



Beginner Exercise: Build a GitHub Actions Pipeline for Python 3.9 Setup



Goal

Create a **GitHub Actions pipeline** based on the following requirements, which includes setting up Python 3.9, installing dependencies, and checking the Python version.



Block-based

1. Trigger: Manual Workflow

- The pipeline must **only run manually** using the `workflow_dispatch` trigger.

2. Job

- You need **one job** that runs on an **Ubuntu virtual machine** using `ubuntu-latest` as the *tool* inside the *job*.

3. Steps

- Step 1:** Use a *command* with the `actions/checkout@v4` *tool* to **check out** the repository code.
- Step 2:** Use a *command* with the `actions/setup-python@v4` *tool* action and the *parameter* `python-version: '3.9'` to **set up Python 3.9**.
- Step 3:** Use a *command* with the `pip` *tool* and the *parameter* `install -r requirements.txt` to **install dependencies**.
- Step 4:** Use a *command* with the `python3` *tool* and the *parameter* `--version` to **print the installed Python version**.

4. Results

- When running the *pipeline*, you should expect a **success** message.
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GitHub Actions

Here are the **specific actions** and **commands** you need to use for each step:

1. Checkout Repository Code

Use `actions/checkout@v4` to get the repository code into the GitHub runner.

```
- name: Checkout code
  uses: actions/checkout@v4
```

2. Set up Python 3.9

Use `actions/setup-python@v4` to install **Python 3.9**.

```
- name: Set up Python 3.9
  uses: actions/setup-python@v4
  with:
    python-version: '3.9'
```

3. Install Dependencies

Use the following command to install dependencies from the `requirements.txt` file.

```
- name: Install dependencies
  run: pip install -r requirements.txt
```

4. Check Python Version

Use this command to print out the Python version and display full version details.

```
- name: Check Python version
  run: python3 --version
```