

# Internship Report - Week 1

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## Task 1: Python Environment Setup

### Task Objective:

Set up the Python development environment by installing Python, an IDE (VS Code), extensions, and verifying package manager (pip).

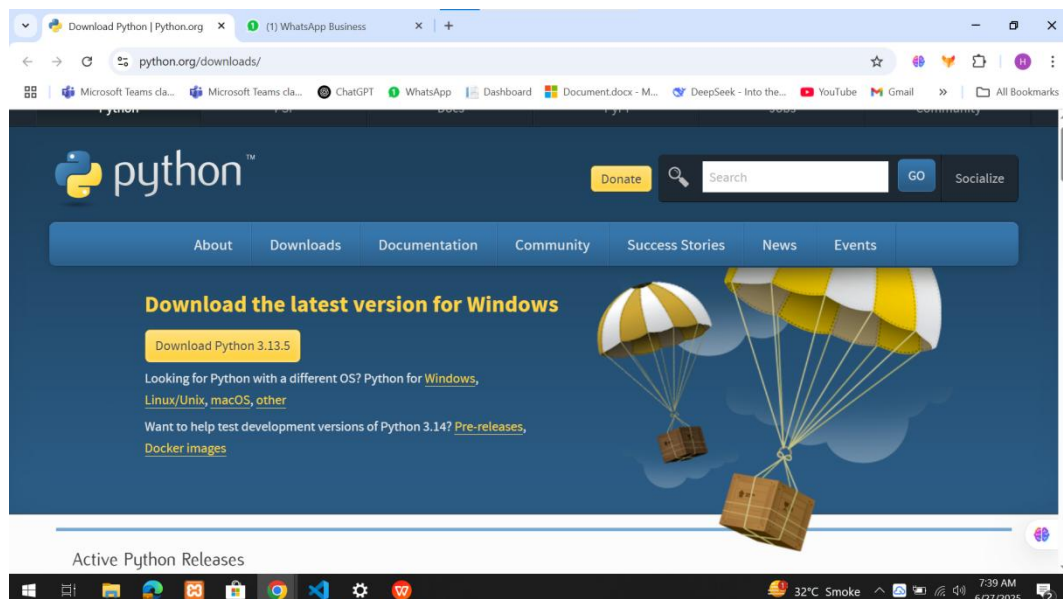
### 1. What I Did (Step-by-Step):

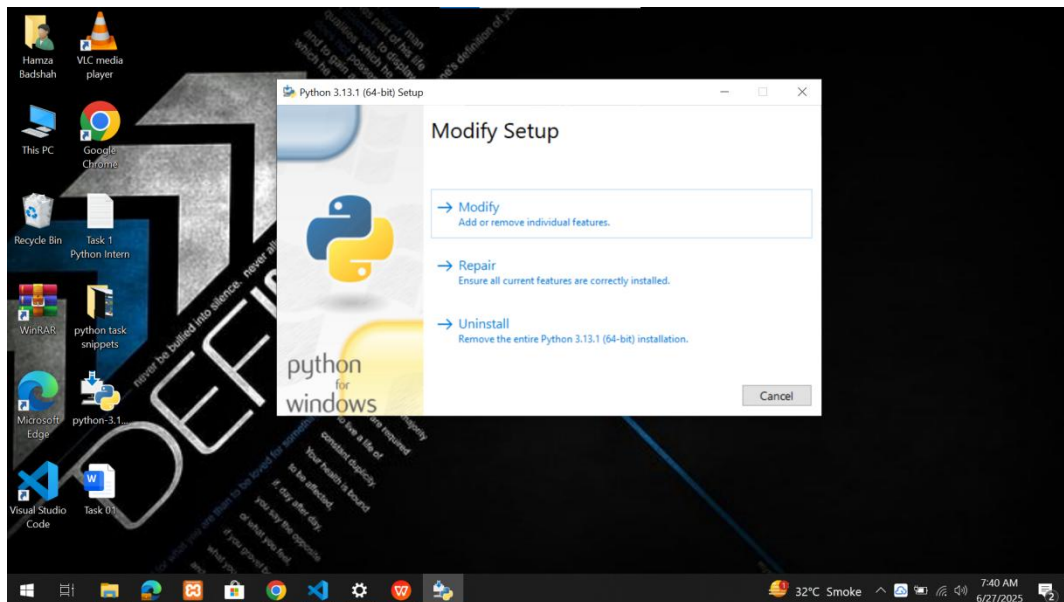
- Installed Python 3.13 from the official python.org site.
- Added Python to the system PATH during installation.
- Installed Visual Studio Code (VS Code) as my preferred IDE.
- Installed essential extensions in VS Code:
- Verified that pip was working by running `pip --version`.
- Attempted to install common packages using `pip install numpy, pandas, matplotlib`.
- Encountered a timeout error but learned how to troubleshoot it.

