Programming Python Using an IDE But Why? And Which One?

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Programming Python Using an IDE
But Why? And Which One?

Code Editor

Integrated Development Environment

What's the Difference?

Code Editor

Integrated Development Environment

Code Editor

Primarily designed to edit code

- Text stored in files, organized in folders

Get started editing text

- Complexity goes up quickly

Code Editor

Features to enhance coding experience
- Included or via a plugin

General purpose
- Usually not language-specific

Availability may vary per operating system

Integrated Development Environment

Code editor + compiler + debugger

- Autocomplete, highlighting, and syntax checking
- Dependency manager
- Source control
- Performance profiler
- Deployment

Demo

Overview of Available Code Editors for Python

```
# Just a quick demo

print('Welcome to the Programming Python Using an IDE course at
Pluralsight!')
```

general_helpers.py - Notepad

```python
"""Generic functions required by the application"""


def set_midnight(thistime):
    if thistime is None:
        return thistime
    wheret = thistime.index('T')
    return thistime[:wheret] + "T00:00:00.000Z"
```

badges.py - Notepad

```python
"""Loads badges from XML"""


import general_helpers as gh
import xml.etree.ElementTree as ET


# extract the values in each xml row
def processXmlFieldsBadges(string):
    elements = ET.fromstring(string.encode('utf-8')).attrib

    badge_id = elements.get("Id")
```

posts.py - Notepad

```python
"""Loads posts from XML"""


import xml.etree.ElementTree as ET
import re


# extract the values in each xml row
def processXmlFieldPosts(string):
    elements = ET.fromstring(string.encode('utf-8')).attrib

    postId = elements.get("Id")
    postType = elements.get("PostTypeId")
    acceptedanswerid = elements.get("AcceptedAnswerId")
    creationdate = elements.get("CreationDate")
```

https://atom.io

ATOM

1.36.1

Release notes

Windows

For 64-bit Windows 7 or later

↓ Download

By downloading, you agree to the Terms and Conditions.

Other platforms   Try Atom Beta

```python
1   # Python program to calculate the Fibonacci sequence
2   # 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55
3
4   def fibo(n):
5       if n <= 1:
6           return n
7       else:
8           return (fibo(n - 1) + fibo(n - 2))
9
10
11  # Calculate Fibonacci
12  result = fibo(10)
13  print('fibo(10) = ' + str(result))
14
```

The 'Python' extension is recommended for this file type.

Install   Show Recommendations

Demo

Configuring Python Features for Specific Code Editors

EXTENSIONS

LoginToGmail.py | Release Notes: 1.33.0 | ≡ Extension: Python ✕ | {} launch.json

Search Extensions in Marketplace

Python   (ms-python.python)

⊿ ENABLED   2

Microsoft | ⊕ 41,994,551 | ★★★★★ | Repository | License

Python   2019.4.11987
Linting, Debugging (multi-threaded, r...
Microsoft   Reload Required   ⚙

Linting, Debugging (multi-threaded, remote), Intellisense, code formatting, refactoring, unit tests, snippets, and more.

Reload Required   Disable▾   Uninstall

XML Tools   2.4.0
XML Formatting, XQuery, and XPath T...
Josh Johnson   ⚙

Please reload Visual Studio Code to complete the updating of this extension.

Details   Contributions   Changelog

Python extension for Visual Studio Code

A Visual Studio Code extension with rich support for the Python language (for all actively supported versions of the language: 2.7, >=3.5), including features such as IntelliSense, linting, debugging, code navigation, code formatting, Jupyter notebook support, refactoring, variable explorer, test explorer, snippets, and more!

Quick start

⊿ RECOMMENDED   0

No extensions found.

PROBLEMS 4   OUTPUT   DEBUG CONSOLE   TERMINAL   Filter. Eg: text, **/*.ts, !**/node_modules/**

⊿ 🐍 LoginToGmail.py   4
   ❌ Value 'response_part' is unsubscriptable pylint(unsubscriptable-object) [34, 61]
   ⚠ Unused variable 'filenames' pylint(unused-variable) [61, 5]
   ⚠ Unreachable code pylint(unreachable) [106, 9]
   ⚠ Unreachable code pylint(unreachable) [109, 9]

