

Python

# Herramientas



Rogelio Ferreira Escutia

Profesor / Investigador  
Tecnológico Nacional de México  
Campus Morelia



# Entornos de Programación

# Python - Entornos

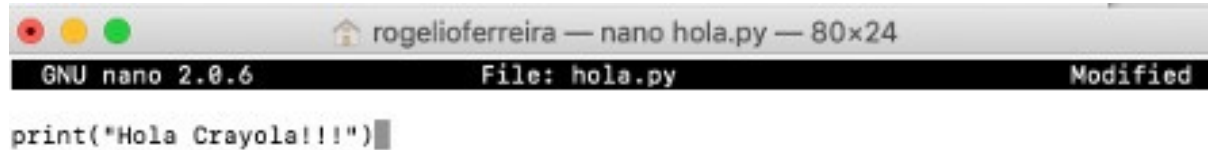
- **Python se puede ejecutar en diferentes entornos:**
  - **Consola.**
  - **Editor de Texto**
  - **IDE.**
  - **Framework.**
  - **Como servidor Web.**
  - **Online.**
  - **En nube.**



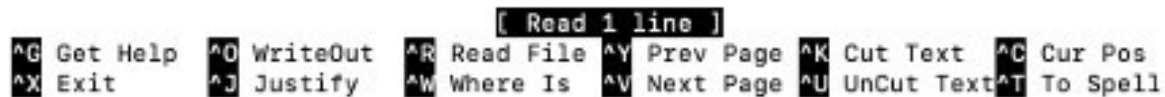
Consola

# Python - Consola

- **> nano hola.py**



```
rogelioferreira — nano hola.py — 80x24
GNU nano 2.0.6 File: hola.py Modified
print("Hola Crayola!!!")
```



```
[ Read 1 line ]
^G Get Help  ^O WriteOut  ^R Read File  ^Y Prev Page  ^K Cut Text  ^C Cur Pos
^X Exit      ^J Justify   ^W Where Is   ^V Next Page  ^U UnCut Text ^T To Spell
```

- **> python hola.py**

**Hola Crayola!!!**



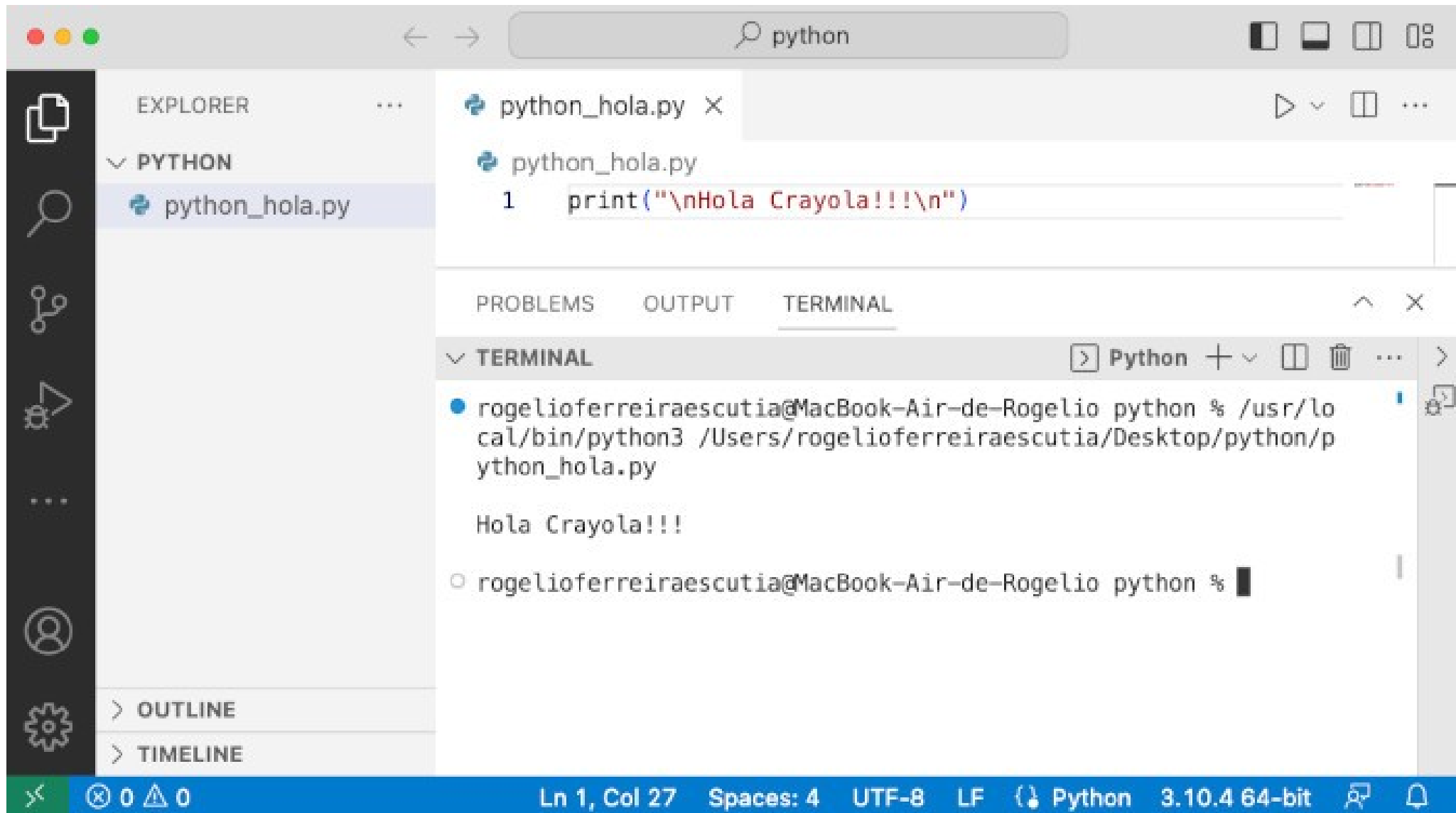
# Editor de Texto

# Python – Editores de Texto

- **Existen varios editores para Python:**
  - **Visual Studio Code**
  - **Brackets.**
  - **Sublime.**