### 2. Screenshots:

#### 1. Python installation

Python download and install setup was done the setup earlier.





## 2. Pip version Installation

I write the command for the pip installation in the **cmd** and install the python package, Including numpy, pandas, matplotlib.

```

C:\Windows\system32\cmd.exe
C:\Users\hp`>`
C:\Users\hp`>`pip install numpy pandas matplotlib --timeout=100
Defaulting to user installation because normal site-packages is not writeable
Collecting numpy
  Using cached numpy-2.3.1-cp313-cp313-win_amd64.whl.metadata (60 kB)
Collecting pandas
  Downloading pandas-2.3.0-cp313-cp313-win_amd64.whl.metadata (19 kB)
Collecting matplotlib
  Downloading matplotlib-3.10.3-cp313-cp313-win_amd64.whl.metadata (11 kB)
Collecting python-dateutil>=2.8.2 (from pandas)
  Downloading python_dateutil-2.9.0.post0-py2.py3-none-any.whl.metadata (8.4 kB)
Collecting pytz>=2020.1 (from pandas)
  Downloading pytz-2025.2-py2.py3-none-any.whl.metadata (22 kB)
Collecting tzdata>=2022.7 (from pandas)
  Downloading tzdata-2025.2-py2.py3-none-any.whl.metadata (1.4 kB)
Collecting contourpy>=1.0.1 (from matplotlib)
  Downloading contourpy-1.3.2-cp313-cp313-win_amd64.whl.metadata (5.5 kB)
Collecting cycler>=0.10 (from matplotlib)
  Downloading cycler-0.12.1-py3-none-any.whl.metadata (3.8 kB)
Collecting fonttools>=4.22.0 (from matplotlib)
  Downloading fonttools-4.58.4-cp313-cp313-win_amd64.whl.metadata (108 kB)
Collecting kiwisolver>=1.3.1 (from matplotlib)
  Downloading kiwisolver-1.4.8-cp313-cp313-win_amd64.whl.metadata (6.3 kB)
Collecting packaging>=20.0 (from matplotlib)
  Downloading packaging-25.0-py3-none-any.whl.metadata (3.3 kB)
Collecting pillow>=8 (from matplotlib)
  Downloading pillow-11.2.1-cp313-cp313-win_amd64.whl.metadata (9.1 kB)
Collecting pyparsing>=2.3.1 (from matplotlib)
  Downloading pyparsing-3.2.3-py3-none-any.whl.metadata (5.0 kB)

