

# CLASS 2<sup>ND</sup> NOTES:

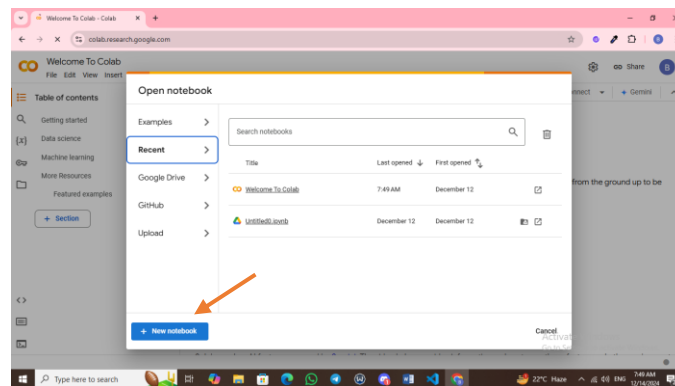
## GOOGLE COLAB:

### Step 1: Open Google Colab:

1. Open your browser and go to [Google Colab](https://colab.research.google.com).
2. Log in with your **Google account** (if not already logged in).

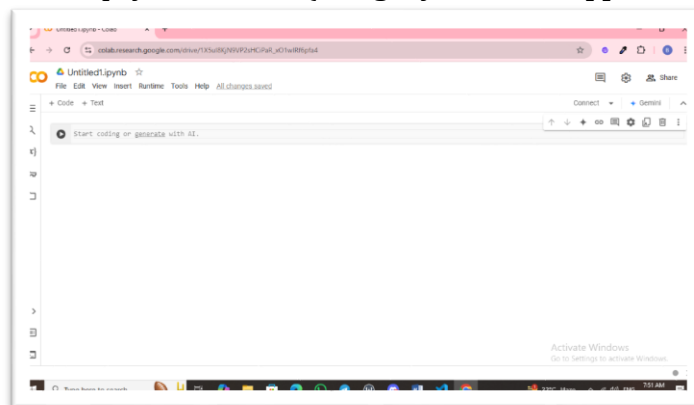
### Step 2: Create a New Notebook:

1. Click on “**New Notebook**” (you’ll see a blank page with the title *Untitled0.ipynb*).
2. This is your coding workspace, called a **notebook**.