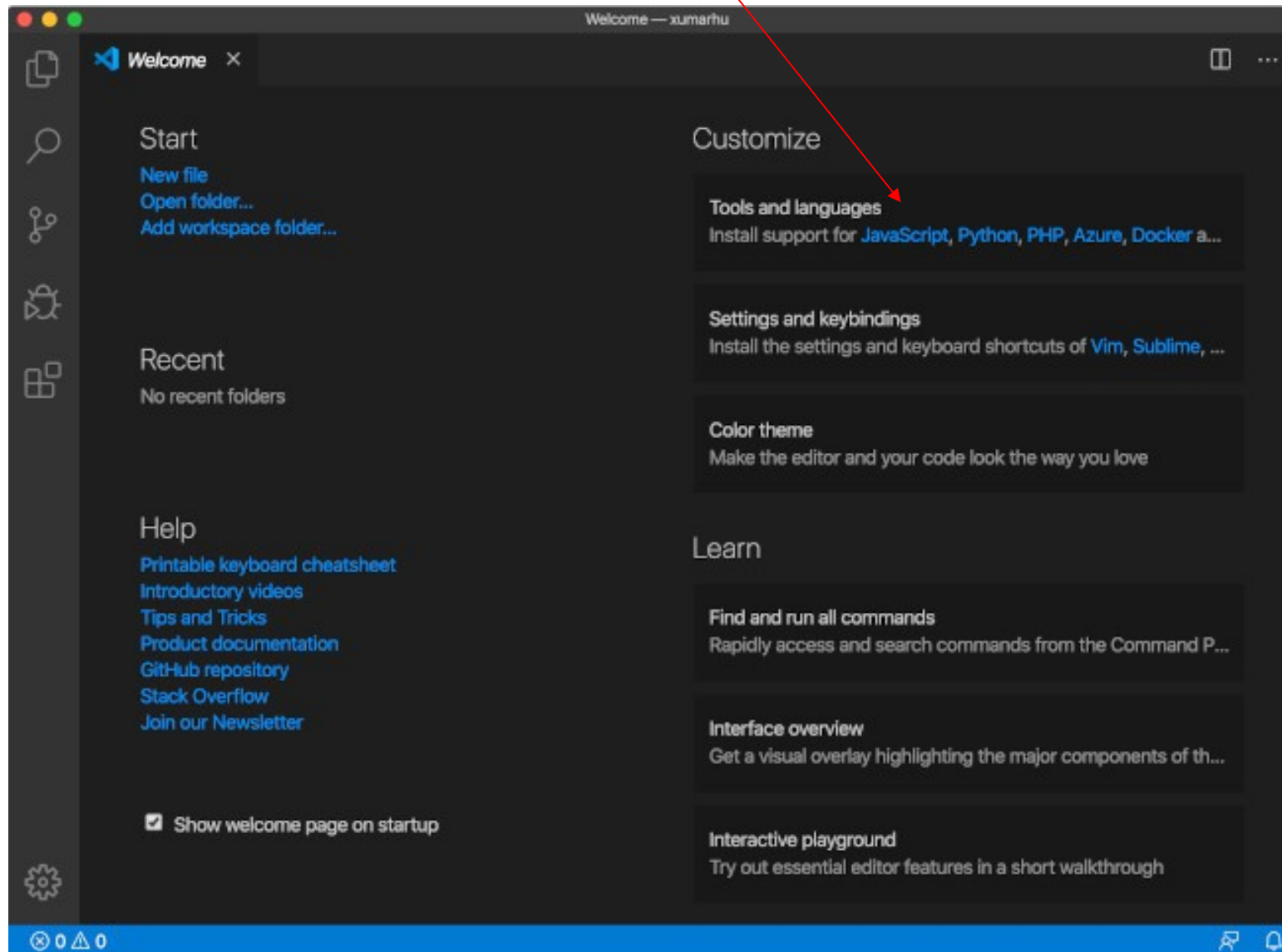
# Python – Visual Studio Code





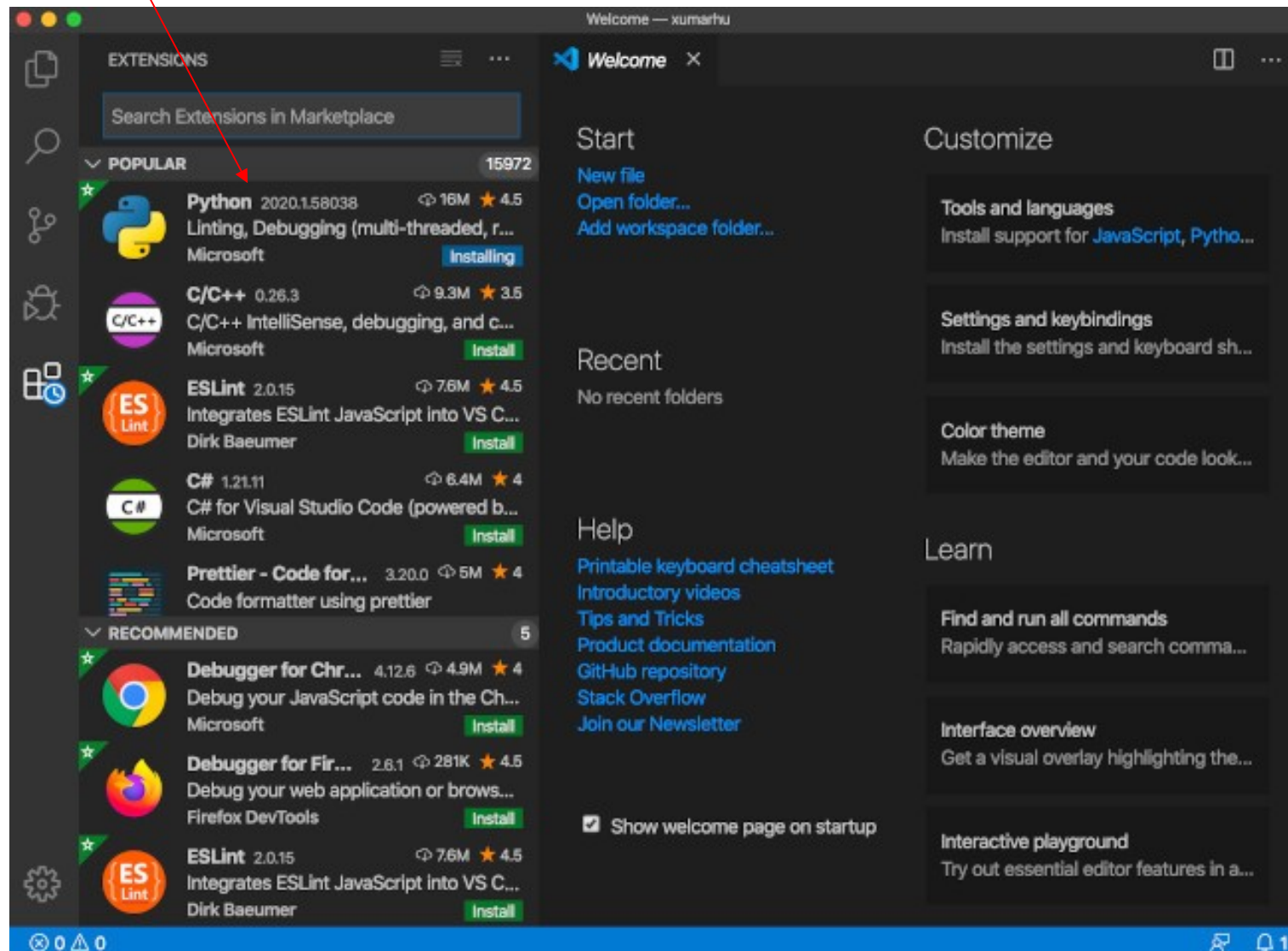
# Visual Studio Code

- **Install Support for Python**



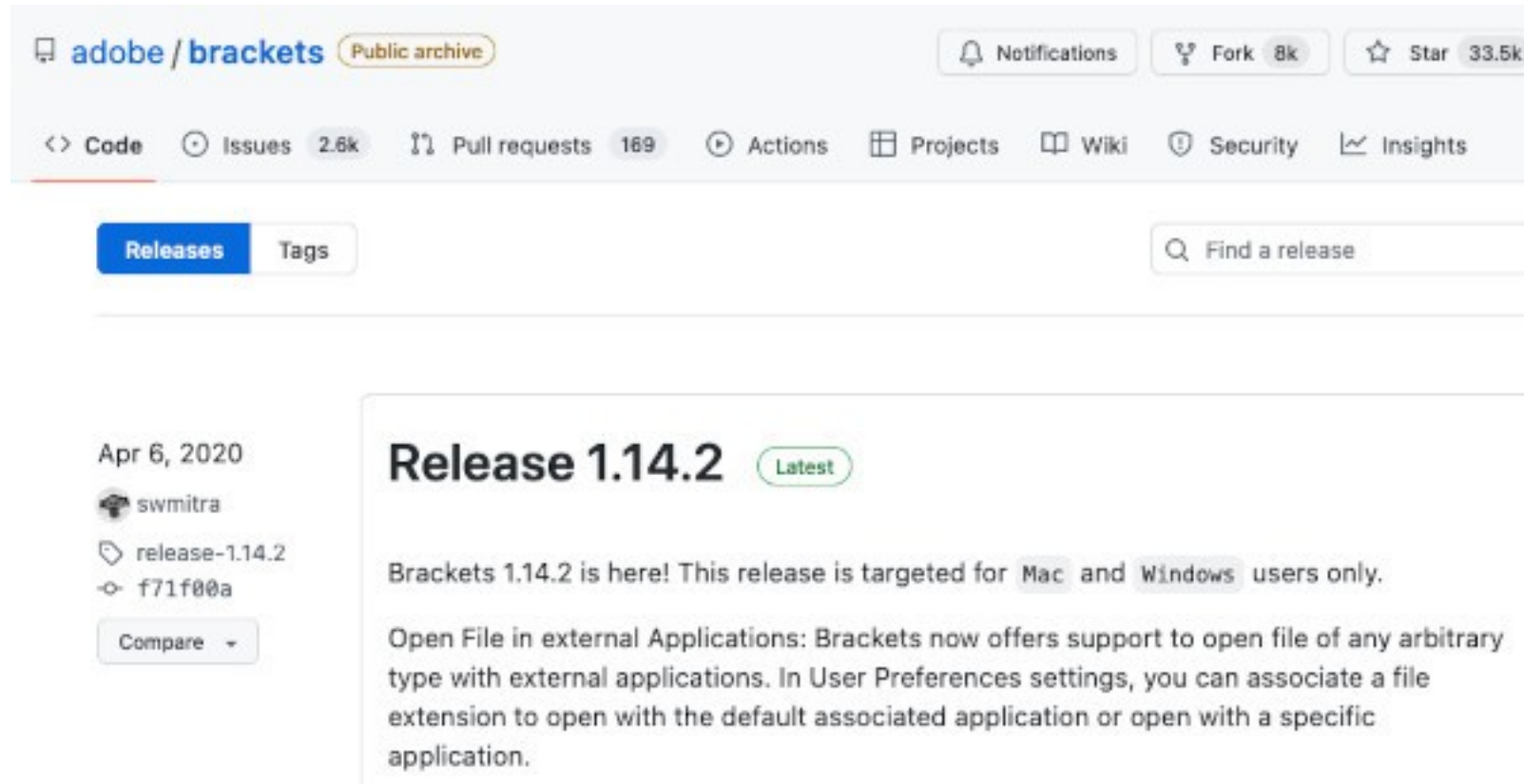
# Visual Studio Code

- **Python Microsoft**



# Brackets

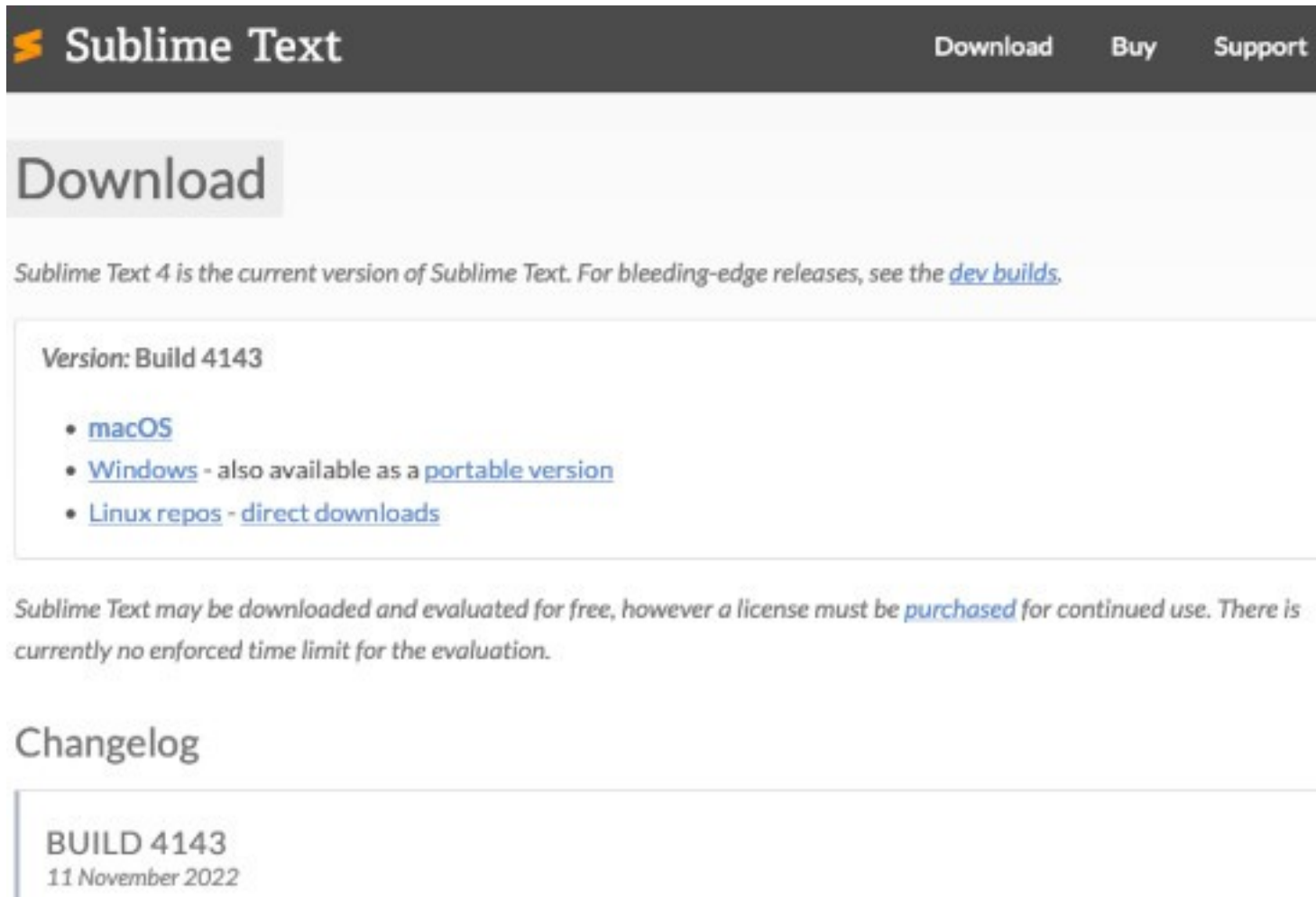
- **Editor de texto:**



The screenshot displays the GitHub interface for the 'adobe/brackets' repository. At the top, it shows the repository name, a 'Public archive' badge, and navigation buttons for Notifications, Fork (8k), and Star (33.5k). Below this is a secondary navigation bar with links for Code, Issues (2.6k), Pull requests (169), Actions, Projects, Wiki, Security, and Insights. The main content area features a 'Releases' tab and a search box labeled 'Find a release'. On the left side, there is a sidebar for the selected release, showing