Python Programming

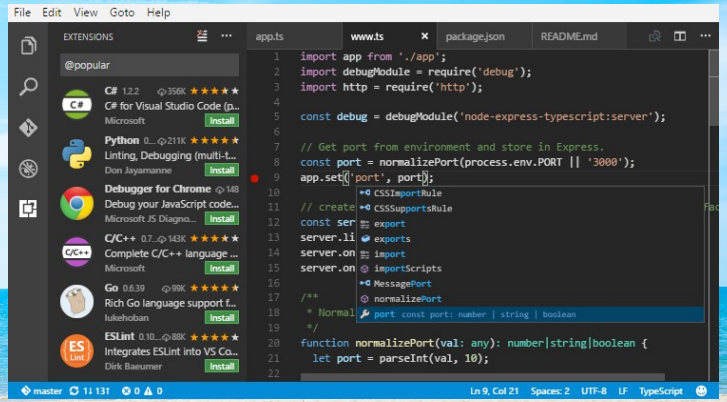
Installation

Installation

- Install VS Code
  - Install Extensions
    - Python Extension
    - Live Share Extension
- Install Python Interpreter
- Share your project via Live Share

VS Code is an IDE

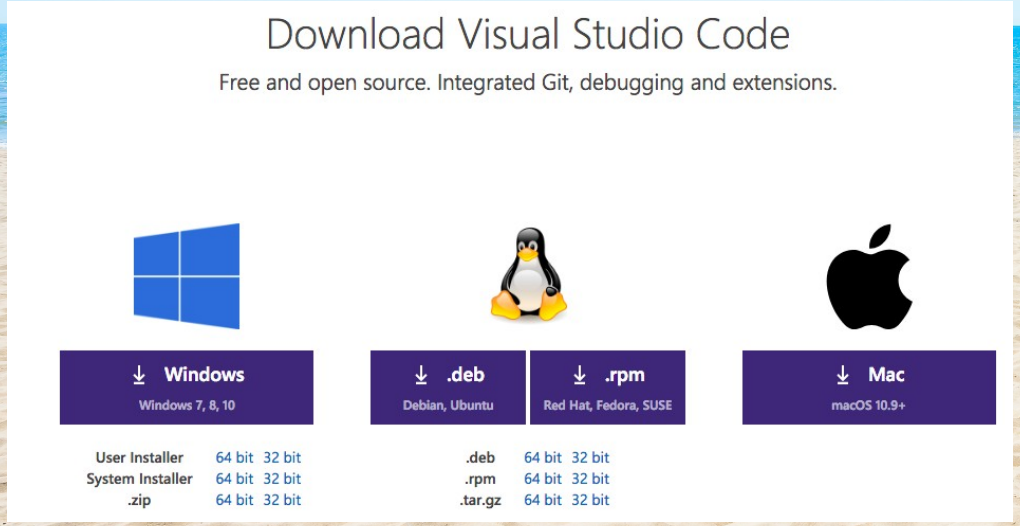
- Integrated Development Environment
- Tool to write code
- Contains functionality to make programming easier



Visual Studio Code

- Install: Visual Studio Code (VSC)