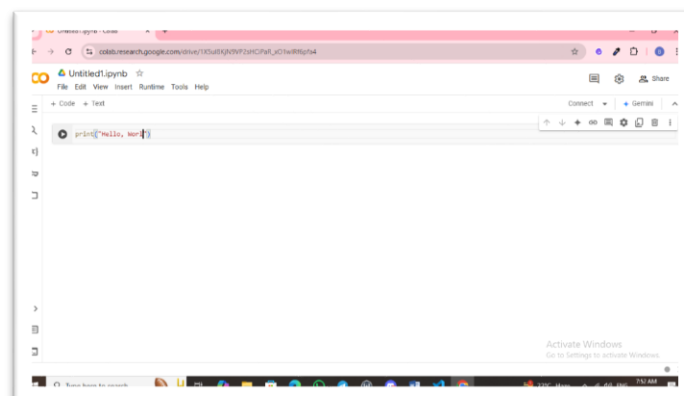


### Step 3: Write the Code:

1. Click on the first empty **code cell** (the gray box with [ ]: on the left).

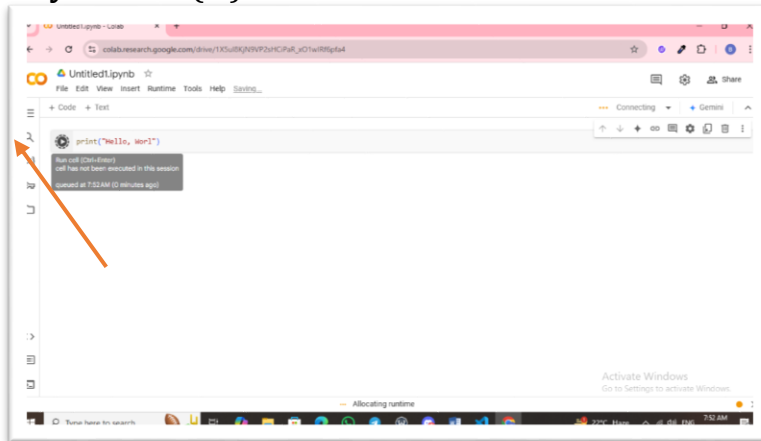


2. Type this Python code:  
`print("Hello, World!")`

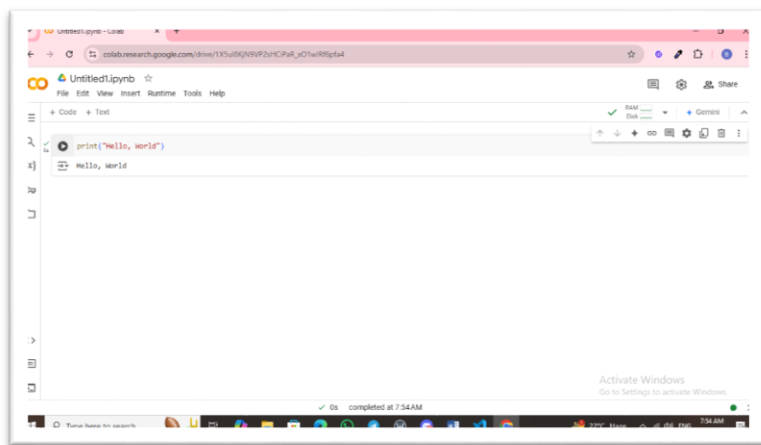


## Step 4: Run the Code:

1. Click the **Play button** (▶) on the left side of the code cell.



2. Google Colab will run your code, and you'll see the output below:  
**Hello, World**



## VISUAL CODE STUDIO:

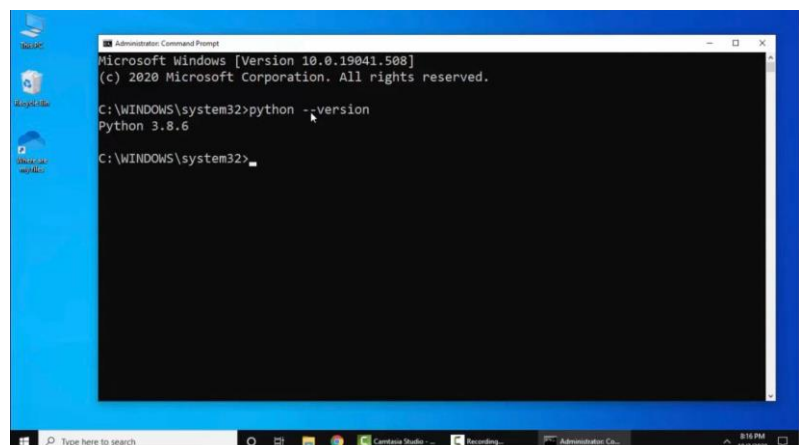
### Step 1: Install Python:

1. Go to [python.org/downloads](https://python.org/downloads)
2. Click **Download Python**.
3. Open the file and:
  - Tick **"Add Python to PATH"**.
  - Click **Install Now**.
4. Done! Python is installed.

Let's check python successfully installed or not.

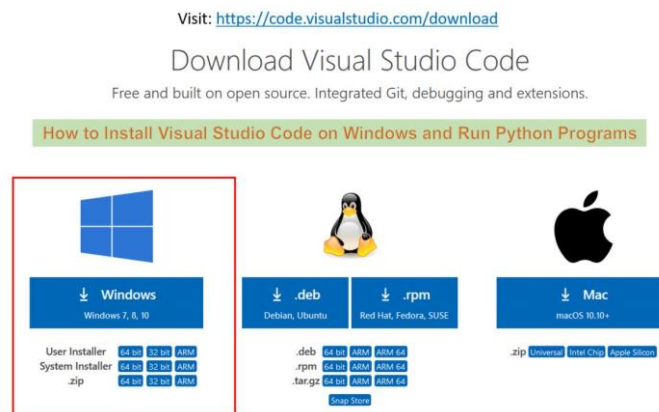
Open cmd from start menu.