the date 'Apr 6, 2020', the user 'swmitra', the release name 'release-1.14.2', and the commit hash 'f71f00a', along with a 'Compare' button. The main content area displays the release title 'Release 1.14.2' with a 'Latest' badge. The release description states: 'Brackets 1.14.2 is here! This release is targeted for Mac and Windows users only.' It also includes a section titled 'Open File in external Applications: Brackets now offers support to open file of any arbitrary type with external applications. In User Preferences settings, you can associate a file extension to open with the default associated application or open with a specific application.'

# Sublime

- Editor de texto:



The screenshot shows the 'Download' page for Sublime Text. At the top, there is a dark navigation bar with the Sublime Text logo and the text 'Sublime Text' on the left, and 'Download', 'Buy', and 'Support' on the right. Below the navigation bar, the word 'Download' is prominently displayed in a large, light gray font. Underneath, a paragraph states: 'Sublime Text 4 is the current version of Sublime Text. For bleeding-edge releases, see the [dev builds](#).' A box contains the text 'Version: Build 4143' followed by a bulleted list of links: 'macOS', 'Windows - also available as a [portable version](#)', and 'Linux repos - [direct downloads](#)'. Below this box, another paragraph reads: 'Sublime Text may be downloaded and evaluated for free, however a license must be [purchased](#) for continued use. There is currently no enforced time limit for the evaluation.' The 'Changelog' section is visible at the bottom, with a vertical line on the left side. The first entry in the changelog is 'BUILD 4143' dated '11 November 2022'.