https://code.visualstudio.com/download/



Visual Studio Code

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By using VS Code, you agree to its
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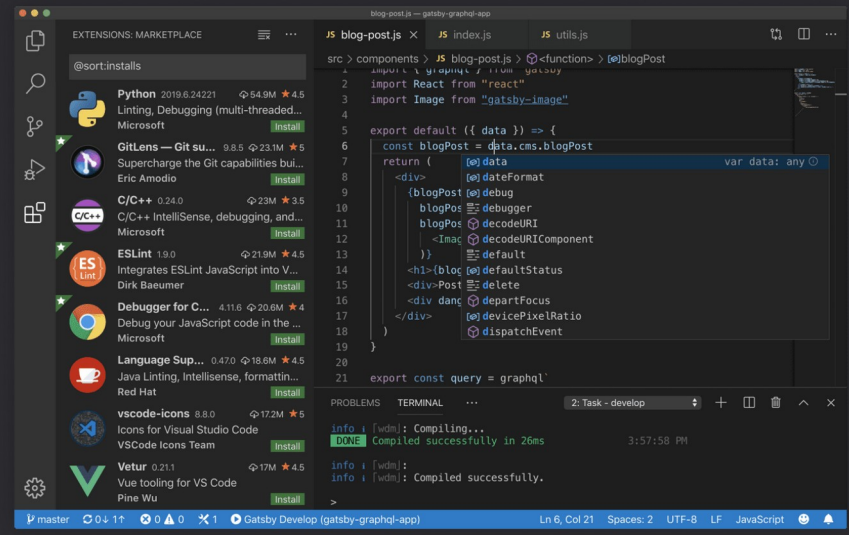
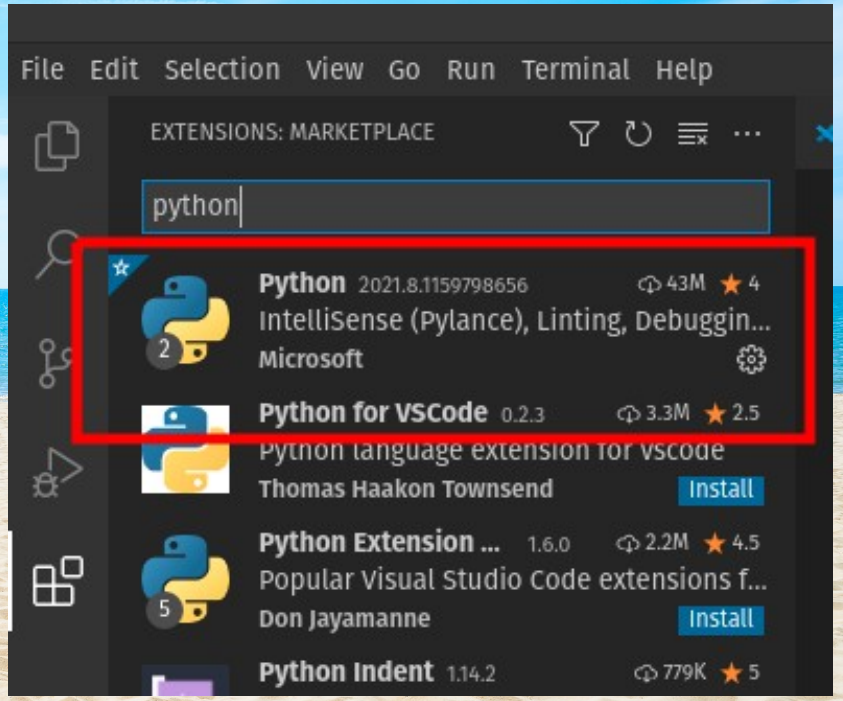


Configuration

- Modify the following settings for convenience:
  - Preferences => Settings
  - Texteditor -> Auto Closing Brackets
    - Choose Always
  - Texteditor -> Files -> Auto Save
    - Choose onFocusChange
  - Texteditor -> Formatting -> Format on Save
    - Check the checkbox

