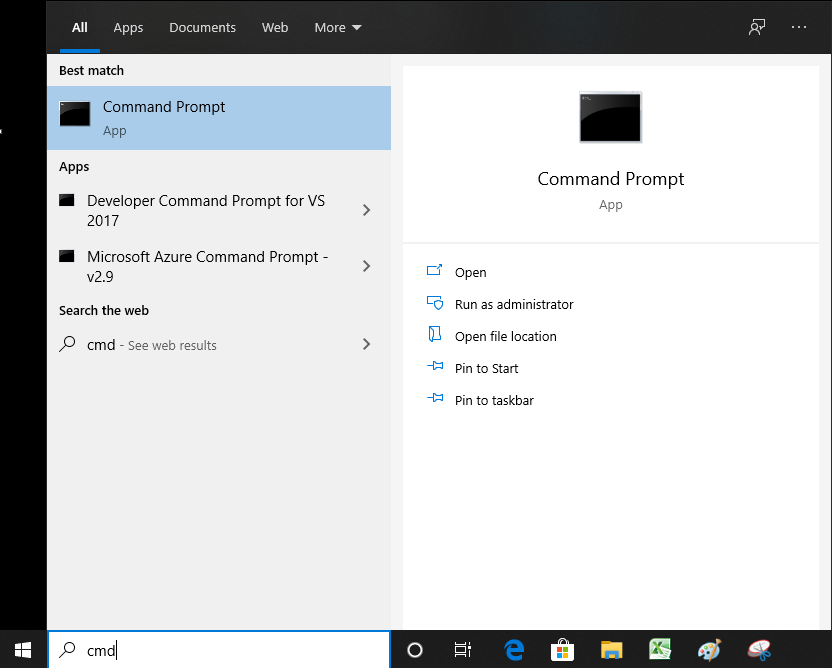


* + - **Step 02: Search for Command Line Prompt (CMD)**
      * **If you are using Windows 8/8.1 Pro, Search button will appear as shown below**

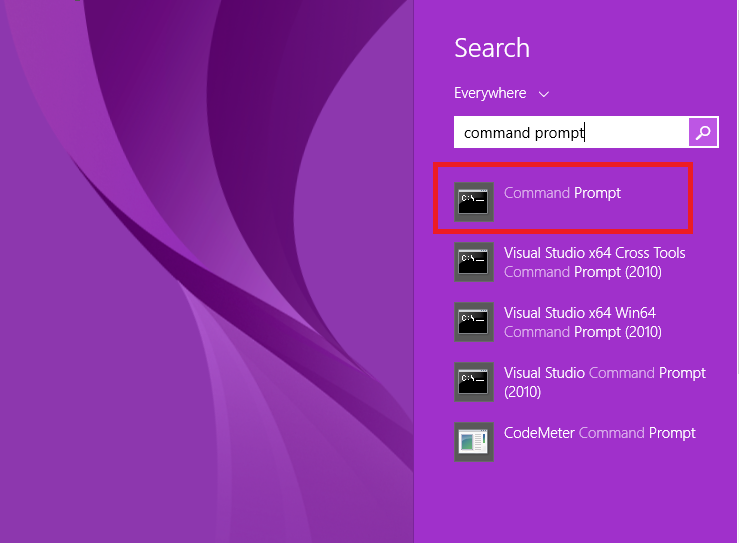


**OR**

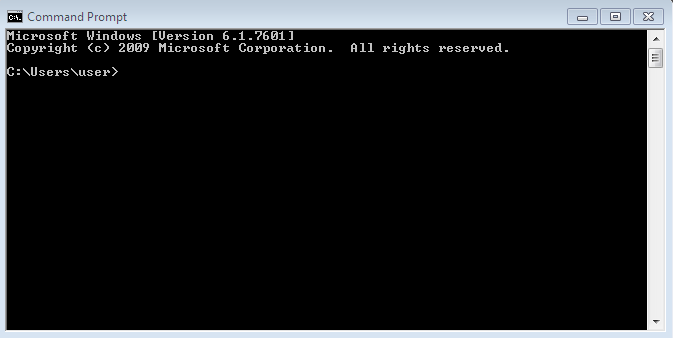
* + - **Step 02: Search for Command Line Prompt (CMD)** 
      * **Note**
        + **If you are using Windows 10, Search button will appear as shown in below figure**

