Week 8: Continuous Deployment

Background

Last week, you practiced using GitHub Actions to set up Continuous Integration (CI) workflows. This week, you will extend your skills to Continuous Deployment (CD) by learning how to automatically deploy a static website using GitHub and GitHub Actions.

You can read the **Continuous Deployment** to get more idea for CD.

The following example is use Github Action to conduct CD.

Objective

You will:

- Create a simple static webpage.
- Push the project to GitHub.
- Set up a GitHub Actions workflow that automatically deploys the page to GitHub Pages whenever you push changes to the master branch.

Step-by-Step Instructions

1. Prepare Your Static Website

- Create a project folder locally on your computer.
- Inside the folder, create a basic index.html file. Example content:

2. Initialize Local Git Repository

Open your terminal, navigate to your project folder, and run:

```
git init
git add .
git commit -m "Initial commit"
```

3. Create a New Repository on GitHub

- Go to GitHub and create a new repository.
- Name it appropriately (e.g., webTest).
- Important:
 - Do not initialize with README, .gitignore, or License (to keep it truly empty).
 - Set the repository visibility:
 - If you want to use GitHub Pages for free → Set repository to Public.

4. Connect Your Local Project to GitHub

Back in your terminal:

```
git remote add origin https://github.com/<your-username>/<your-repo-name>.git git push -u origin master
```

5. Configure GitHub Pages

- In your GitHub repository:
 - Go to Settings → Pages.
 - $\hspace{1cm} \bullet \hspace{1cm} \text{Under Build and Deployment} \rightarrow \text{Source}, \, \text{select GitHub Actions}. \\$

GitHub Pages

GitHub Pages is designed to host your personal, organization, or project pages from a GitHub repository.

Build and deployment



With a GitHub Enterprise account, you can restrict access to your GitHub Pages site by publishing it privately. You can use privately published sites to share your internal documentation or knowledge base with members of your enterprise. You can try GitHub Enterprise risk-free for 30 days. Learn more about the visibility of your GitHub Pages site.

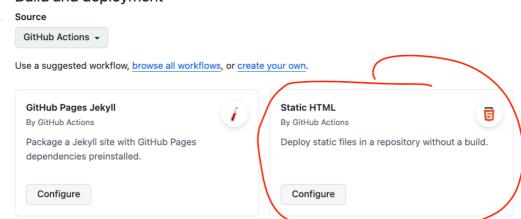
Start free for 30 days

Choose → "Static HTML"
 (NOT Jekyll, since you are uploading a raw HTML file.)

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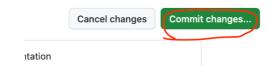


Workflow details will appear here once your site has been deployed. View workflow runs.

Custom domain

Custom domains allow you to serve your site from a domain other than wlyang538.github.io. <u>Learn more about configuring custom domains</u>.

- Click **Configure**. Then click Commit changes.. on the **top right** corner.
- Then you can see the .github/workflows/xxxx.yml on your github page.



6. Push and Trigger Deployment

Whenever you push new commits to master, GitHub Actions will:

- Build the static site.
- Deploy it automatically to GitHub Pages.

You can check the progress under the **Actions** tab of your repository.

7. Verify Your Website

Once deployed, your site will be available at:

```
https://<your-username>.github.io/<your-repo-name>/
```

Check if your index.html page loads correctly!

Reminders

- Repository must be Public to use GitHub Pages for free.
- Always pull before you push to master
- Do not leak sensitive information in logs if you add environment variables later.