**GitHub prof:** <https://github.com/sojog/Python-NN-Machine-Learning-february>

**Mail prof:** [hello@silviuojog.com](mailto:hello@silviuojog.com)

**Github-ul meu**: https://github.com/faust030/PythonTraining\_feb2025

**Day1:**

Silviu Ojog:

* Trainer full time
* Doctorat in blockchain

Structura cursului:

* Pranz: 12:30 – 13:30
* Pauza 10:30 – 10:45

Conform **tiobe** index: este cel mai popular limbaj – de vreo 2 ani

* Creste mult din 2017 pt ca creste in popularitate data science
* Prin 2016 Google a facut open source modulul Tensor Flow
  + Open AI a luat finantare de la investitori si au inceput sa antreneze modelul

Python este un limbaj **interpretat**

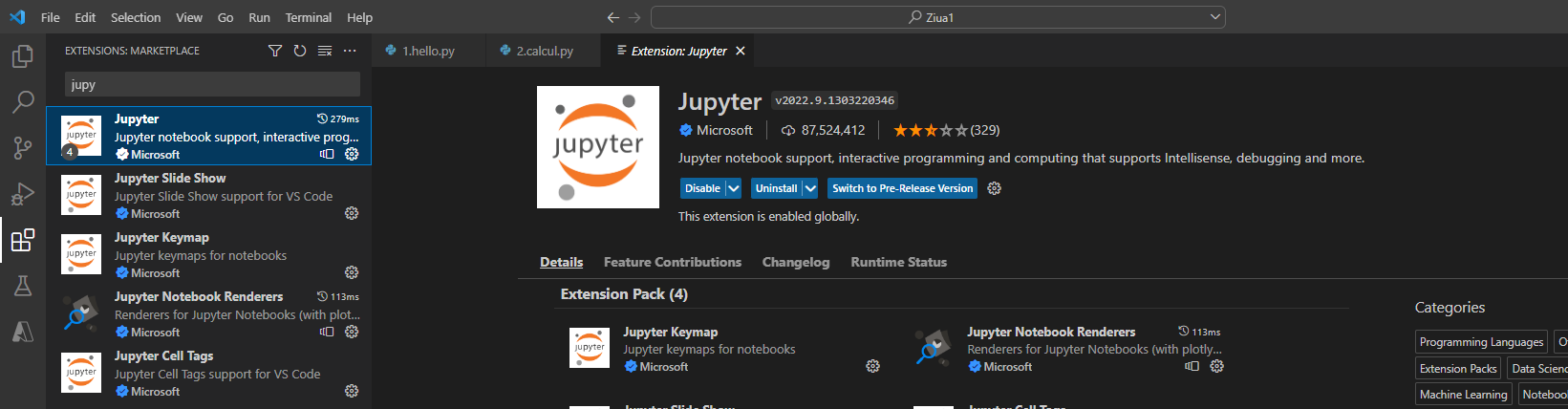
* Codul este analizat linie cu lunie
* As opposed to **compilat** (e.g. Java, C++ unde trebuie sa rulezi tot codul odata, in Python poti rula linie cu linie)

Python v2.x vs v3.x:

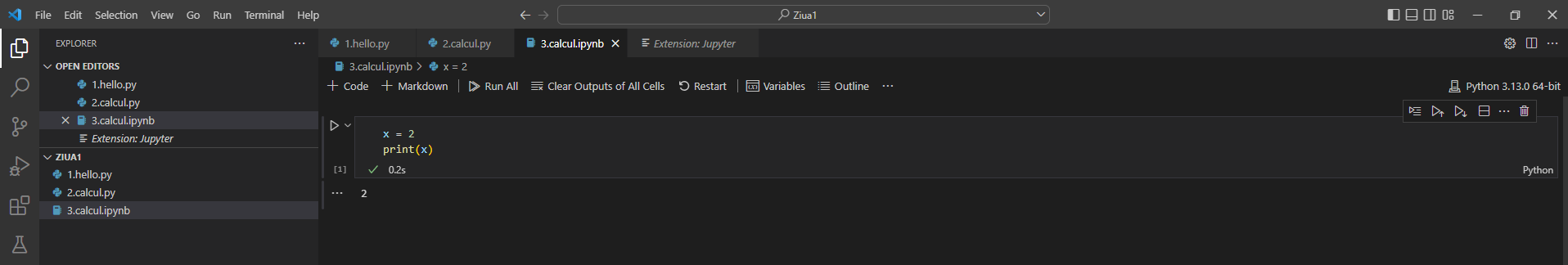
* V2.6 – 2006
* V3.0 – 2006 nu era backwards compatible
  + Codul trebuie rescris
* V2.7 – 2007
* V2.7.18 – 2020
* V3.9.7 – 2020
* V2.x – DEPRECATED (invechit)