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



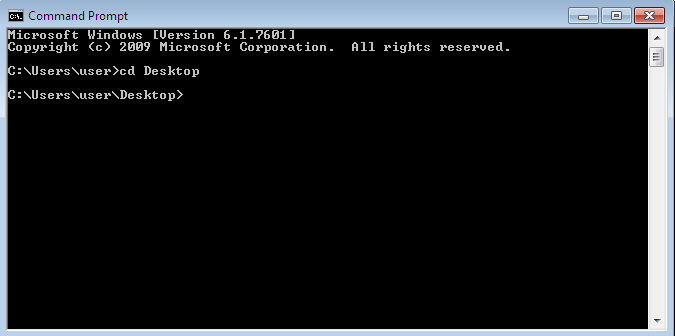
* + - **Step 04: Command Prompt window will appear on your Computer Screen**



* + - **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**

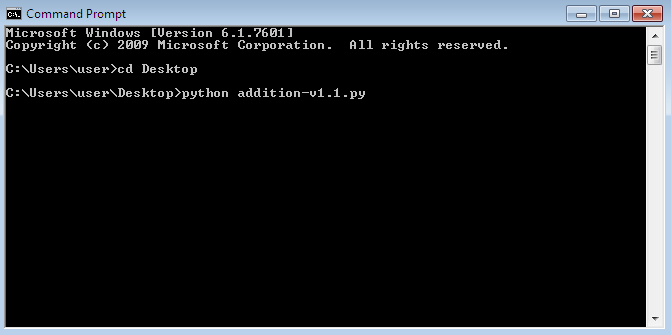
|  |
| --- |
| **cd Desktop** |

* + - * **Step 5.2: The cmd will enter to the Desktop Folder**

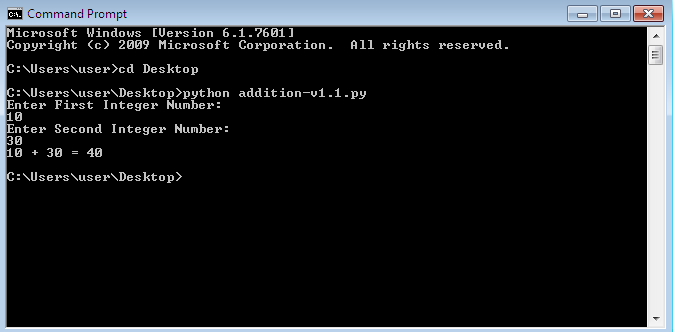


* + - **Step 06: Write the following Command on cmd. It will execute the Program in Python (.py) File** 
      * **Step 6.1: Press Enter key**

|  |
| --- |
| **python addition-v1.1.py** |

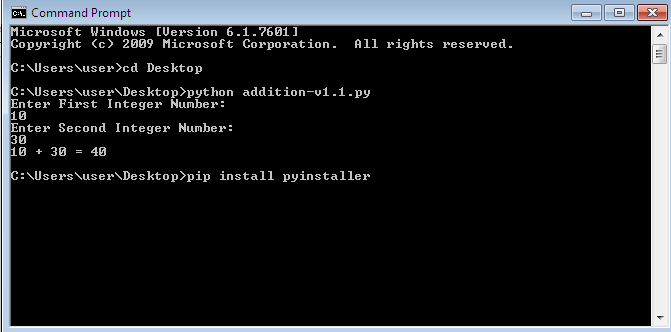


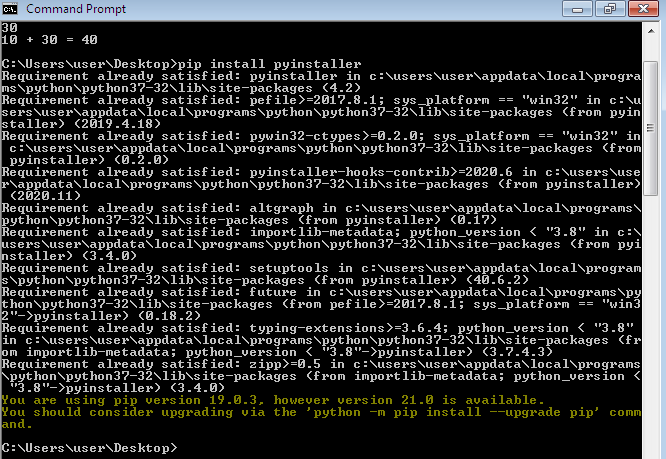
* + - * **Step 6.2: The addition-v1.1.py Software will be executed (see Figure below)**



