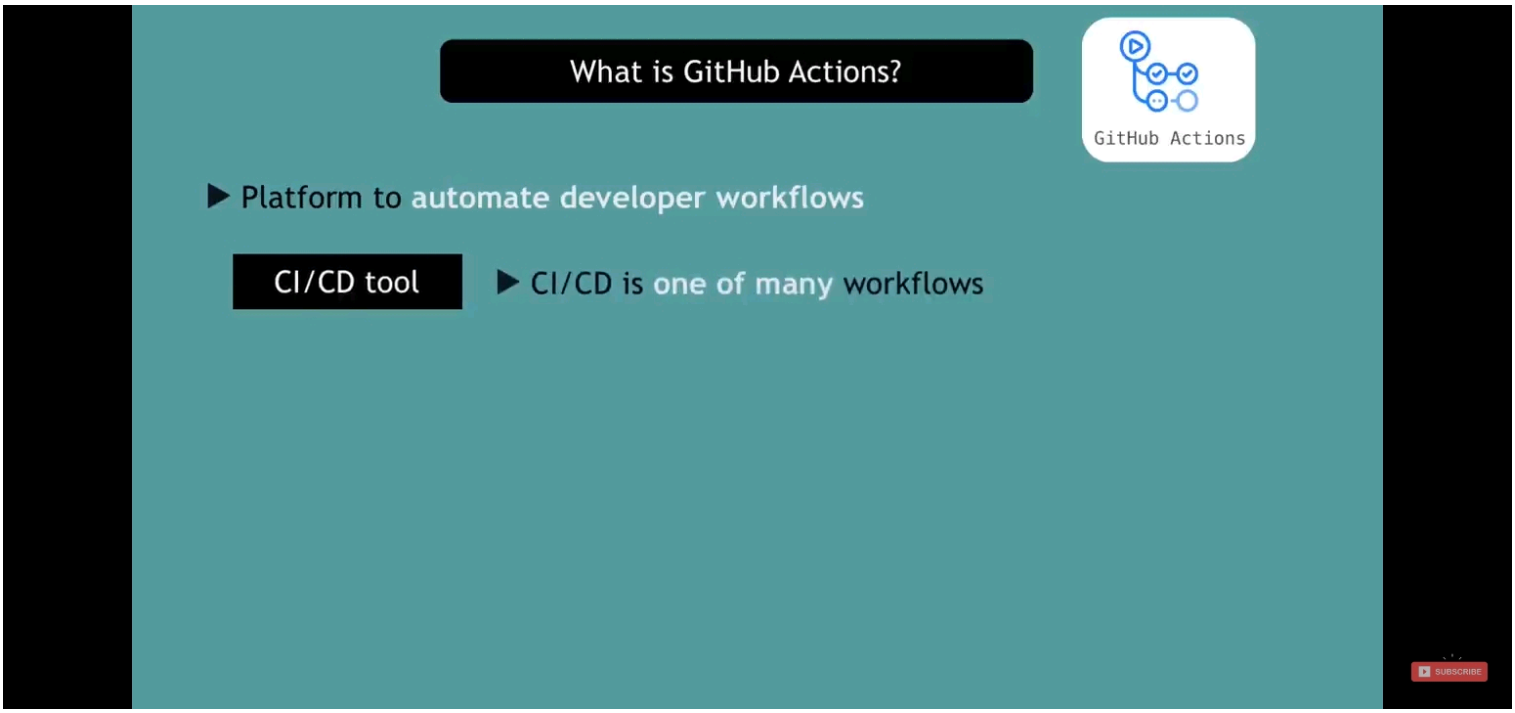
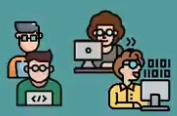
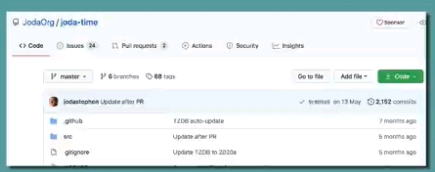

What is GitHub Actions?
GitHub Actions
▶ Platform to automate developer workflows
CI/CD tool
▶ CI/CD is one of many workflows
SUBSCRIBE

What are those workflows?

Organizational tasks



Contributers



Issues 24

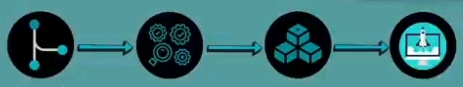
Pull requests 301

- is it minor/major?
- is it reproducable?
- assign to a contributer

- review pull request
- is the bug fixed?
- merge to master branch

- prepare release notes
- update version number

WORKFLOWS

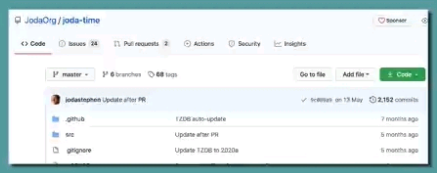


Merged Code | Test | Build | Deployment

SUBSCRIBE

How GitHub Actions automate these workflows?