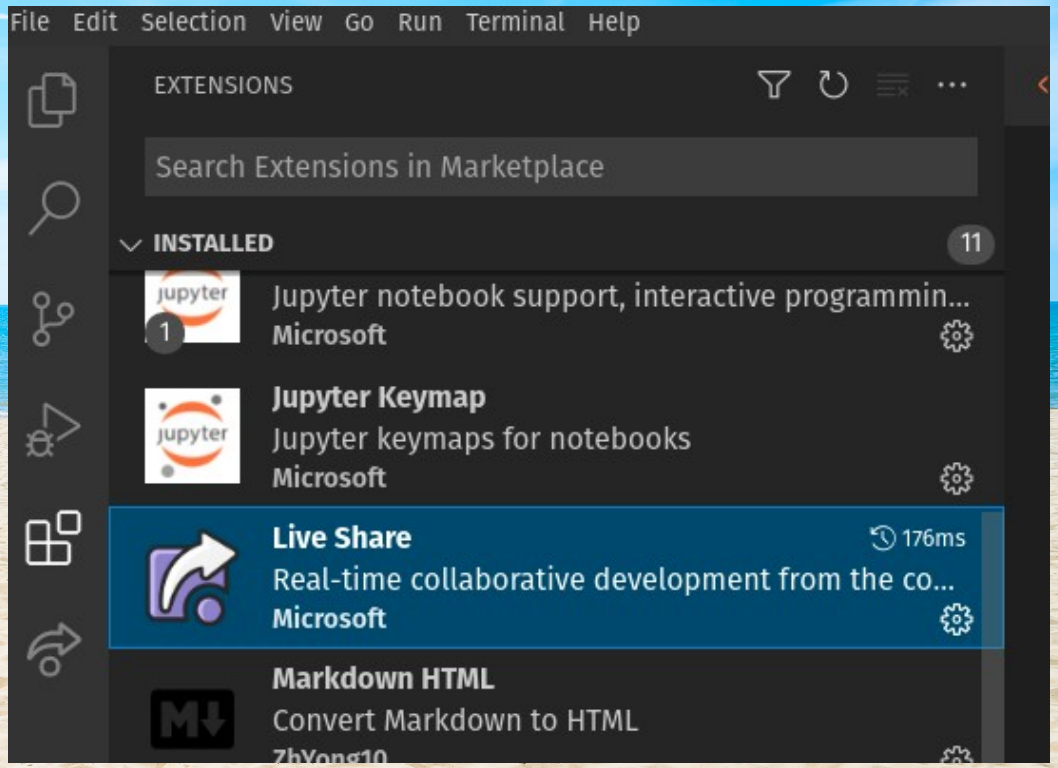
Install Python Extension

- Next, install the Python extension for VS Code from the Visual Studio Marketplace. For additional details on installing extensions, see Extension Marketplace. The Python extension is named Python and it's published by Microsoft.



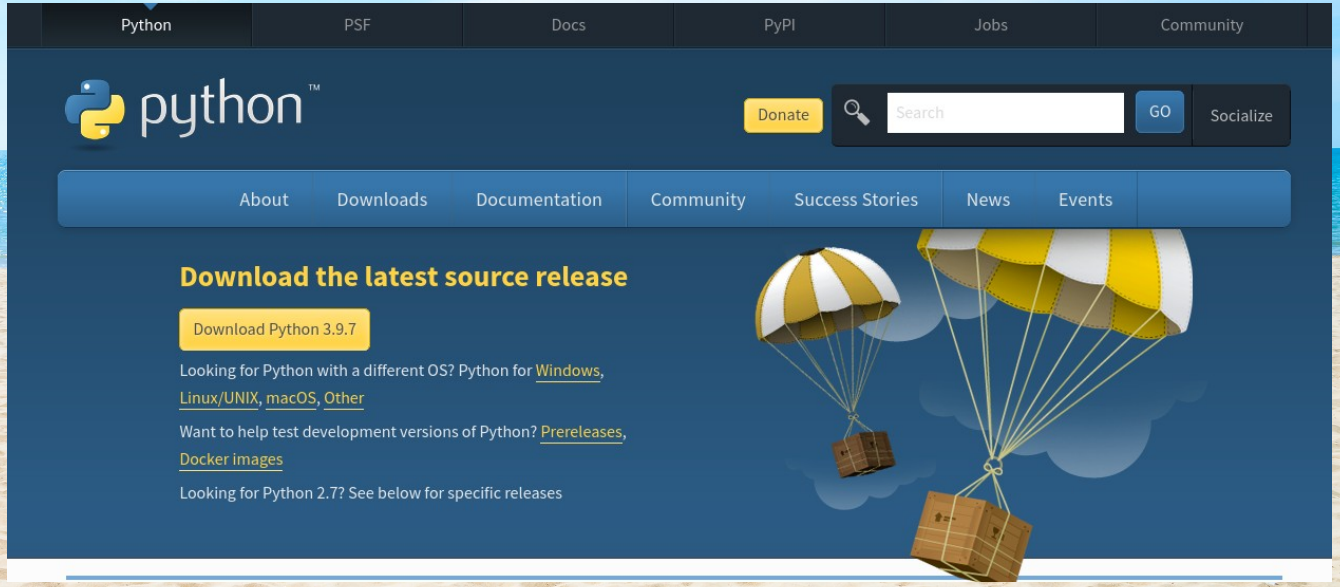
Install Live Share Extension

- Next, install the Live Share extension for VS Code from the Visual Studio Marketplace. For additional details on installing extensions, see Extension Marketplace. The Live Share Extension is published by Microsoft.