IDE

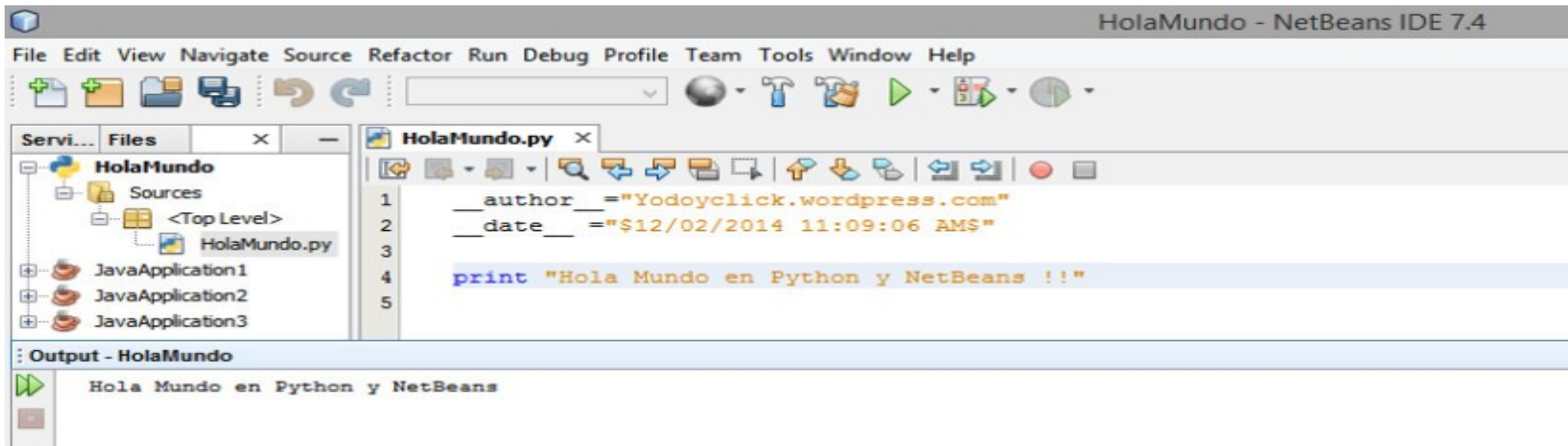
# Python – IDE

- **Existen varios IDE's para Python:**
  - **NetBeans**
  - **Eclipse**



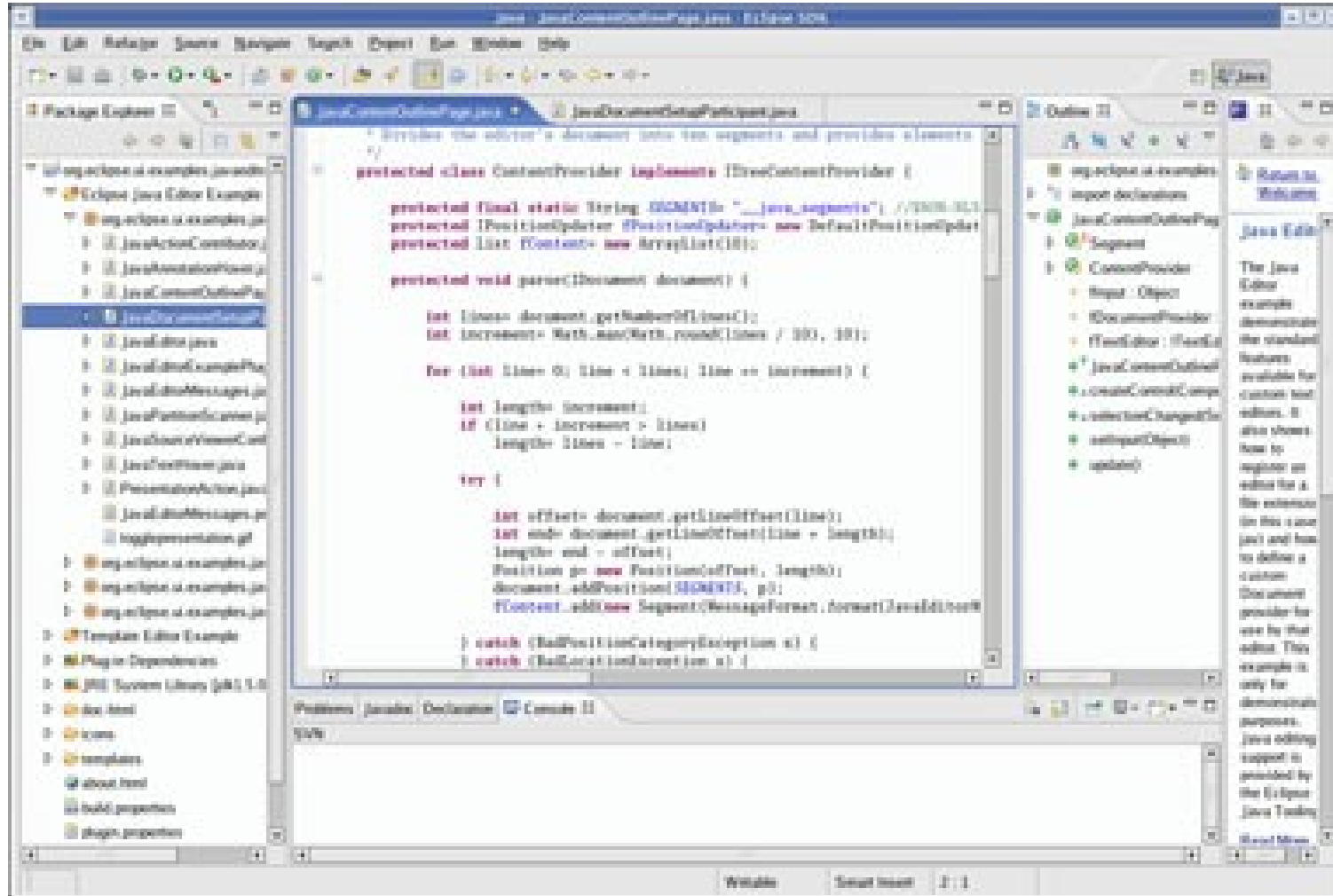
# NetBeans

- **IDE:**



# Eclipse

- IDE:





# Framework

# Python – Frameworks

- Existen varios Frameworks para Python:
  - Django.

```
funciones.py
1  -
2  def aumenta_y_muestra(recibe):
3      x = 2
4      print x + recibe
5      -
6  def muestra():
7      print "-----"
8  -
9  muestra()
10 aumenta_y_muestra(10)
```

```
Escritorio - arturojamaicagarcia@
+ Desktop python funciones.py
File "funciones.py", line 2
def aumenta_y_muestra(10):
                        ^
SyntaxError: invalid syntax
+ Desktop python funciones.py
Esta es mi primer funcion
12
+ Desktop python funciones.py
Esta es mi primer funcion
12
6
22
502
+ Desktop python funciones.py
-----
12
6
```



