

step-by-step installation instructions to run `server.py` as a service daemon:

1. Prepare Your Python Script:

- Make sure your Python script (`server.py`) is located in a directory of your choice. Ensure the script is executable.

2. Create a Log Directory:

- Create a directory to store log files. For example, create a directory named `logs` in your project directory (`/path/to/logs/`).

3. Create a Service File:

- Create a new service file for your Python script. You can name it as `filename.service`.
- Open a text editor and paste the service configuration provided in the sample below into the file.

```
**SAMPLE SERVICE FILE**
```

```
[Unit]
```

```
Description=introductory_test.service
```

```
[Service]
```

```
Type=simple
```

```
User=root
```

```
Group=root
```

```
ExecStart=/usr/bin/python3 /introductory-test/src/server.py
```

```
WorkingDirectory=/tmp
```

```
Restart=always
```

```
Nice=19
```

```
LimitNOFILE=16384
```

```
StandardOutput=file:/introductory-test/logs/serveroutput.log
```

```
StandardError=file:/introductory-test/logs/server.log
```

```
[Install]
```

```
WantedBy=multi-user.target
```

4. Adjust Service Configuration:

- Adjust the `ExecStart` directive in the service file to point to the location of your Python script (`server.py`).
- Modify the `WorkingDirectory` directive to specify the directory containing your Python script.
- Update the `StandardOutput` and `StandardError` directives to specify the path to your log file.

5. Save the Service File:

- Save the service file (`introductory_test.service`) in the directory `/etc/systemd/system/`.
OR you may use this command to create a symbolic link to place where you service file is located

```
sudo ln -s /introductory-test/introductory_test.service
/usr/lib/systemd/system/introductory_test.service
```

6. Set Permissions:

- Ensure that the service file has the correct permissions. It should be readable by everyone and writable only by root.

- You can set the permissions using the following command:

```
```bash
sudo chmod 644 /etc/systemd/system/introductory_test.service
```
```

7. Reload systemd Manager Configuration:

- After creating or modifying a service file, you need to reload the systemd manager configuration to apply the changes:

```
```bash
sudo systemctl daemon-reload
```
```

8. Start the Service:

- Start the service using the following command:

```
```bash
sudo systemctl start introductory_test.service
```
```

or restart your service using this command

```
```bash
sudo systemctl restart introductory_test.service
```
```

9. Check Service Status:

- You can check the status of your service to ensure it's running without errors:

```
```bash
sudo systemctl status introductory_test.service
```
```

10. Enable Automatic Start (Optional):

- If you want the service to start automatically at system boot, you can enable it using the following command:

```
```bash
sudo systemctl enable introductory_test.service
```
```

'''

11. **Verify Logs:**

- After starting the service, verify that the log file (`server.log`) is being created in the specified directory (`/introductory-test/logs/`). You can check the log file for any output from your Python script.

That's it! Your Python script should now be running as a service daemon, and its output should be logged to the specified log file. You can monitor the service's status, stop or restart it, and view its logs using `systemd` commands.