⊿ DISABLED   0

Welcome   🐍 fibonacci.py ✕

```python
1    # Python program to calculate the Fibonacci sequence
2    # 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55
3
4    def fibo(n):
5        if n <= 1:
6            return n
7        else:
8            return (fibo(n - 1) + fibo(n - 2))
9
10
11   # Calculate Fibonacci
```
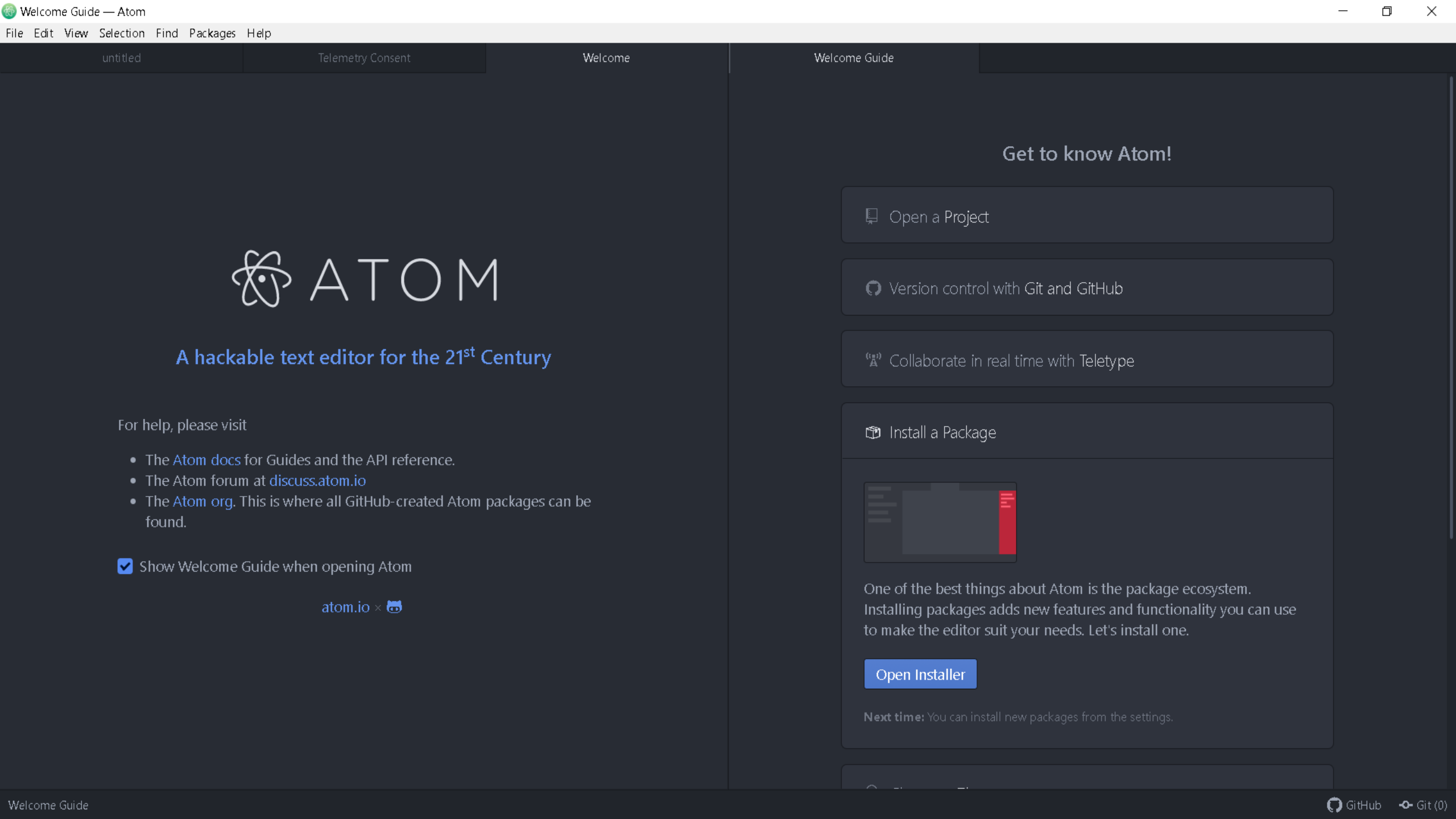
PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**   1: Python   ▼

```
...
>>> fibo(10)
55
>>> fibo(5)
5
>>> import sys
>>> print(sys.version_info)
sys.version_info(major=3, minor=7, micro=0, releaselevel='final', serial=0)
>>> 
```

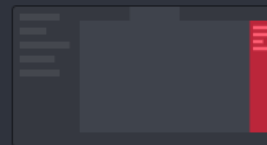File   Edit   View   Selection   Find   Packages   Help

Get to know Atom!

□ Open a Project

◯ Version control with Git and GitHub

📡 Collaborate in real time with Teletype

📦 Install a Package

One of the best things about Atom is the package ecosystem. Installing packages adds new features and functionality you can use to make the editor suit your needs. Let's install one.

Open Installer

Next time: You can install new packages from the settings.

⚛ ATOM

A hackable text editor for the 21st Century

For help, please visit

- The Atom docs for Guides and the API reference.
- The Atom forum at discuss.atom.io
- The Atom org. This is where all GitHub-created Atom packages can be found.

☑ Show Welcome Guide when opening Atom

atom.io × 🐙

Project

- demos
  - fibonacci
    - fibonacci.py
  - hello-ide
    - hello.py
  - stackoverflow
    - badges.py
    - comments.py
    - data.xlsx
    - excel_table.PNG
    - general_helpers.py
    - hi_nano.py
    - posts-100.json
    - posts.py
    - Posts.xml
    - resources.py

hello.py | ⚒ Settings

- ⊶ Core
- <> Editor
- ⟳ URI Handling
- ⌨ Keybindings
- 📦 Packages
- 🪣 Themes
- ⟳ Updates
- ＋ Install

Open Config Folder

＋ Install Packages

⑦ Packages are published to atom.io and are installed to /Users/xavier/.atom/packages

| atom-file-icons | Packages | Themes |

atom-file-icons 0.6.0   ⌓ 44,270

logo style icons and ui tweaks to mirror vscode

donovanhiland   ⟳ Install

file-type-icons 1.3.4   ⌓ 140,008

Changes the icon for files in the Tree View and Tabs to reflect the file's type

lee-dohm   ⟳ Install

logo-file-icons 1.13.0   ⌓ 32,157

Add some nice logo icons to your files in Atom.

manuelbieh   ⟳ Install

file-icons-logo 2.7.2   ⌓ 1,057

Settings   ⧉ GitHub   ⟑ Git (0)

Takeaway

Code is text stored in files
- Organized in folders

Code in a text editor
- Complexity goes up quickly

Features to improve productivity
- General purpose
- May need to install a plugin

Takeaway

Different types of code editors
- Notepad, Notepad++
- Nano, VI, Emacs
- Sublime Text, Atom, VS Code

Availability per OS varies

Takeaway

Integrated Development Environment
- Also known as IDE
- Go beyond code editing
- Running, debugging, source control, profiling, and more

We will cover IDEs next