# Como Servidor Web

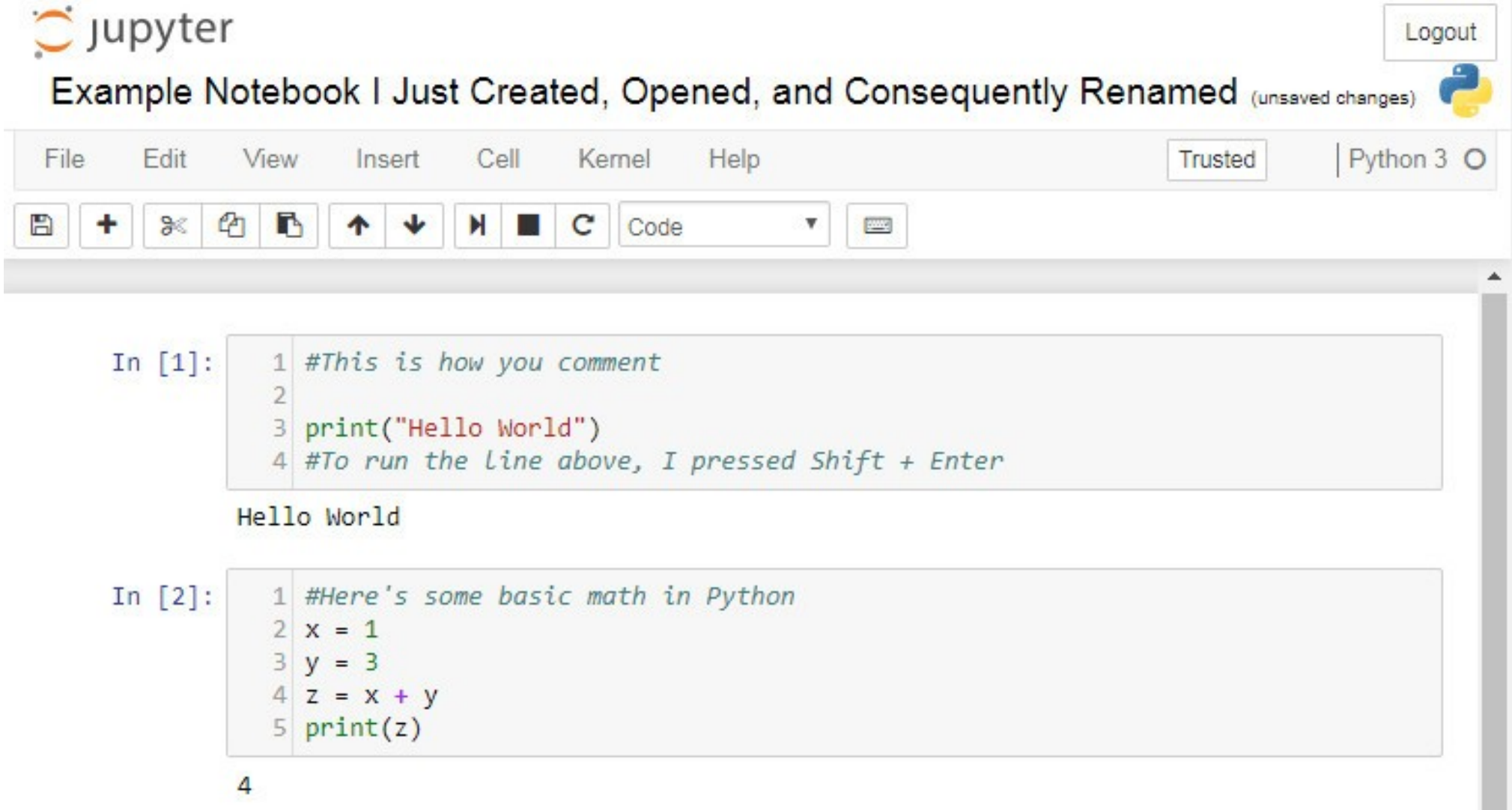
# Python – Anaconda

The screenshot displays the Anaconda Navigator desktop application. At the top left is the 'ANACONDA NAVIGATOR' logo. On the right, there is a 'Sign in to Anaconda Cloud' button. A left-hand sidebar contains navigation options: Home, Environments, Projects (beta), Learning, and Community. Below these are buttons for Documentation, Developer Blog, and Feedback, along with social media icons for Twitter, YouTube, and GitHub. The main area shows 'Applications on root' with a 'Channels' button and a 'Refresh' button. Seven application cards are displayed in a grid:


- jupyterlab** (0.27.0): An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture. [Launch]
- jupyter notebook** (5.0.0): Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis. [Launch]
- qtconsole** (4.3.1): PyQt GUI that supports inline figures, proper multiline editing with syntax highlighting, graphical calltips, and more. [Launch]
- spyder** (3.2.3): Scientific Python Development Environment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features. [Launch]
- glueviz** (0.10.4): Multidimensional data visualization across files. Explore relationships within and among related datasets. [Install]
- orange3** (3.4.1): Component based data mining framework. Data visualization and data analysis for novice and expert; interactive workflows with a large toolbox. [Install]
- rstudio** (1.0.153): A set of integrated tools designed to help you be more productive with R. Includes R essentials and notebooks. [Install]
















# Python – Anaconda (Jupyter)



jupyter Logout

Example Notebook I Just Created, Opened, and Consequently Renamed (unsaved changes) 

File Edit View Insert Cell Kernel Help Trusted | Python 3 

          Code  

In [1]:

```
1 #This is how you comment
2
3 print("Hello World")
4 #To run the line above, I pressed Shift + Enter
```

Hello World

In [2]:

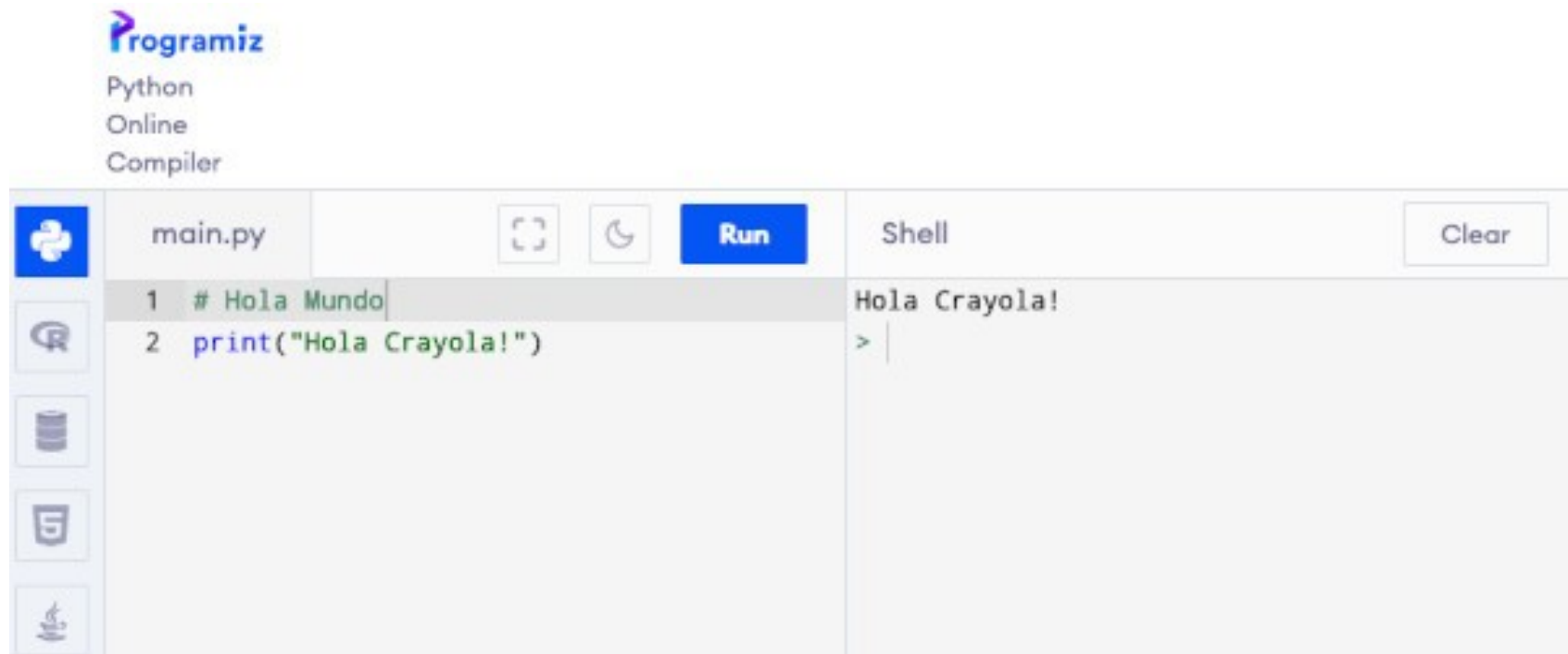
```
1 #Here's some basic math in Python
2 x = 1
3 y = 3
4 z = x + y
5 print(z)
```

