Python Virtual Environment Setup (Bash - Windows & Linux)

1. Verify Python Installation

Before creating a virtual environment, ensure Python is installed:

```bash
python3 --version
```

If Python is not installed, download it from https://www.python.org/downloads/.

2. Create a Virtual Environment

Use the following command to create a virtual environment named `myenv`:

```bash
python3 -m venv myenv
```

3. Activate the Virtual Environment

Linux / Mac / WSL / Git Bash:

```bash
source myenv/bin/activate
```

Windows (Git Bash / WSL):

```bash
source myenv/Scripts/activate
```

Windows (Command Prompt - CMD):

```cmd
myenv\Scripts\activate
```

Windows (PowerShell):

```powershell
myenv\Scripts\Activate.ps1
```

4. Install Dependencies

To install dependencies from a `requirements.txt` file:

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

If you don't have a `requirements.txt` file, install packages manually:

```bash
pip install package_name
```

5. Save Installed Dependencies

To save all installed dependencies to a `requirements.txt` file:

```bash
pip freeze > requirements.txt
```

6. Deactivate the Virtual Environment

To exit the virtual environment:

```bash
deactivate
```

7. Remove the Virtual Environment

If you want to delete the virtual environment completely:

```bash
rm -rf myenv
```

8. Common Issues and Fixes

Issue: "bash: myenv/bin/activate: No such file or directory"

Solution: Ensure the virtual environment was created correctly. Run:

```bash
ls myenv
```

If the folder does not exist, create the environment again:

```bash
python3 -m venv myenv
```

If the issue persists, check that Python is installed and accessible:

```bash
python3 --version
```

If necessary, reinstall Python and try again.