how to make new python package in vs code

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Creating a new Python package in Visual Studio Code (VS Code) involves several steps. Here's a structured guide to help you through the process:

Step-by-Step Guide to Create a Python Package

1. Set Up Your Project Directory

- Open VS Code.
- Create a new folder for your package. You can do this directly in VS Code or through your file explorer.

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```bash
mkdir my_python_package
cd my_python_package
```

2. Create the Package Structure

Inside your project directory, create the following structure:

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```
my_python_package/
├── my_package/
│   ├── __init__.py
│   └── module.py
├── setup.py
└── README.md
```

- `my_package/` : This is the directory for your package.
- `__init__.py` : This file makes Python treat the directories as containing packages. It can be empty or contain initialization code.
- `module.py` : This file can contain your functions or classes.
- `setup.py` : This script is for packaging your project.
- `README.md` : A markdown file to describe your package.

3. Write Your Code

- In `module.py`, add some basic functionality:

```python
def hello():
    return "Hello, World!"
```

- In `__init__.py`, you can import your module:

```python
from .module import hello
```

4. Create the `setup.py` File

This file is crucial for packaging your Python project. Here's a simple example:

```python
from setuptools import setup, find_packages

setup(
    name='my_package',
    version='0.1',
    packages=find_packages(),
    description='A simple example package',
    author='Your Name',
    author_email='your.email@example.com',
    url='https://github.com/yourusername/my_python_package',
)
```

5. Install Your Package Locally

Open a terminal in VS Code and run:

```bash
pip install -e .
```

This command installs your package in "editable" mode, allowing you to modify the code without reinstalling.

6. Test Your Package

You can create a separate Python file (e.g., `test.py`) in the root directory to test your package:

```python
from my_package import hello

print(hello())
```

Run the test file:

```bash
python test.py
```

7. Version Control (Optional)

If you're using Git, initialize a repository:

```bash
git init
git add .
git commit -m "Initial commit"
```

Conclusion

You've now created a simple Python package in VS Code! You can expand on this by adding more modules, writing tests, and eventually publishing