4

Online

# Python Online

- Programiz:



Programiz  
Python  
Online  
Compiler

```
main.py
```

```
1 # Hola Mundo  
2 print("Hola Crayola!")
```

Run

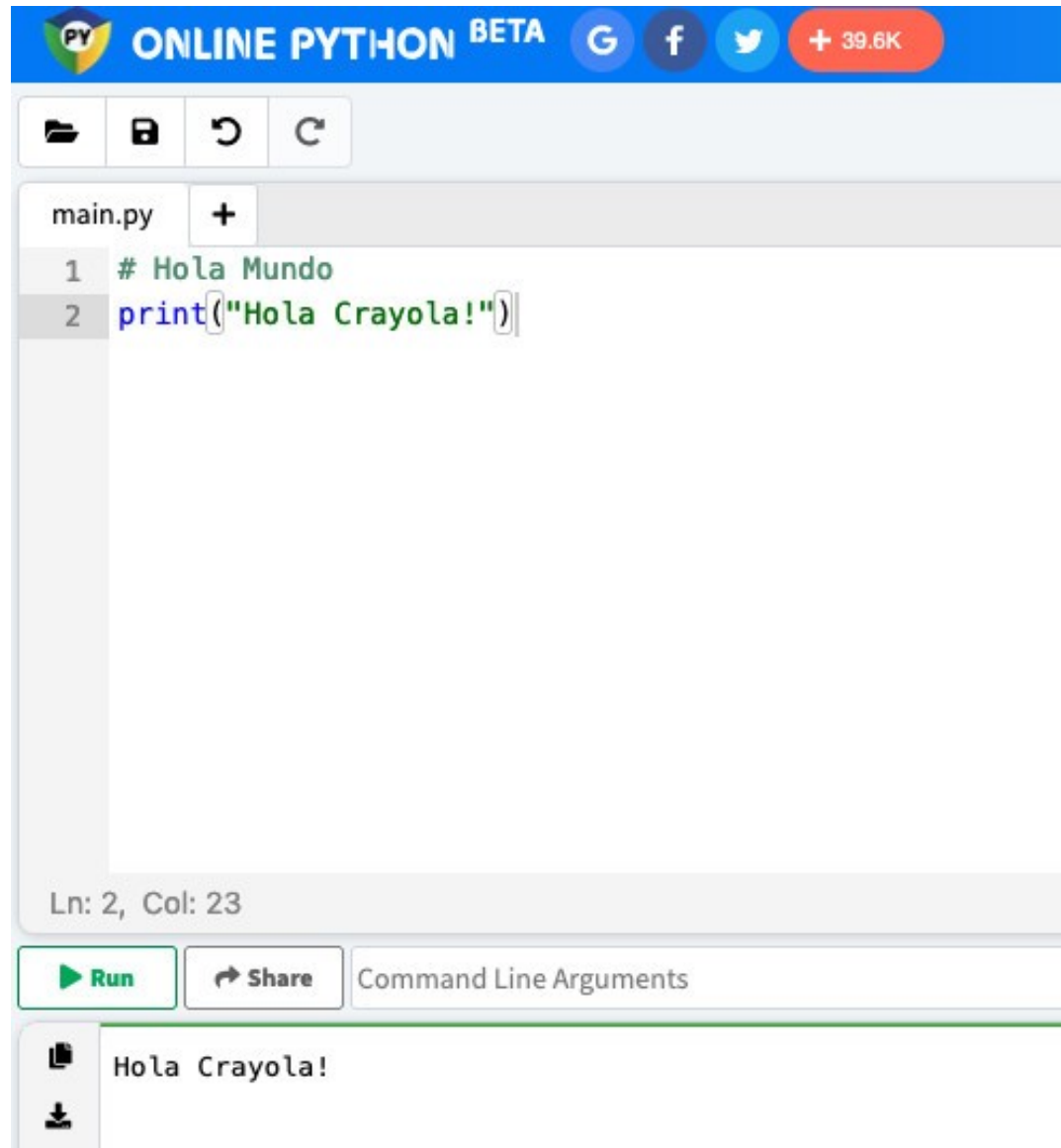
Shell

Hola Crayola!  
> |

Clear

# Python Online

- Online Python:

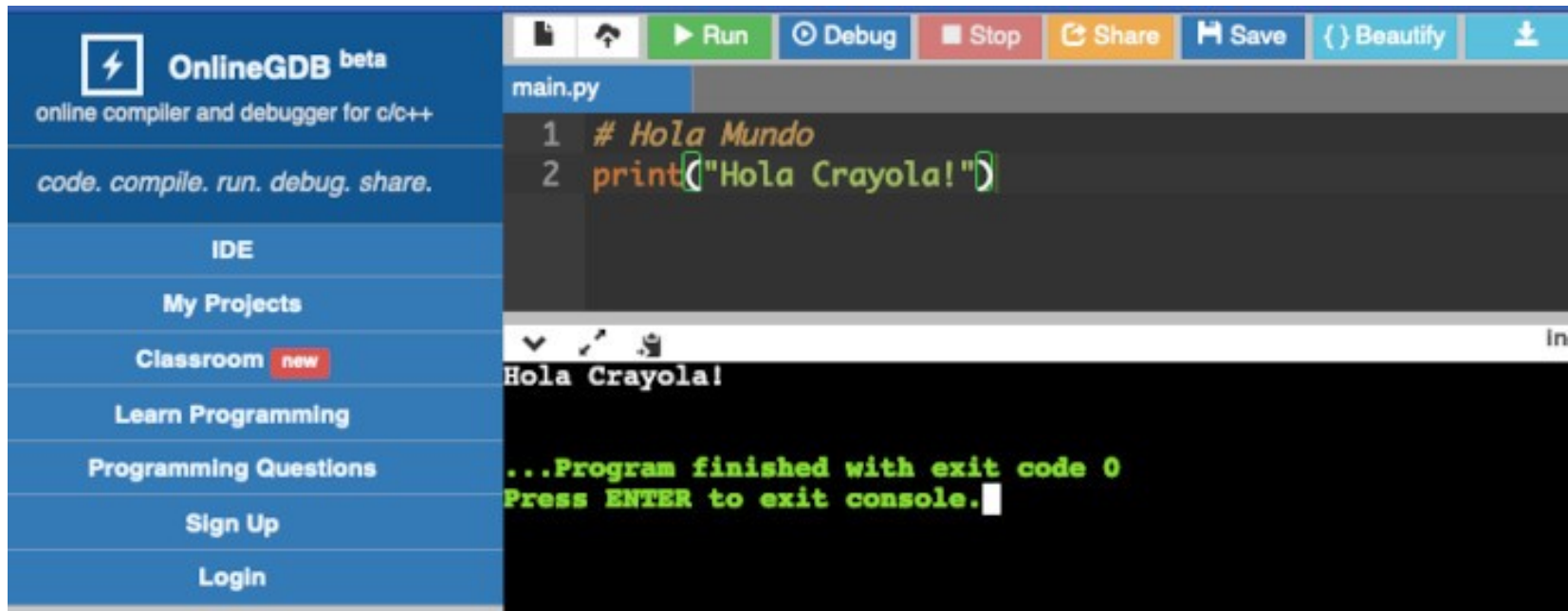


The screenshot displays the Online Python Beta web interface. At the top, there is a blue header with the Python logo, the text "ONLINE PYTHON BETA", and social media icons for Google+, Facebook, and Twitter, along with a red button indicating "+ 39.6K". Below the header is a toolbar with icons for file operations. The main area is a code editor with a file named "main.py" open. The code contains two lines: a comment "# Hola Mundo" and a print statement "print('Hola Crayola!')". The cursor is positioned at the end of the second line. At the bottom of the editor, it shows "Ln: 2, Col: 23". Below the code editor is a control bar with a green "Run" button, a "Share" button, and a text input field for "Command Line Arguments". At the very bottom, there is a terminal window showing the output "Hola Crayola!" with a copy icon and a download icon.



# Python Online

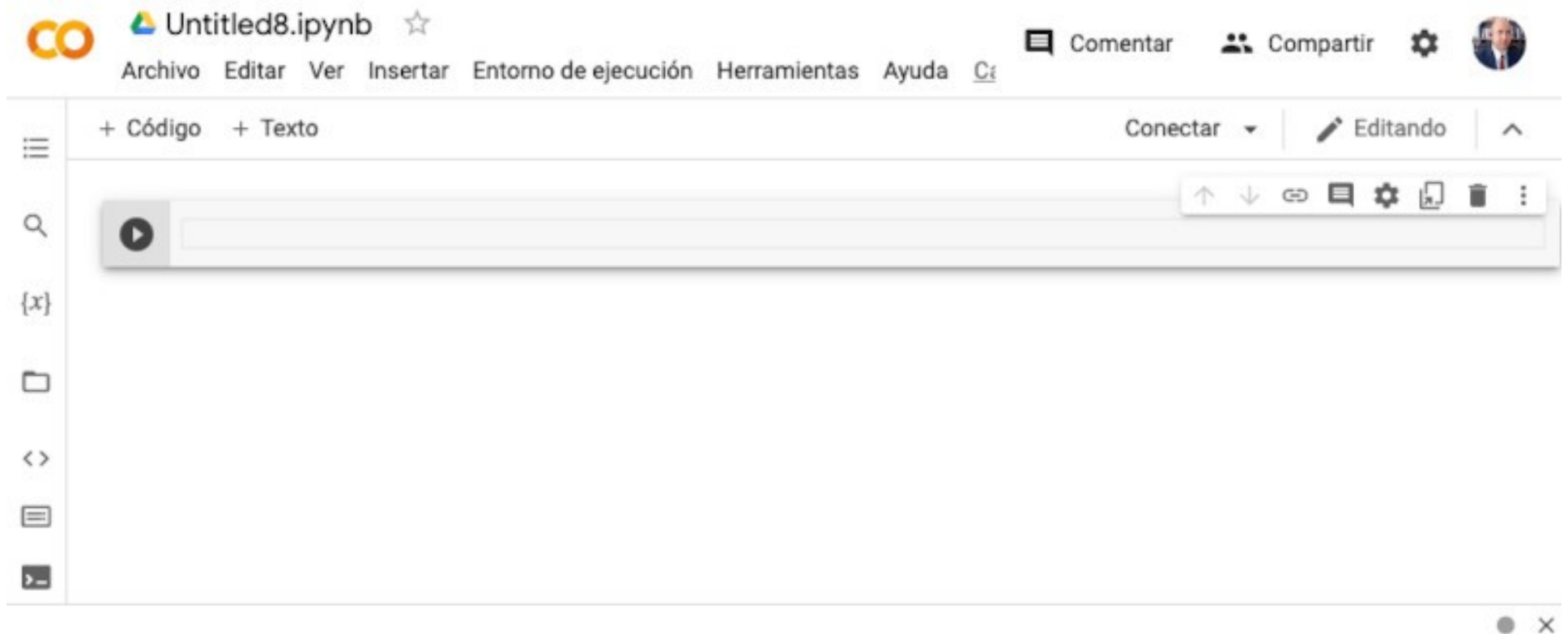
- **OnlineGDB:**



En Nube

# Python Cloud

- **Google Colaboratory:**





## Rogelio Ferreira Escutia

Profesor / Investigador  
Tecnológico Nacional de México  
Campus Morelia



[rogelio.fe@morelia.tecnm.mx](mailto:rogelio.fe@morelia.tecnm.mx)



[rogeplus@gmail.com](mailto:rogeplus@gmail.com)



[xumarhu.net](http://xumarhu.net)



[@rogeplus](https://twitter.com/rogeplus)



[https://www.youtube.com/  
channel/UC0on88n3LwTKxJb8T09sGjg](https://www.youtube.com/channel/UC0on88n3LwTKxJb8T09sGjg)



[rogelioferreiraescutia](https://www.linkedin.com/in/rogelioferreiraescutia)

