Installation of Pytest

## **🧩 What is Pytest?**

**Pytest** is a **popular open-source testing framework** for Python that makes it **easy to write simple as well as complex automated tests**.

It’s widely used for:

* **Unit testing**
* **Integration testing**
* **Functional testing**
* **API testing**

## **⚙️ Key Features**

| **Feature** | **Description** |
| --- | --- |
| 🧠 **Simple syntax** | Tests are written as regular Python functions (no need for classes). |
| 🚀 **Auto-discovery** | Pytest automatically finds files and test functions that start with test\_. |
| 🧪 **Assertions** | You can use plain assert statements — Pytest gives detailed error output. |
| 🔄 **Fixtures** | Reusable setup and teardown logic using @pytest.fixture. |
| 🔍 **Parameterization** | Easily run the same test with multiple sets of input data. |
| 📊 **Plugins** | Over 1,000+ plugins available (e.g., for reporting, parallel runs, etc.). |
| 🤝 **Integration** | Works well with CI/CD tools (like Jenkins, GitHub Actions, etc.). |

## **🧠 Example**

Here’s a **simple pytest example**:

# test\_calculator.py

def add(a, b):

return a + b

def test\_add():

assert add(2, 3) == 5

To run it, open the terminal and type:

pytest

Pytest will automatically detect and execute the test\_add function.

Output example:

================= test session starts =================

collected 1 item

test\_calculator.py . [100%]

================== 1 passed in 0.02s ==================

## **🧰 File Naming Rules**

By default, Pytest looks for:

* Files starting with test\_ or ending with \_test.py
* Functions starting with test\_

Example:

tests/

├── test\_login.py

├── test\_api.py

## **💡 Why Pytest?**

* It’s **lightweight yet powerful**
* Has **clean and readable code**
* Provides **rich reporting**
* Can **integrate with Selenium, Playwright, REST APIs, or databases**
* Perfect for both **beginners** and **advanced QA engineers**

### **🧪 Step 1: Installation**

Alternatively, open the **Terminal** in PyCharm and run:

pip install pytest

You should see a success message like:

Successfully installed pytest-x.x.x

### **🧪 Step 2: Verify Installation**

In the **Python Console** or terminal, run:

pytest --version

### **If it shows a version number (e.g., pytest 8.2.2), it’s installed correctly.**

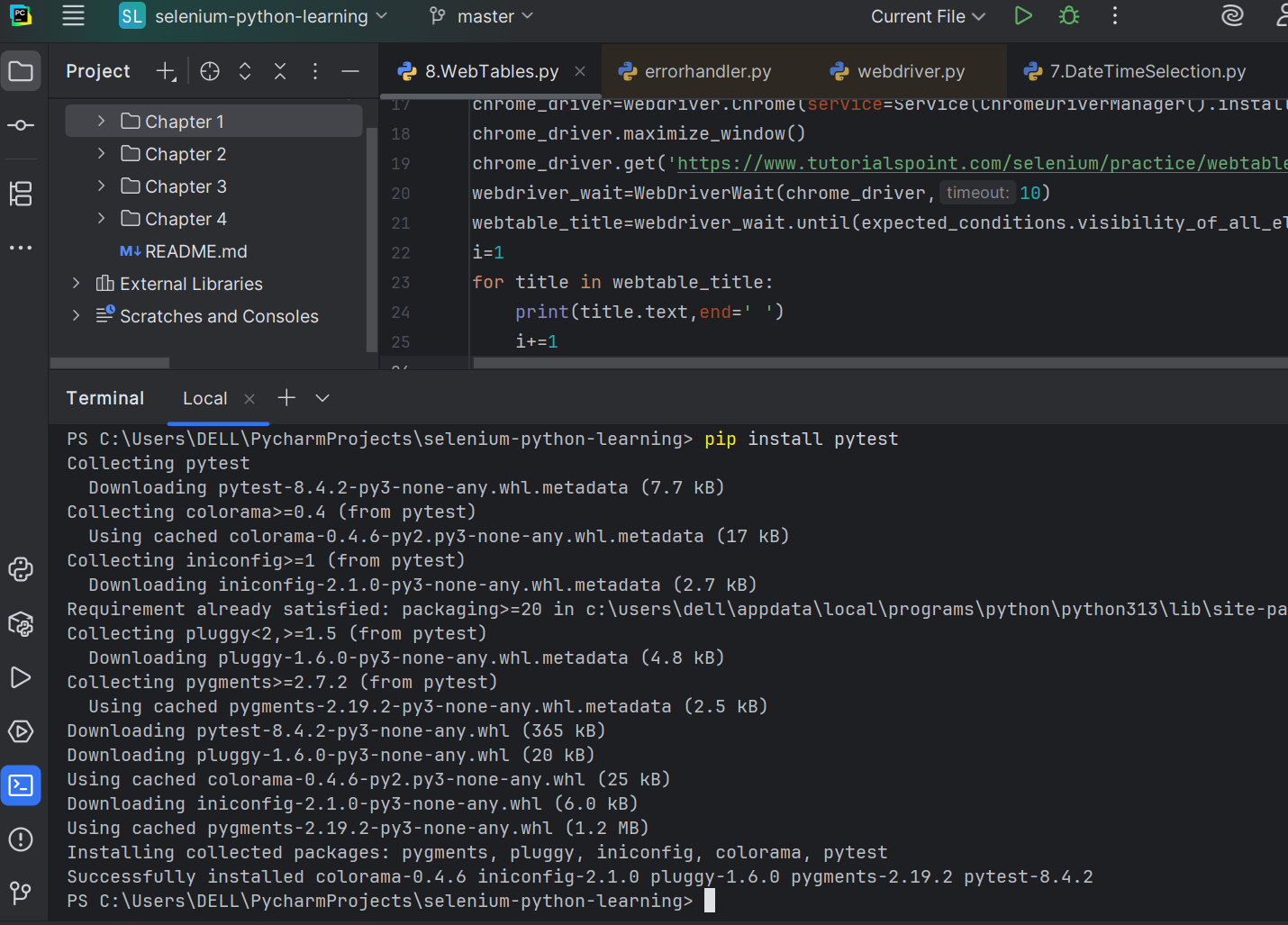
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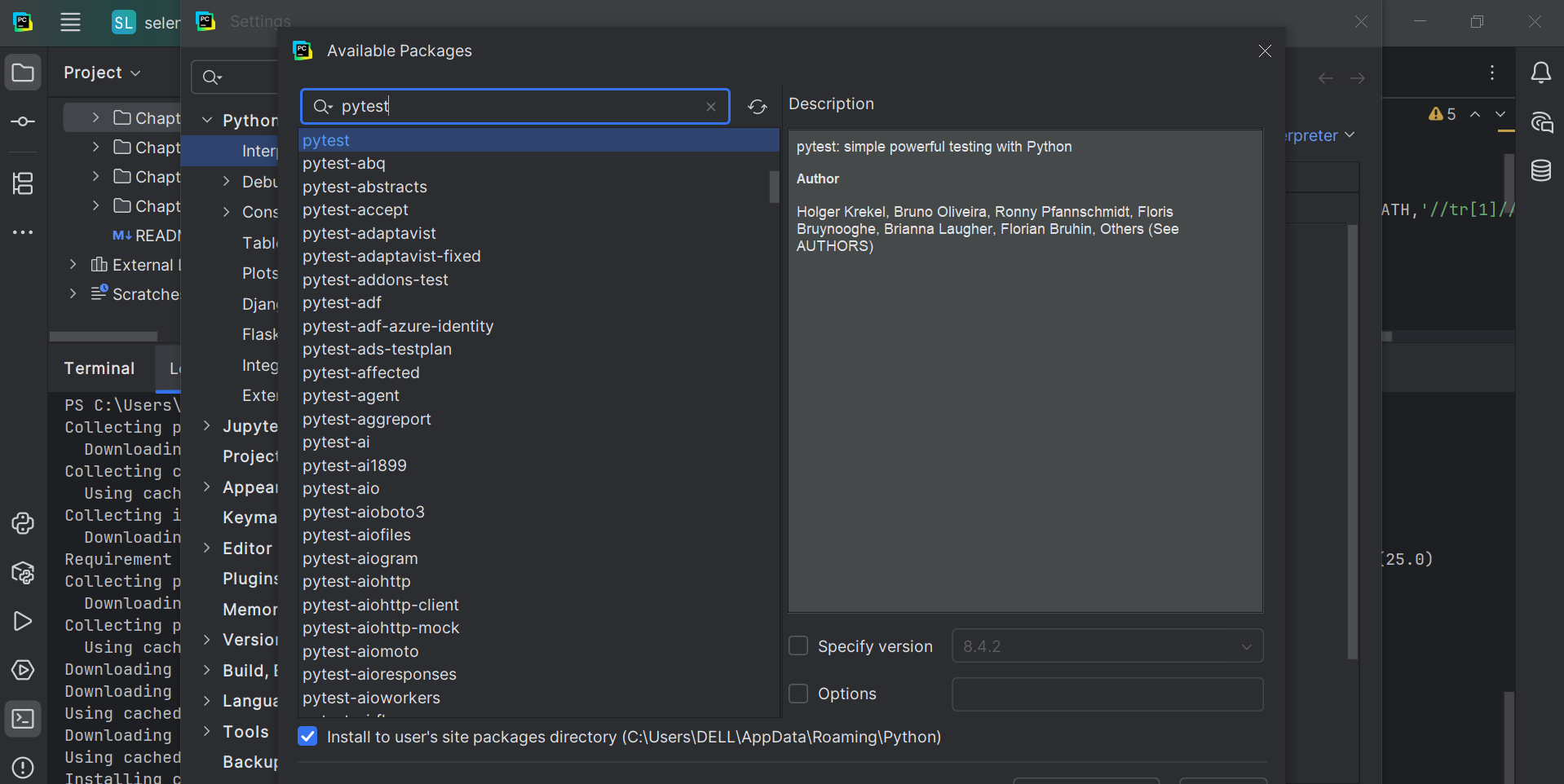
### **🧰 Step 3: Configure PyCharm to Use pytest**