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

|  |
| --- |
| **pip install pyinstaller** |



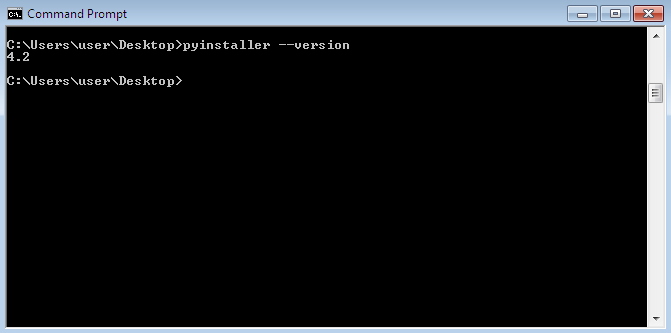


* + - **Step 08: Verify installation of pyinstaller by using the following Command**
      * **Step 8.1: Press Enter Key**

|  |
| --- |
| **pyinstaller –version** |

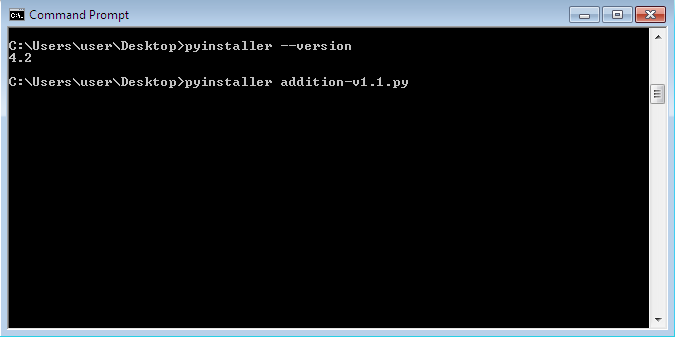


* + - * **Step 8.2: The pyinstaller version will be displayed**
        + **In my case, it is 4.2**

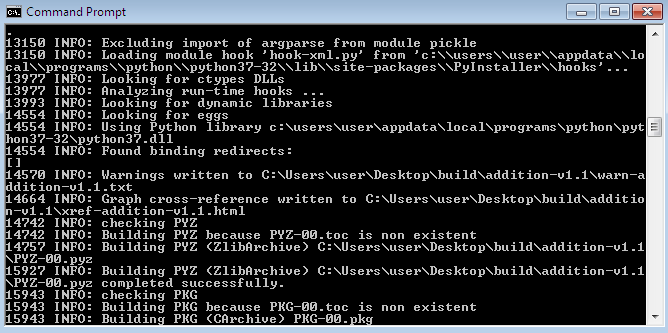


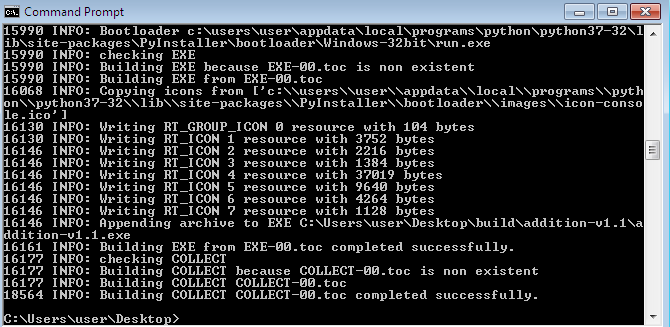
* + - **Step 09: In order to convert a Python (.py) File to an Executable (.exe) File write following Command**
      * **Step 9.1: Press Enter key**

|  |
| --- |
| **pyinstaller addition-v1.1.py** |

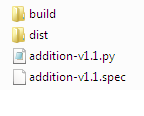


* + - * + **It starts Building Analysis**

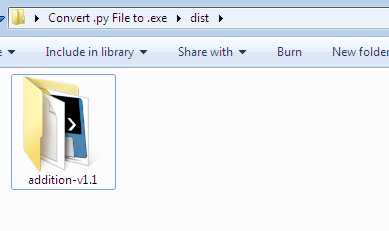




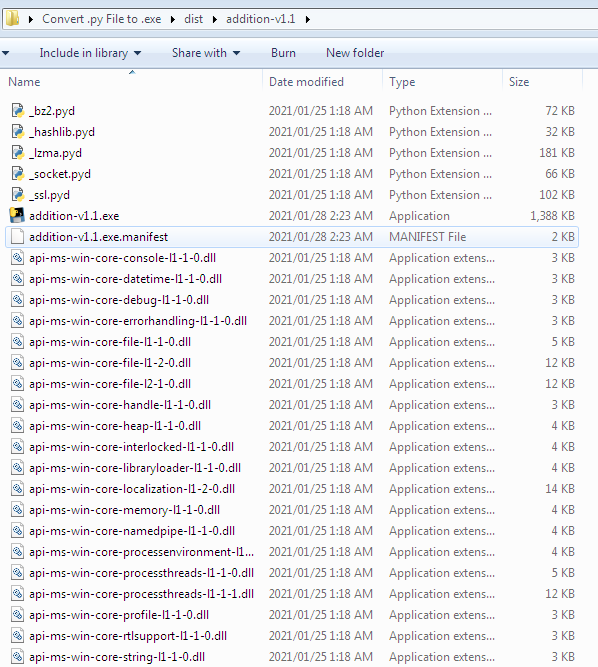
* + - **Step 10: After successful Analysis, Following Folders will be displayed on the navigated Folder (where .py File is placed)**
      * **build**
      * **dist**
      * **addition-v1.1.spec**