Type `python --version` then enter



## Step 2: Install VS Code:

1. Go to [code.visualstudio.com](https://code.visualstudio.com).
2. Click **Download**.



3. Open the file and install it (use default options).
4. Done! VS Code is installed.

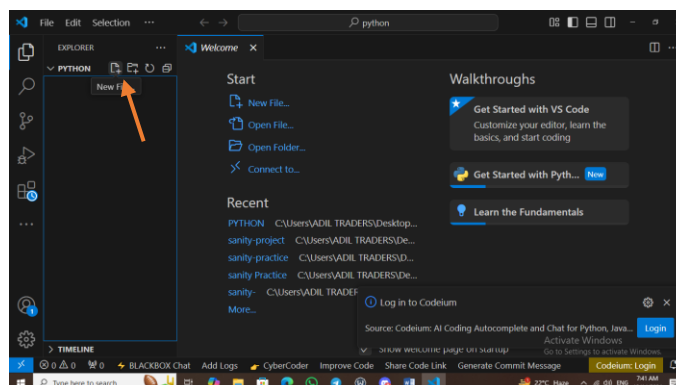


## Step 3: Open VS Code:

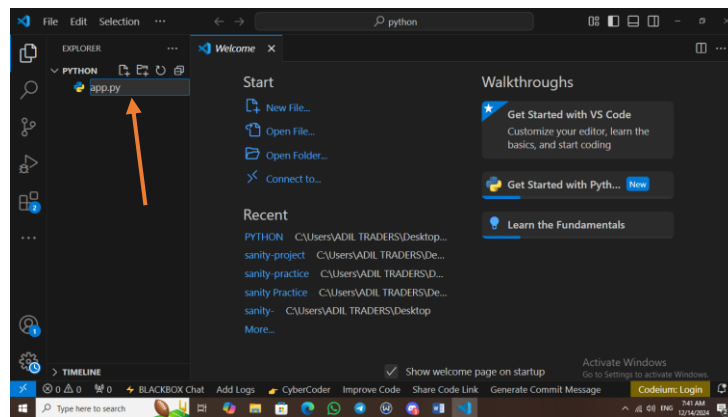
1. Open **Visual Studio Code** from your desktop or Start menu.

## Step 4: Write the Code

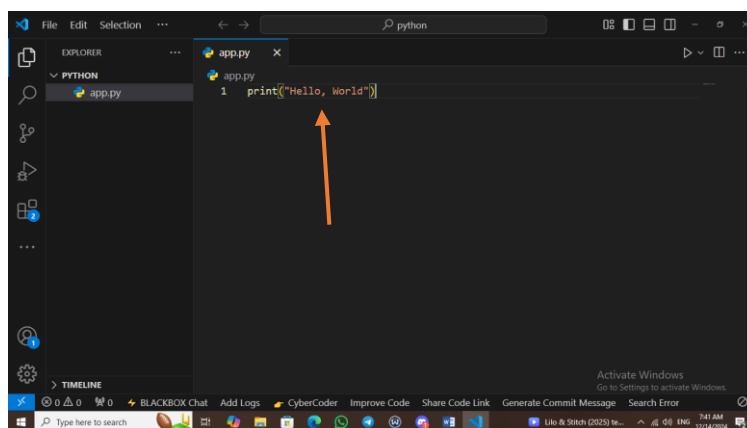
1. Click **File > New File** in VS Code.