```

## 3. Pip list

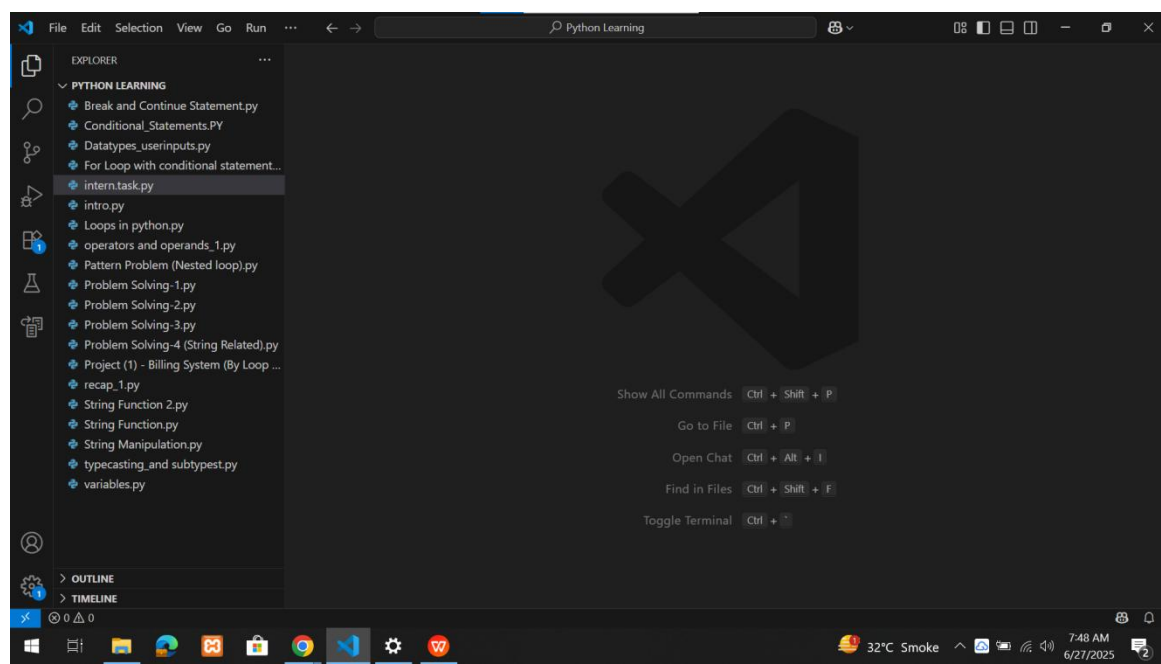
1. Press **Ctrl+R** and type **cmd** in the dialogue box.
2. Write a pip list and press enter.

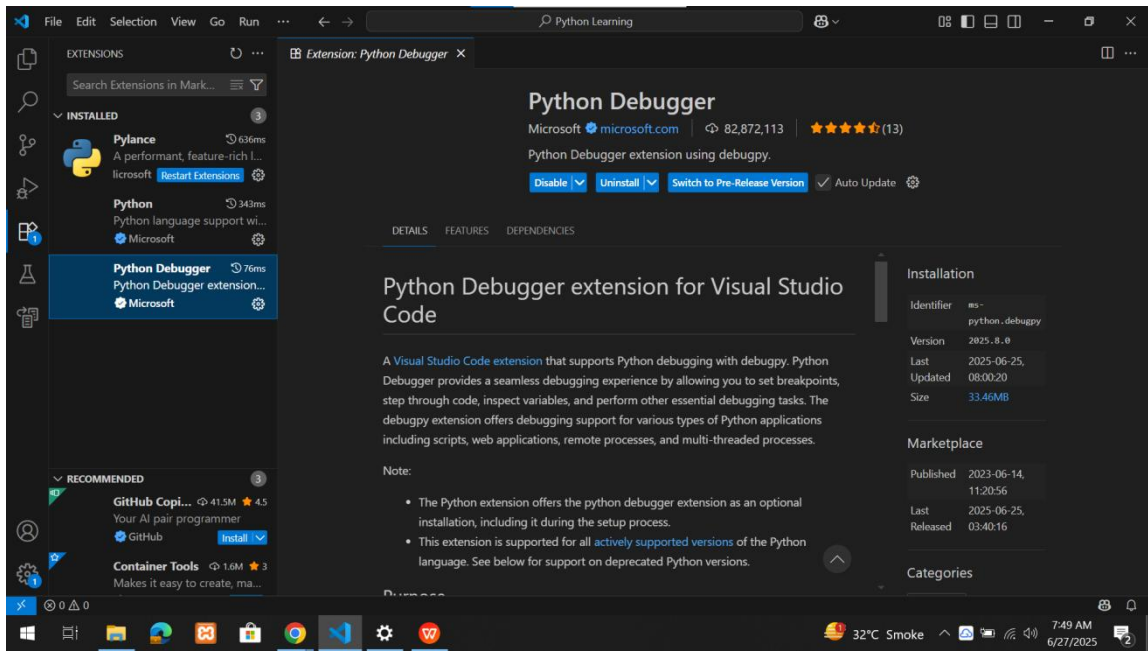
```
C:\Users\hp``>
C:\Users\hp``>pip list
Package            Version
-----
contourpy          1.3.2
cyclar             0.12.1
fonttools          4.58.4
kiwisolver         1.4.8
matplotlib         3.10.3
numpy              2.3.1
packaging          25.0
pandas            2.3.0
pillow            11.2.1
pip               24.3.1
pyparsing         3.2.3
python-dateutil   2.9.0.post0
pytz              2025.2
six               1.17.0
tzdata            2025.2

C:\Users\hp``>
```