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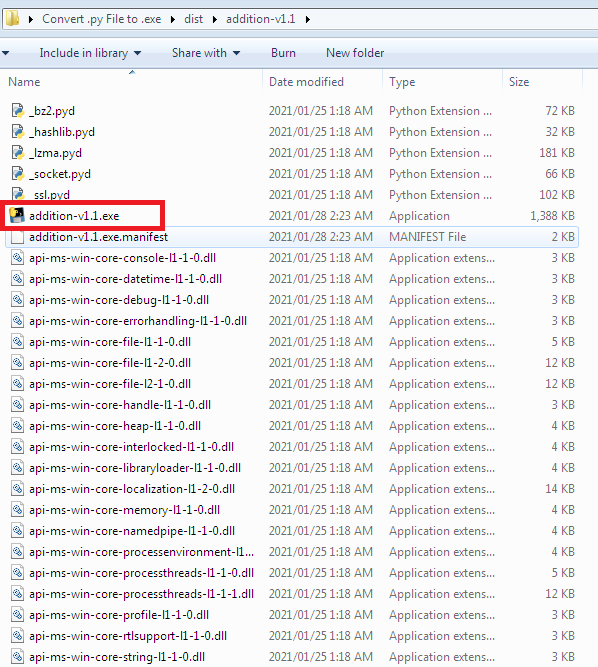
* + - **Step 11: Click on dist Folder**
      * **The addition-v1.1.exe Folder will be located**



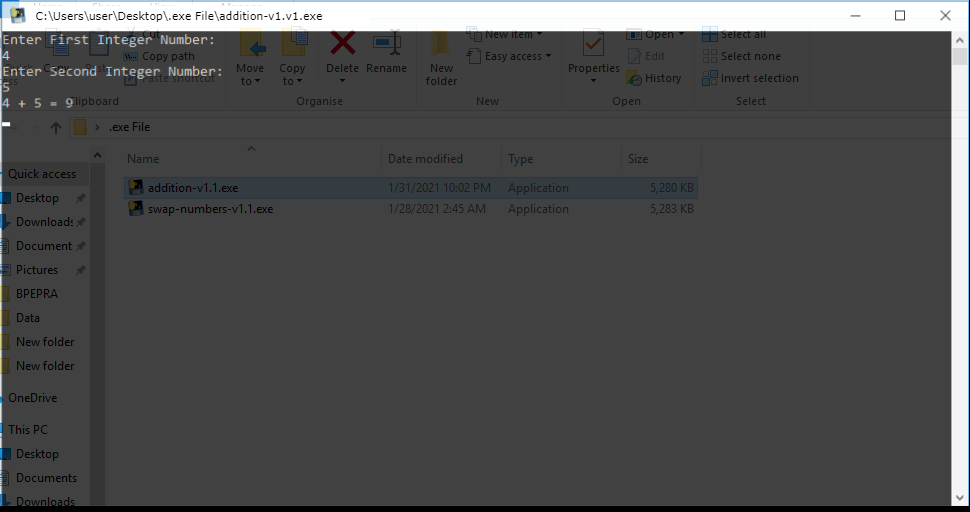
* + - **Step 12: Click on addition-v1.1 Folder**
      * **Step 12.1: Inside addition-v1.1 Folder, there are almost 54 items**