**Facem niste exercitii: Python Institute (pythoninstitute.org)** – cea mai importanta certificare pt Python

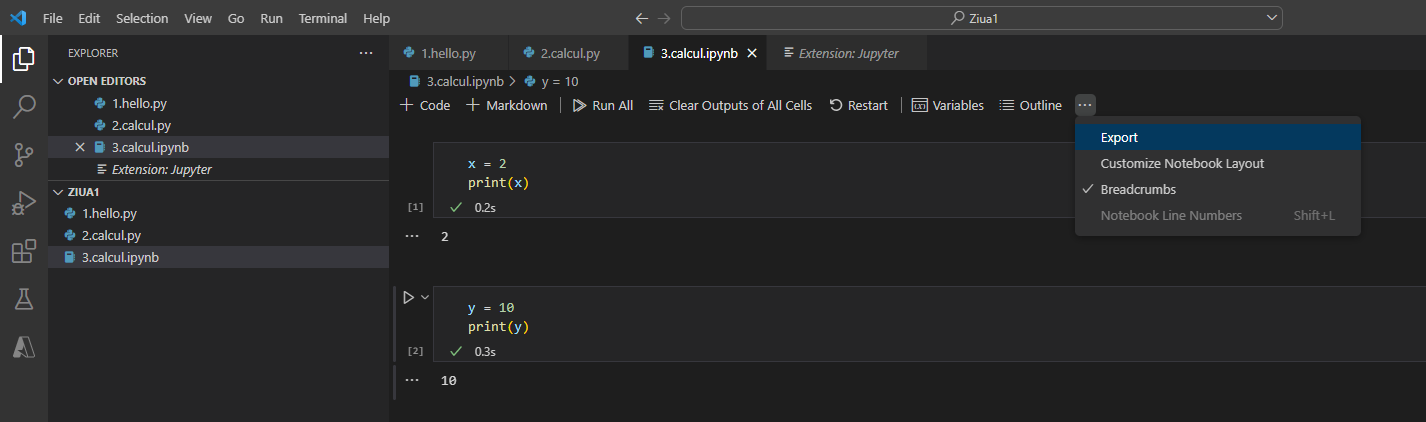
**VSC** are extensie pt **Jupyter**

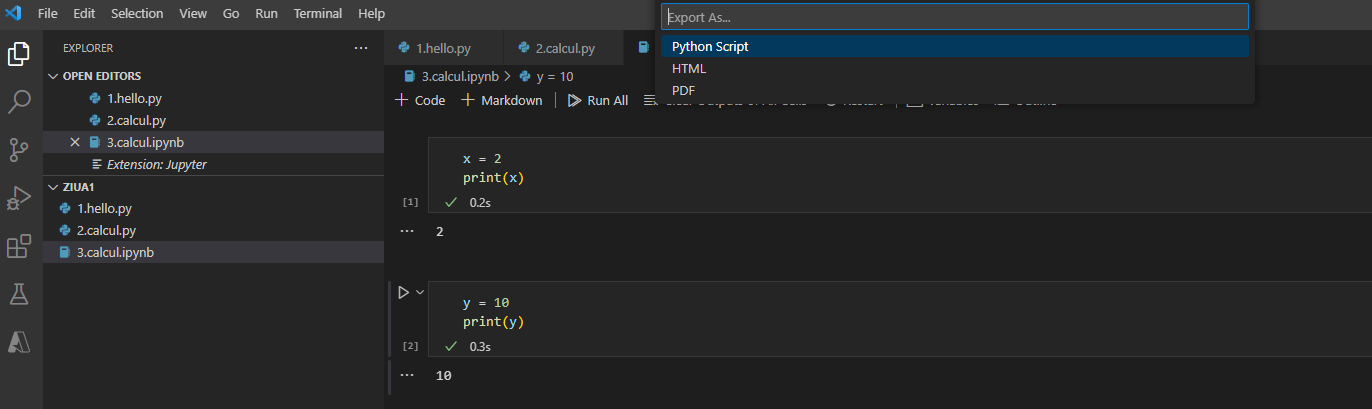


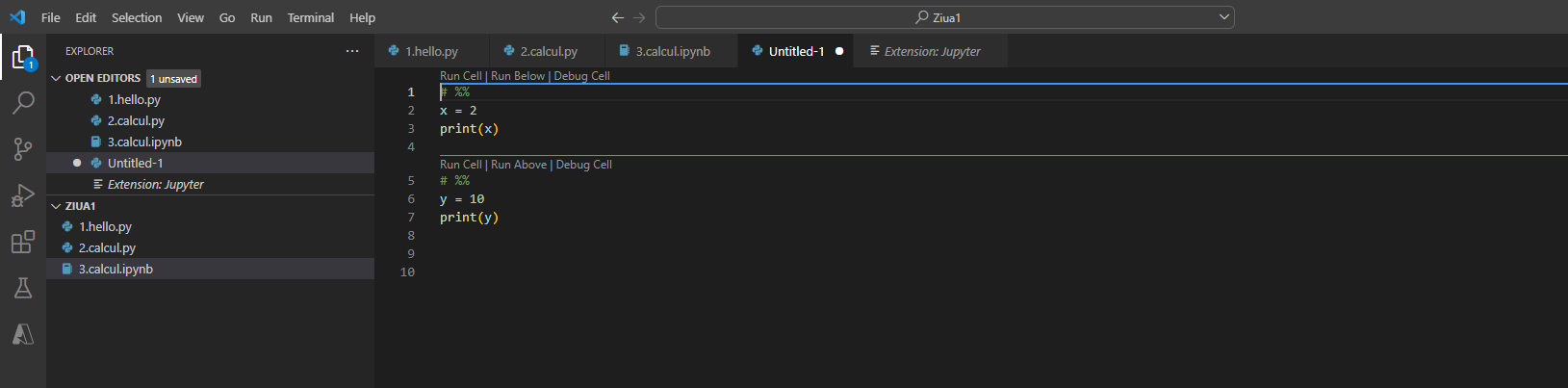
Apoi putem crea fisiere **.ipynb** => se poate rula ca in Jupyter:



Putem apoi converti fisierul usor in **.py** prin: … -> Export -> Python Script



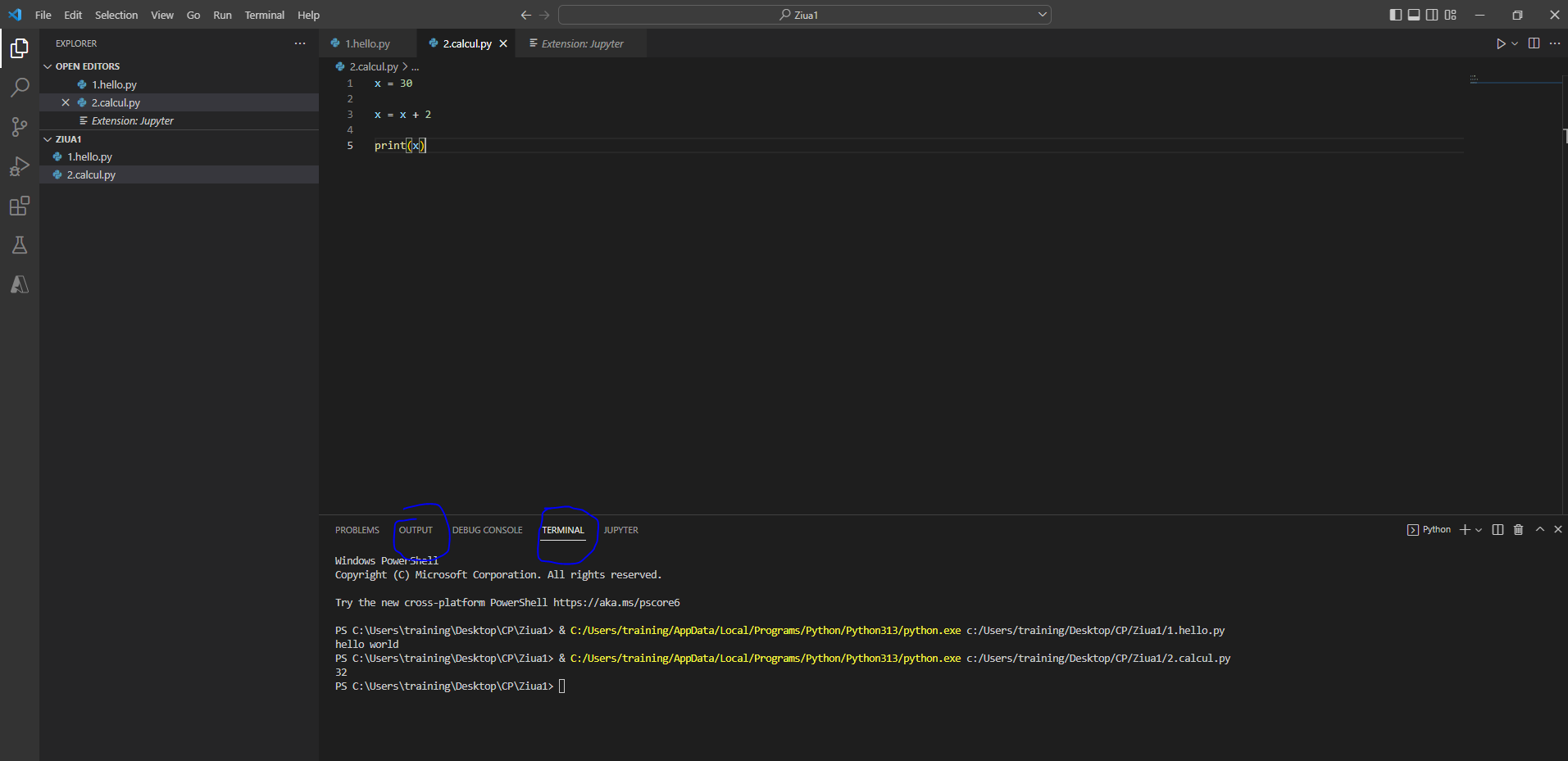




* Pune acele comentarii (# %%) unde erau delimitari de celule

In VSC:

* Output = doar rezultatul
* Terminal -> include si locatia de unde s-a rulat fisierul