#### 4. VS Code/Python Extension Setup

Go to search bar and type a python extension and install it.





## Learnings and Challenges:

1. Understood the components of a development environment.
2. Faced network timeout during pip install.
3. Learned about timeout flags and mirror URLs.

## Task 2: Print Personal Info with Python

### Task Objective:

Write a Python script that prints name, hobby, age, and reason for learning Python.

### 1. What I Did:

- Created a script using both variables and formatted output.
- Verified the output in VS Code terminal.

### 2. Code Snippet with Output

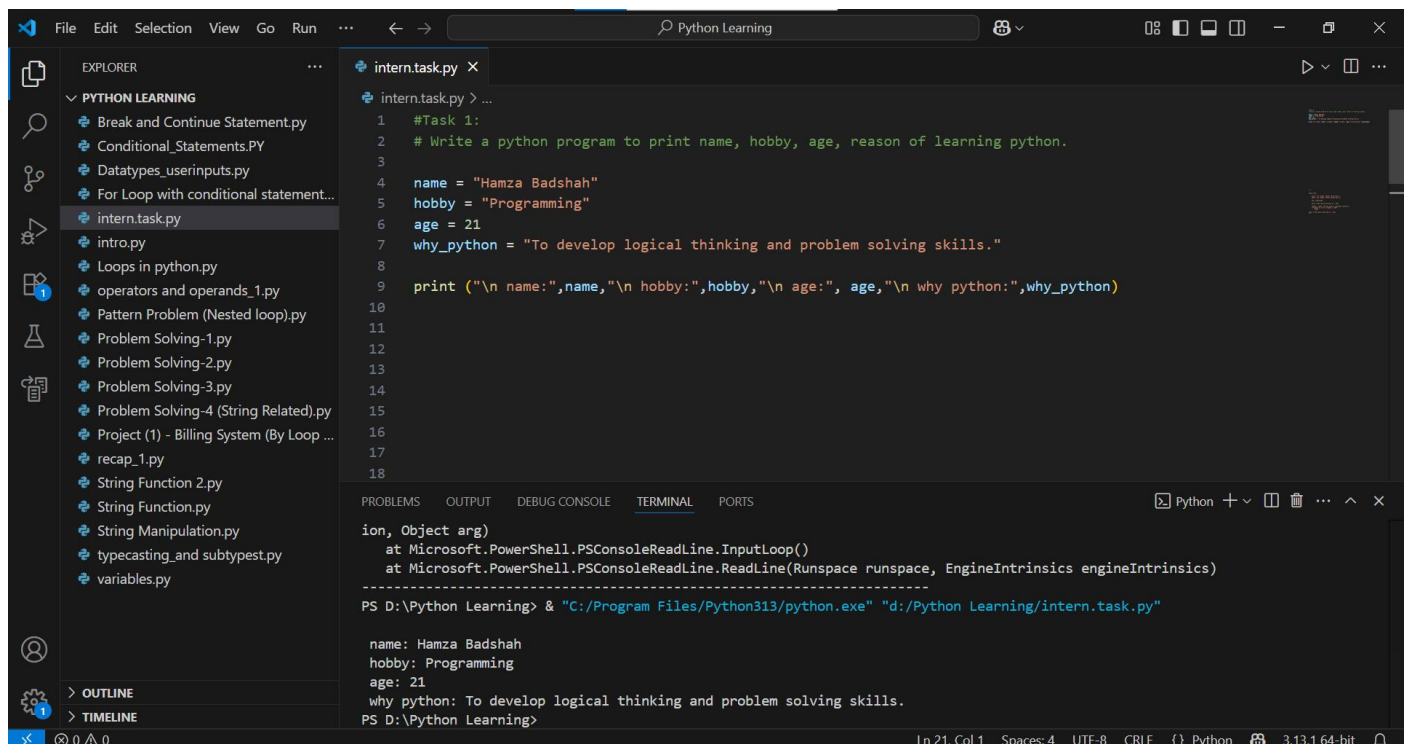
```
name = "Hamza Badshah"
```

```
hobby = "Programming"
```

```
age = 21
```

```
why_python = "To develop logical thinking and problem solving skills"
```

```
print ("\n name:",name,"\n hobby:",hobby,"\n age:", age,"\n goal:",why_python)
```



```
intern.task.py > ...
1 #Task 1:
2 # Write a python program to print name, hobby, age, reason of learning python.
3
4 name = "Hamza Badshah"
5 hobby = "Programming"
6 age = 21
7 why_python = "To develop logical thinking and problem solving skills."
8
9 print ("\n name:",name,"\n hobby:",hobby,"\n age:", age,"\n why python:",why_python)
10
11
12
13
14
15
16
17
18
```

```
ion, Object arg)
  at Microsoft.PowerShell.PSConsoleReadLine.InputLoop()
  at Microsoft.PowerShell.PSConsoleReadLine.ReadLine(Runspace runspace, EngineIntrinsics engineIntrinsics)
-----
PS D:\Python Learning> & "C:/Program Files/Python313/python.exe" "d:/Python Learning/intern.task.py"

name: Hamza Badshah
hobby: Programming
age: 21
why python: To develop logical thinking and problem solving skills.
PS D:\Python Learning>
```