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

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

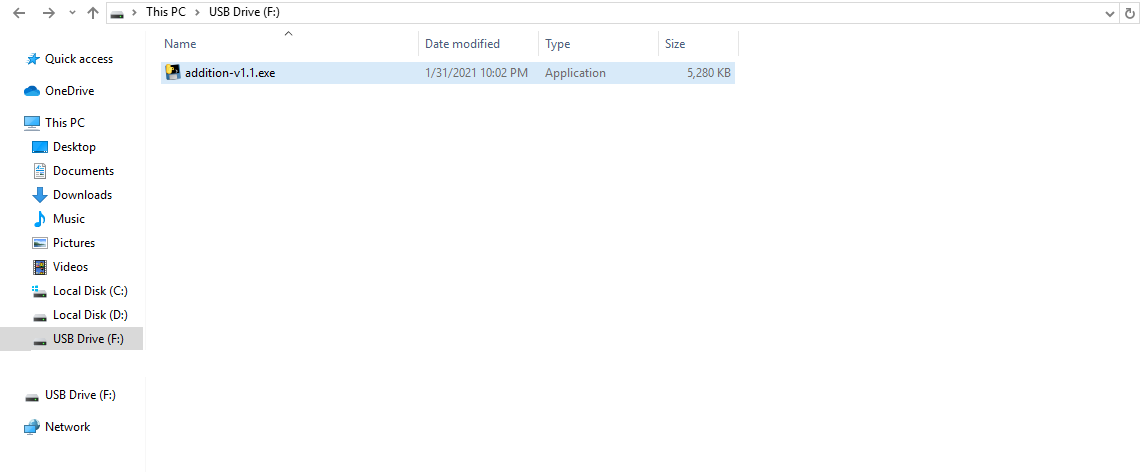


**SLIDE**

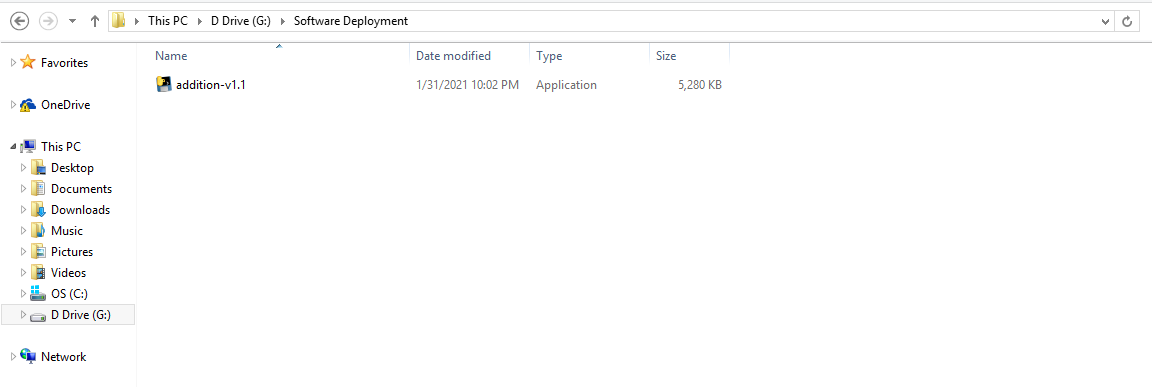
**Example 01 - Software Life Cycle (Application Phase) Cont…**

**Steps – Deploying the Executable File on Client Machine**

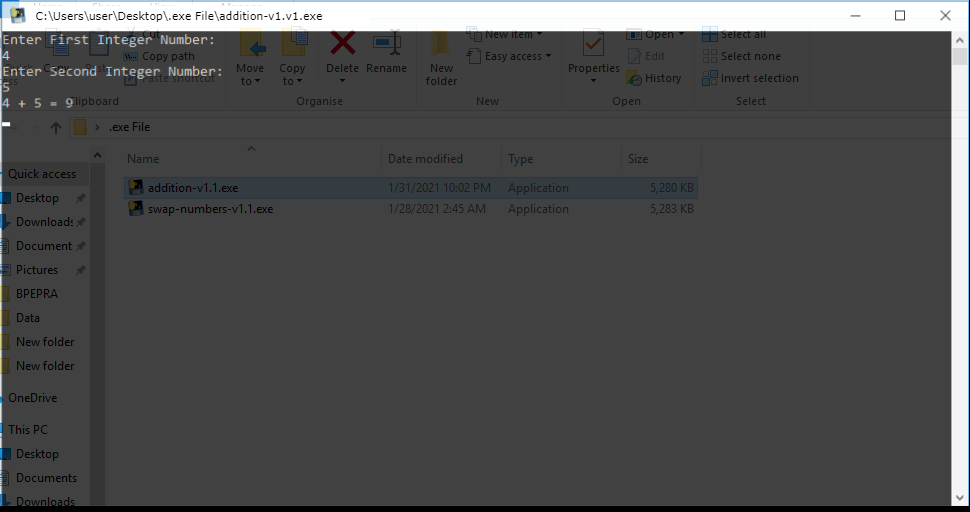
* **Alhumdulilah, I have converted the .py file to .exe File and saved in my Laptop. In Sha Allah, now I will deploy the .exe File on the Clint Machine in the following Steps** 
  + **Step 01: I will Copy the addition-v1.1.exe File from my Laptop into a USB Drive**

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* + **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 😊**



**SLIDE**

**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)**