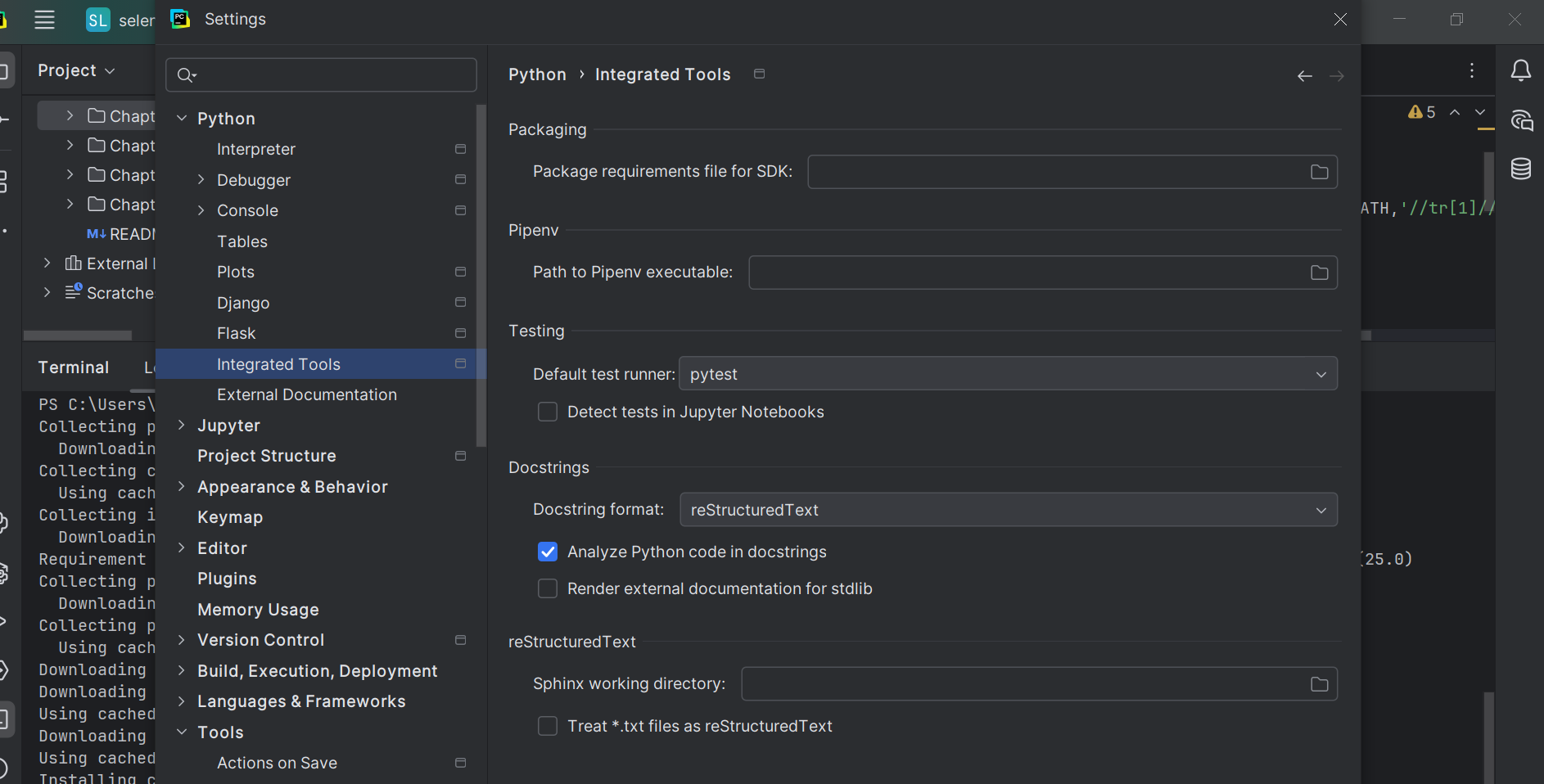
### **Go to File → Settings → Tools → Python Integrated Tools.**

### **Under Testing, set: Default test runner: pytest**

### **Click Apply → OK.**







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