### 3. Learnings and Challenges:

- Practiced use of variables, strings, and print statements.
- No such a challenge I have faced as I am familiar with basic python execution.

## Task 3: Addition of Two Numbers

### Task Objective:

Write a Python script that takes two numbers as input and prints their sum.

#### 1. What I Did:

- Used input() to get values from user.
- Converted them to integers.
- Printed their sum.

## 2. Code Snippet with output:

Terminal asking for input and displaying the sum.

#Task 02:

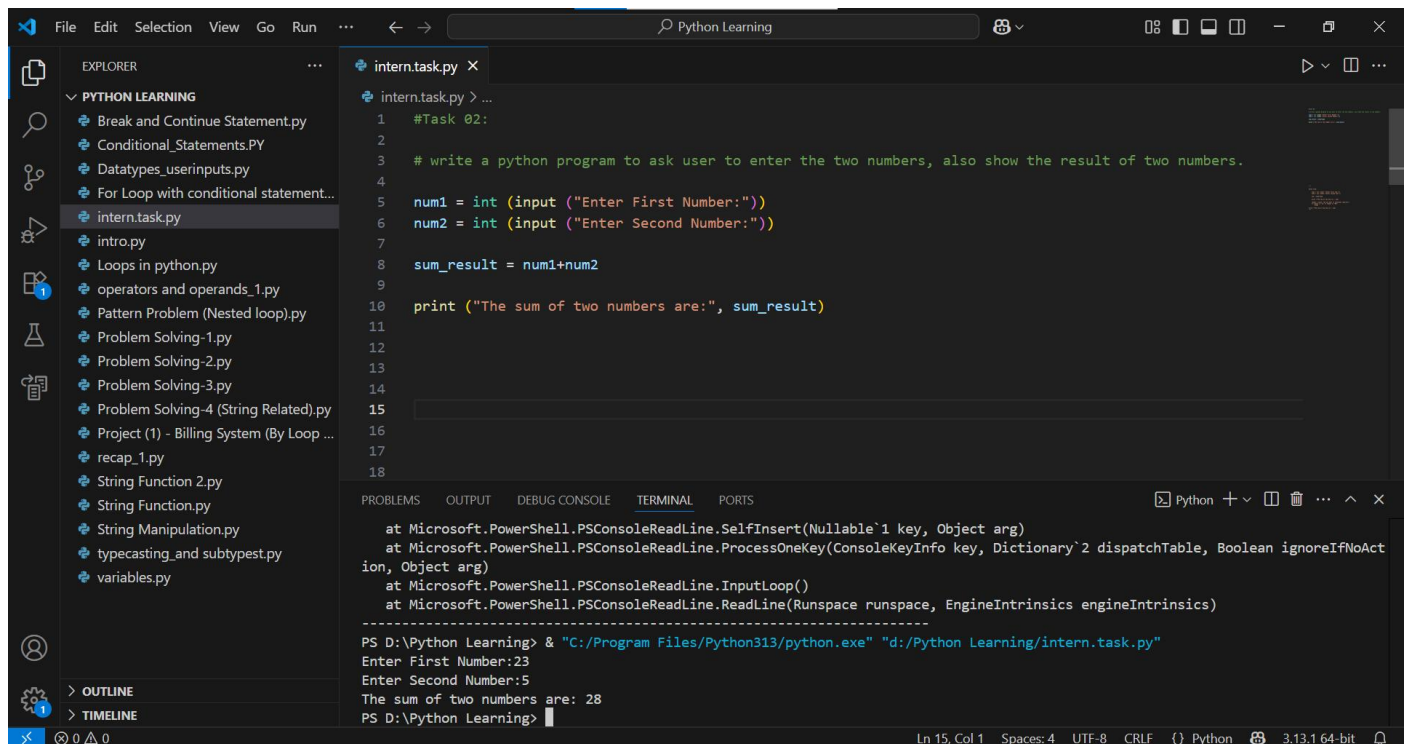
# write a python program to ask user to enter the two numbers, also show the result of two numbers.

```
num1 = int (input ("Enter First Number:"))
```

```
num2 = int (input ("Enter Second Number:"))
```

```
sum_result = num1+num2
```

```
print ("The sum of two numbers are:", sum_result)
```



The screenshot shows a Visual Studio Code editor window with a file named `intern.task.py` open. The code in the editor is as follows:

```
1 #Task 02:
2
3 # write a python program to ask user to enter the two numbers, also show the result of two numbers.
4
5 num1 = int (input ("Enter First Number:"))
6 num2 = int (input ("Enter Second Number:"))