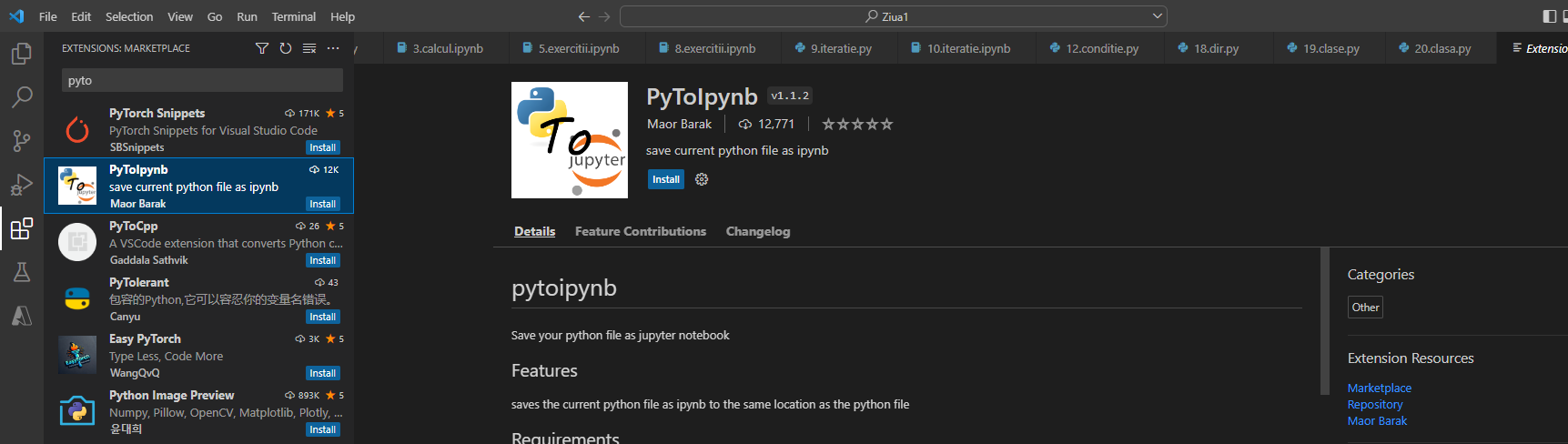


**4 tipuri** de date de baza:

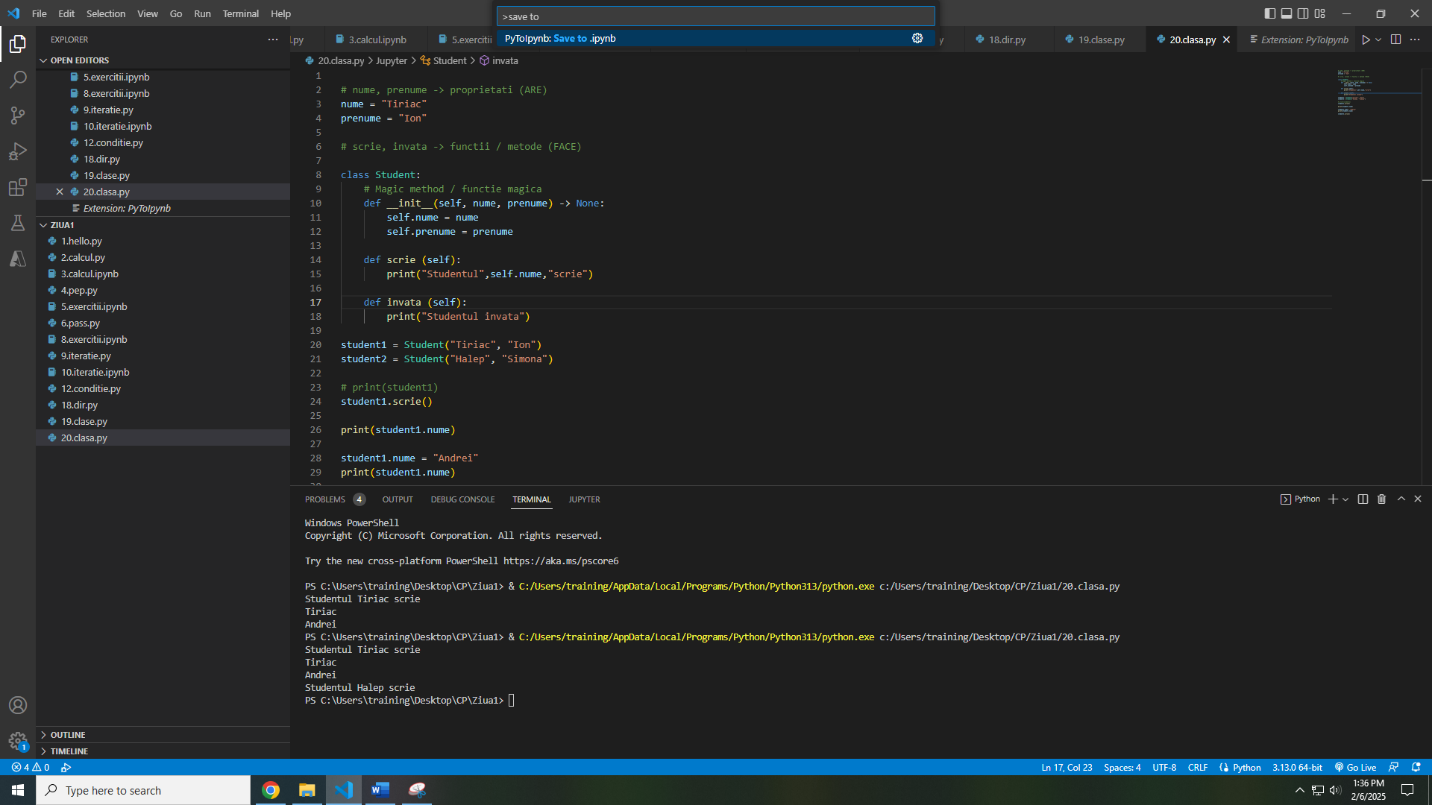
* String
* Float
* Int
* Boolean (True, False)