2. Click **File** > name it **app.py**

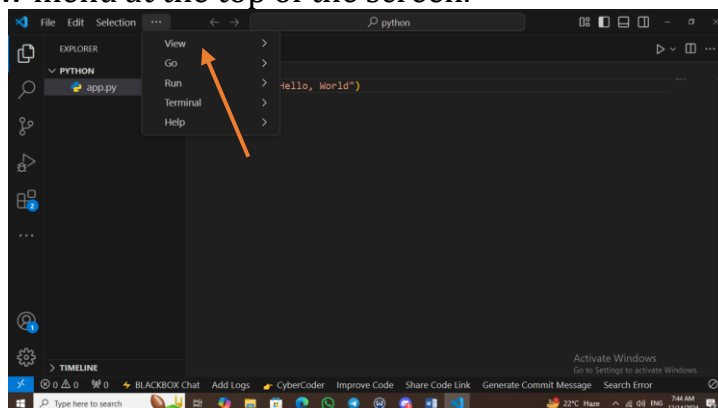


3. Type this code in the file:  
`print("Hello, World!")`

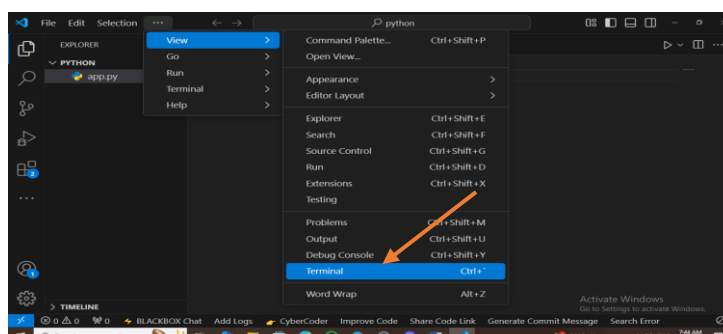


## Step 5: Run the Code

1. Open terminal in **Visual Studio code**
2. Click on the **View** menu at the top of the screen.



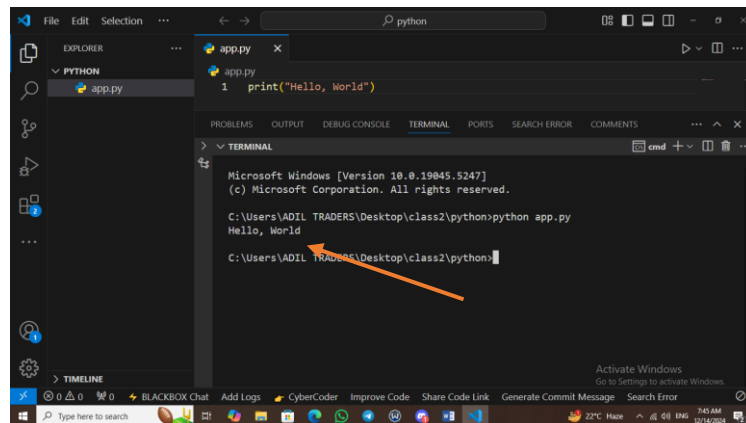
3. Select **Terminal** from the dropdown.



4. In the terminal,  
type: `python app.py` (your file name)

1. Press **Enter**.

You'll see: Hello, World!



```
File Edit Selection ... python
EXPLORER
PYTHON
app.py
1 print("Hello, World")
TERMINAL
Microsoft Windows [Version 10.0.19045.5247]
(c) Microsoft Corporation. All rights reserved.
C:\Users\ADIL TRADERS\Desktop\class2\python>python app.py
Hello, World
C:\Users\ADIL TRADERS\Desktop\class2\python>
```

## Shortcut to Open the Terminal

Press **Ctrl + `** (the backtick key is just below the Esc key)

## Python variable:

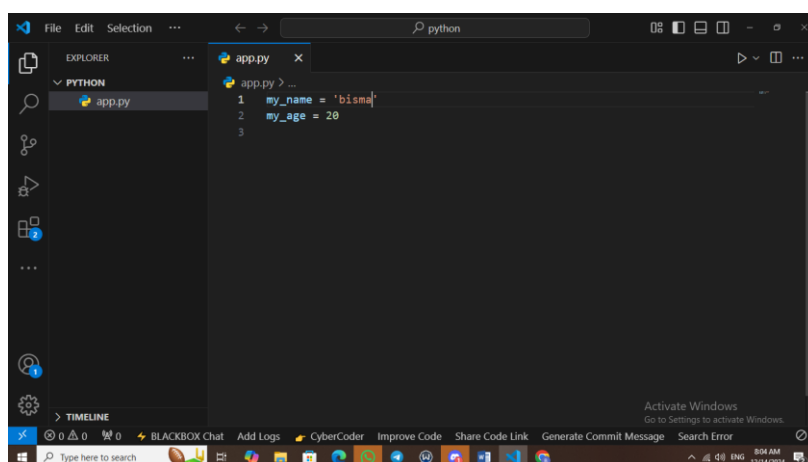
### What is a variable?

A variable is like a container that stores information for later use. For example, you can store your name, a number, or any data in it.

Q: How to create a variable?

- Pick a name for your variable (e.g., age, name, or score).
- Use the = sign to give it a value.

Example:



```
File Edit Selection ... python
EXPLORER
PYTHON
app.py
1 my_name = 'bisma'
2 my_age = 20
3
```

## Rules for variable names

- Variable names **must start with a letter** (e.g., x, name) or an underscore \_.
- No spaces (use snake\_case like my\_variable).
- Don't use numbers at the beginning (2name is wrong, but name2 is fine)