



Beginner Exercise: Build a GitHub Actions Pipeline with Node.js and Heroku Deployment



Goal

Create a **GitHub Actions pipeline** based on the following requirements. This pipeline will include steps for setting up Node.js, installing dependencies, running tests, and deploying to Heroku.



Requirements

1. Trigger: Manual Workflow

- The pipeline must **only run manually** using the `workflow_dispatch` trigger, meaning you will manually start the workflow from the GitHub web interface.

2. Jobs and Steps

Job 1: Build and Test the Application

- Run on `ubuntu-latest` .
- Step 1: Checkout the repository using `actions/checkout@v4` .
- Step 2: Set up **Node.js version 18** using `actions/setup-node@v3` .
- Step 3: Install dependencies using `yarn install` .
- Step 4: Run tests using `yarn test` .

Job 2: Deploy to Heroku

- Run on `ubuntu-latest` .
 - Step 1: Checkout the repository using `actions/checkout@v4` .
 - Step 2: Deploy the application to Heroku using `akhilshns/heroku-deploy@v3.12.12` .
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Commands and Actions to Use

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

Job 1: Build and Test

1. Checkout Repository Code

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

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

2. Set up Node.js 18

Use `actions/setup-node@v3` to set up **Node.js version 18**.

```
- name: Set up Node.js
  uses: actions/setup-node@v3
  with:
    node-version: '18'
```

3. Install Dependencies

Use `yarn install` to install dependencies from `package.json`.

```
- name: Install dependencies
  run: yarn install
```

4. Run Tests

Use `yarn test` to run the test suite for the application.

```
- name: Run tests
  run: yarn test
```

Job 2: Deploy to Heroku

1. Checkout Repository Code

Again, use `actions/checkout@v4` to get your repository code for the deployment.

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

2. Deploy to Heroku

Use `akhilshns/heroku-deploy@v3.12.12` to deploy the application to Heroku.

```
- name: Deploy to Heroku
  uses: akhilshns/heroku-deploy@v3.12.12
  with:
    heroku_api_key: ${ secrets.HEROKU_API_KEY }
    heroku_app_name: "your-app-name-here"
```

Ensure that you have the `HEROKU_API_KEY` stored as a **secret** in your repository settings.
Replace `"your-app-name-here"` with the actual name of your Heroku application.