**Pypi.org** = o pagina unde sunt documentate toate packetele disponibile in Python

Extensie pt connversie .py -> .ipynb



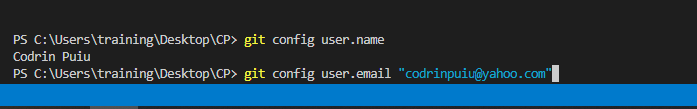
Go to file -> CTRL+SHIFT+P -> save to .ijynb

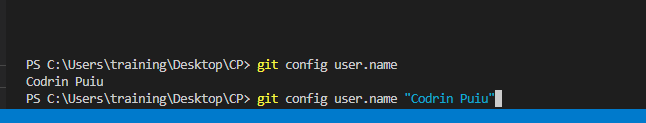


Add “# %%” as a separator for it to know where to separate the cells

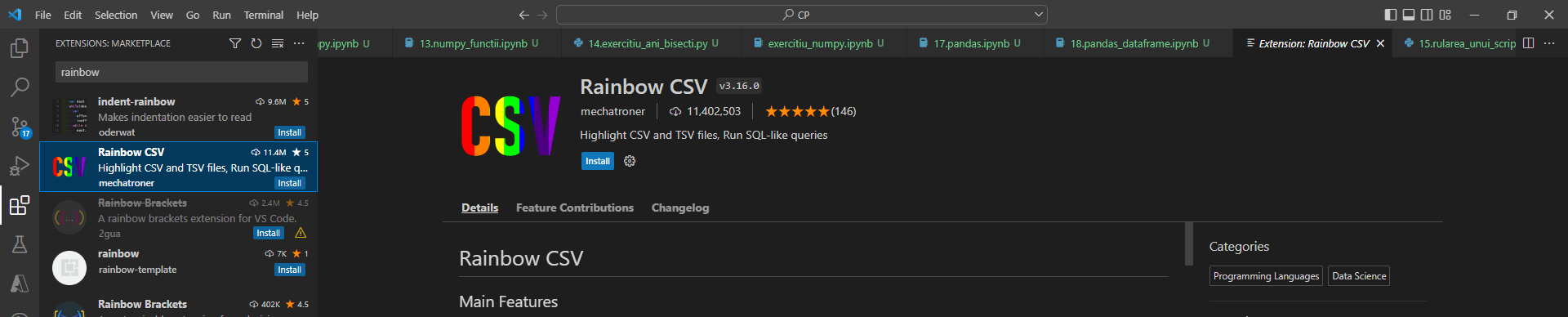
PEP = Python Enhancement Proposals: peps.python.org

**Ziua 2:**





**Coloreaza frumos CSV**:



**Ziua 3:**

HTML = Hyper Text Markup Language

XML = sXtendable Markup Language

HTTP = Hyper Text Transfer Protocol

Client -> (HTTP) -> Server

Server -> (HTML, CSS, JavaScript) -> Client

<http://127.0.0.1/> = local host

HTTP status condes:

1xx – informare (ping)

2xx – success

4xx – eroare client

5xx – eroare server

3xx – redirectare

API = Application Programming Interface

**Ziua 4:**

Framework de server:

* Django -> dar e destul de stufos, suporta aplicatii foarte mare
* Streamlid -> pt Data Science

Machine learning:

* Invatare supervizata
  + Regresie:
    - Sklearn
    - TensorFlow -> ceva mai avansat
    - Keras -> wrapper pt TensorFlow
* Invatare nesupervizata

**PyautoGUI**: <https://pypi.org/project/PyAutoGUI/>

**Machine Learning**

* Supervizata
  + KNN (K nearest neighbours)

**Boston Dataset:**

https://www.kaggle.com/code/prasadperera/the-boston-housing-dataset