

Setting Up the Virtual Environment and Running Jupyter Notebooks in VSCode

Creating and Activating the Virtual Environment

Follow these steps to create and activate a virtual environment named `project_env` for both Windows and macOS/Linux systems.

Windows:

1. Open Command Prompt and navigate to your project directory.
2. Create the virtual environment:

```
python -m venv project_env
```

3. Activate the virtual environment:

```
.\project_env\Scripts\activate
```

macOS/Linux:

1. Open Terminal and navigate to your project directory.
2. Create the virtual environment:

```
python3 -m venv project_env
```

3. Activate the virtual environment:

```
source project_env/bin/activate
```

Installing Required Libraries

Install the necessary packages within the activated virtual environment:

```
pip install -r requirements.txt
```

Running Jupyter Notebook (or for VSCode check below)

After setup, run Jupyter Notebook by executing:

```
jupyter notebook
```

Configuring VSCode to Use the Virtual Environment

In VSCode, the selection of the virtual environment and Jupyter kernel is typically done at the top of the interface:

1. Open your project folder in VSCode.
2. Open the notebook.
3. Press "Select Kernel" in the top right corner.
4. Choose `project_env` from the list of available python environments.
5. Once `project_env` is selected, VSCode will use it for running Python scripts and Jupyter Notebooks.

This setup ensures that all Python executions within VSCode, including Jupyter Notebooks, utilize the libraries and settings defined in your project's virtual environment.