Install Python Interpreter

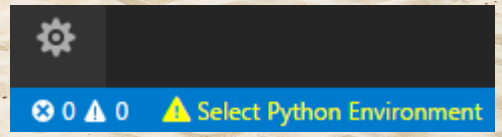
- Install Python from python.org



VS Code Python interpreter

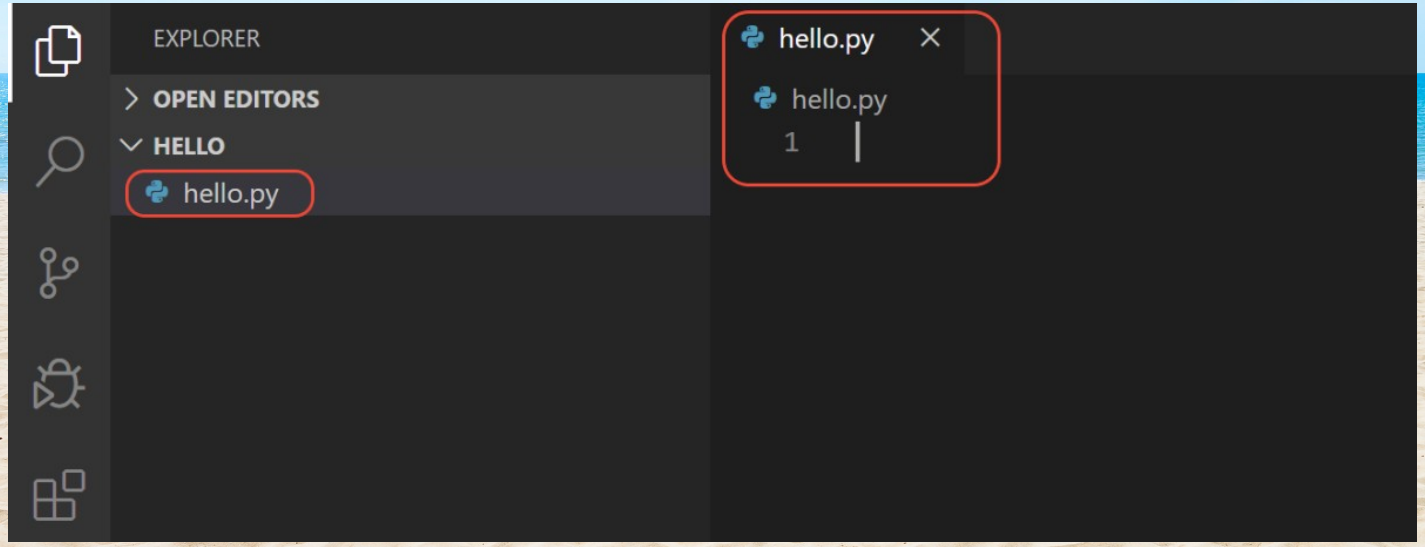
- Python is an interpreted language, and in order to run Python code and get Python IntelliSense, you must tell VS Code which interpreter to use.

- From within VS Code, select a Python 3 interpreter by opening the Command Palette (Ctrl+Shift+P), start typing the Python: Select Interpreter command to search, then select the command. You can also use the Select Python Environment option on the Status Bar if available (it may already show a selected interpreter, too):



Hello World

- In VS code create a new file hello.py

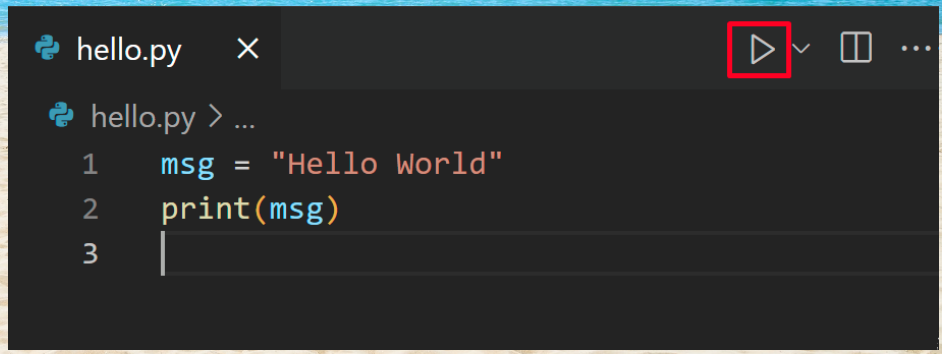


run Hello World

- enter the following source code in hello.py:

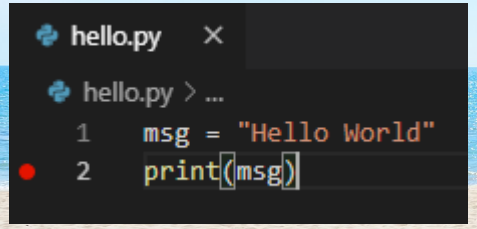
```
msg = "Hello World"

print(msg)
```

- and run it using the play button

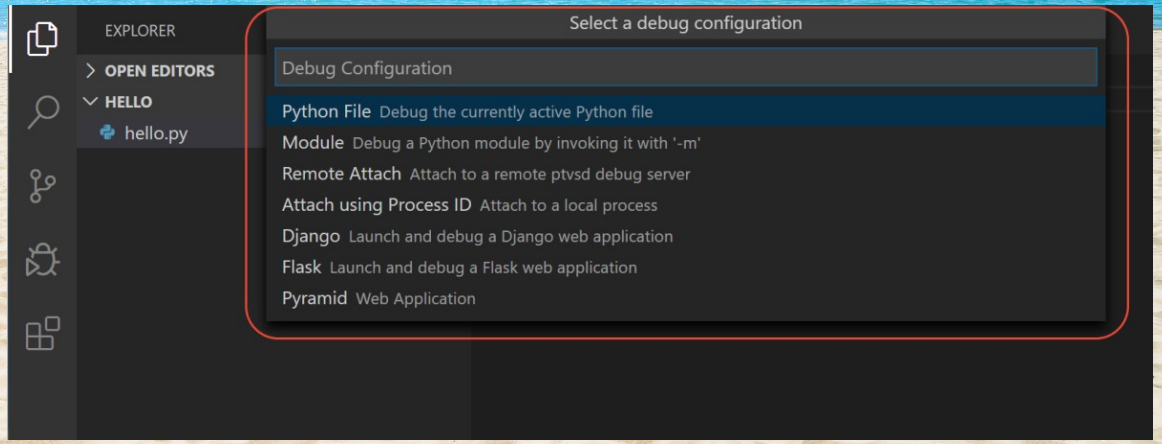


Configure and run the debugger

- Set a breakpoint on line 2 of hello.py

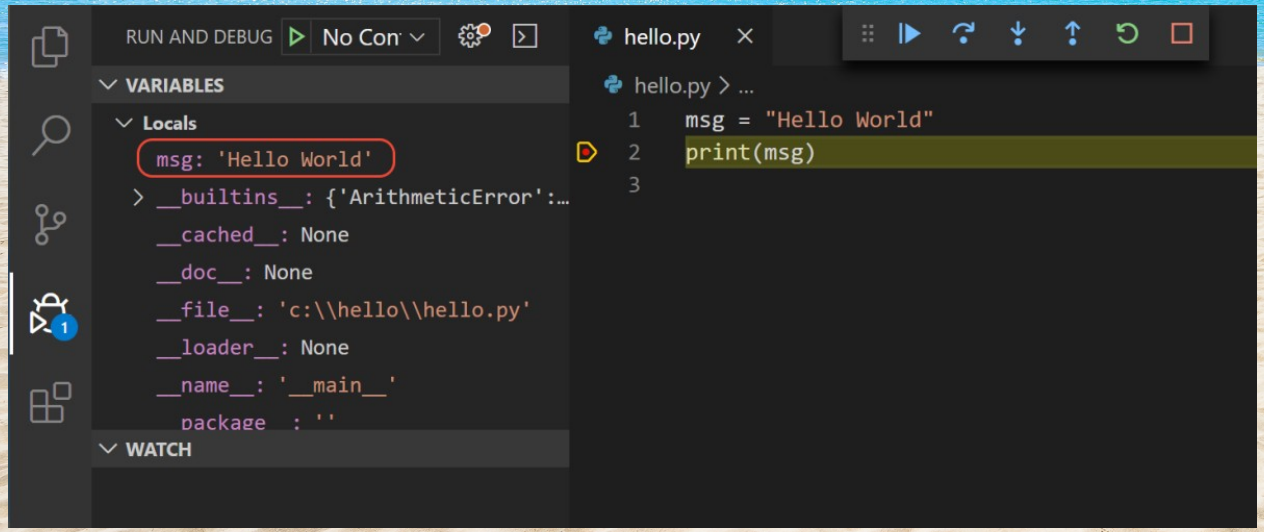


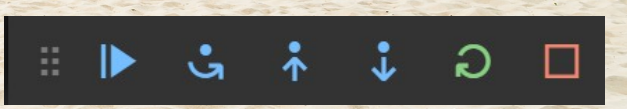
- Press F5 and choose ‘Debug the currently active Python file’



Debugging

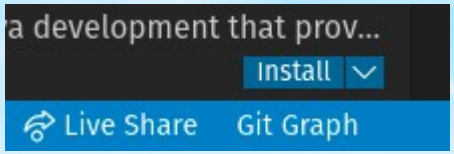
- The debugger will stop at the first line of the file breakpoint.
- If you examine the Local variables window at this point, you will see now defined msg variable appears in the Local pane.
- A debug toolbar appears along the top with the following commands from left to right: continue (F5), step over (F10), step into (F11), step out (Shift+F11), restart (Ctrl+Shift+F5), and stop (Shift+F5)





Share your project via Live Share

1) Click the Live Share button in your status bar at the left bottom of VS Code status bar



2) You'll be asked to sign in the first time you share (using a GitHub or Microsoft account), which allows others to identity you when collaborating. On Windows, you may be asked to allow Live Share to open a firewall port, in order to enable peer-to-peer connections.

3) Send the session URL to your instructor