7
8 sum_result = num1+num2
9
10 print ("The sum of two numbers are:", sum_result)
11
12
13
14
15
16
17
18
```

The bottom panel of the editor shows the output of the program in the terminal. The command prompt is `PS D:\Python Learning> "C:/Program Files/Python313/python.exe" "d:/Python Learning/intern.task.py"`. The output shows the user entering `23` for the first number and `5` for the second number, resulting in the sum `28`.

```
at Microsoft.PowerShell.PSConsoleReadLine.Insert(Nullable`1 Key, Object arg)
at Microsoft.PowerShell.PSConsoleReadLine.ProcessOneKey(ConsoleKeyInfo key, Dictionary`2 dispatchTable, Boolean ignoreIfNoAction, Object arg)
at Microsoft.PowerShell.PSConsoleReadLine.InputLoop()
at Microsoft.PowerShell.PSConsoleReadLine.ReadLine(Runspace runspace, EngineIntrinsics engineIntrinsics)
-----
PS D:\Python Learning> "C:/Program Files/Python313/python.exe" "d:/Python Learning/intern.task.py"
Enter First Number:23
Enter Second Number:5
The sum of two numbers are: 28
PS D:\Python Learning>
```

## 3. Learnings and Challenges:

- Learned to accept user input and perform basic arithmetic.
- Practiced type conversion from string to int.