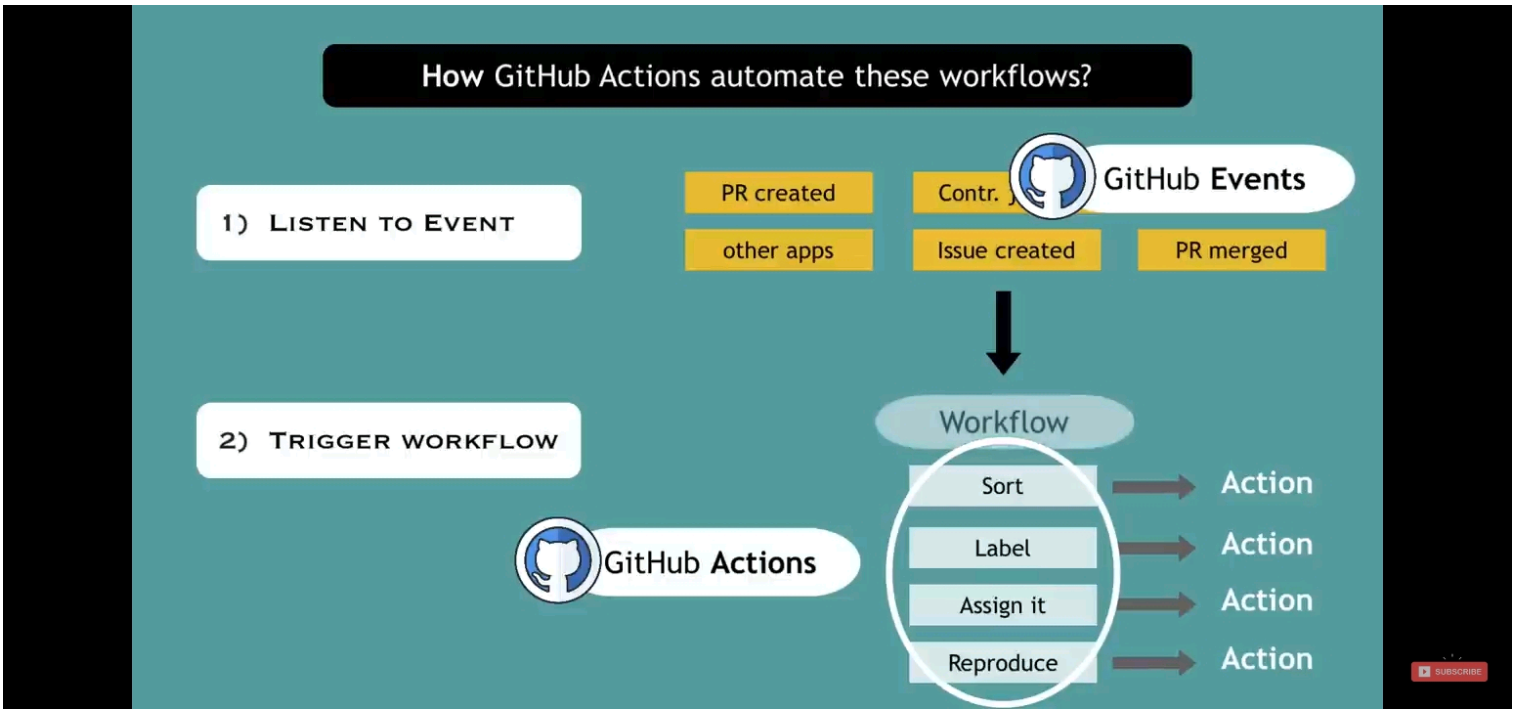
GitHub Actions



- when something happens IN or TO your repository
  - PR created
  - Contr. joined
  - other apps
  - Issue created
  - PR merged

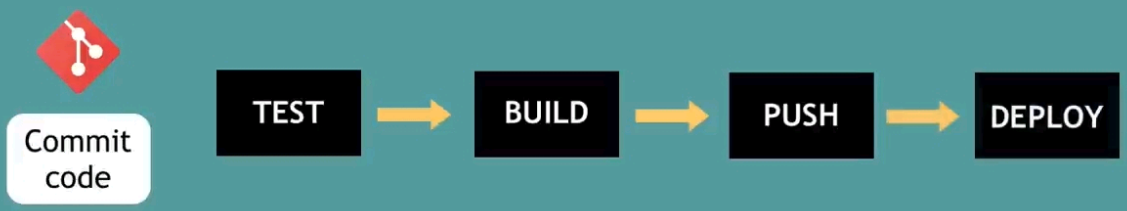
GitHub Events

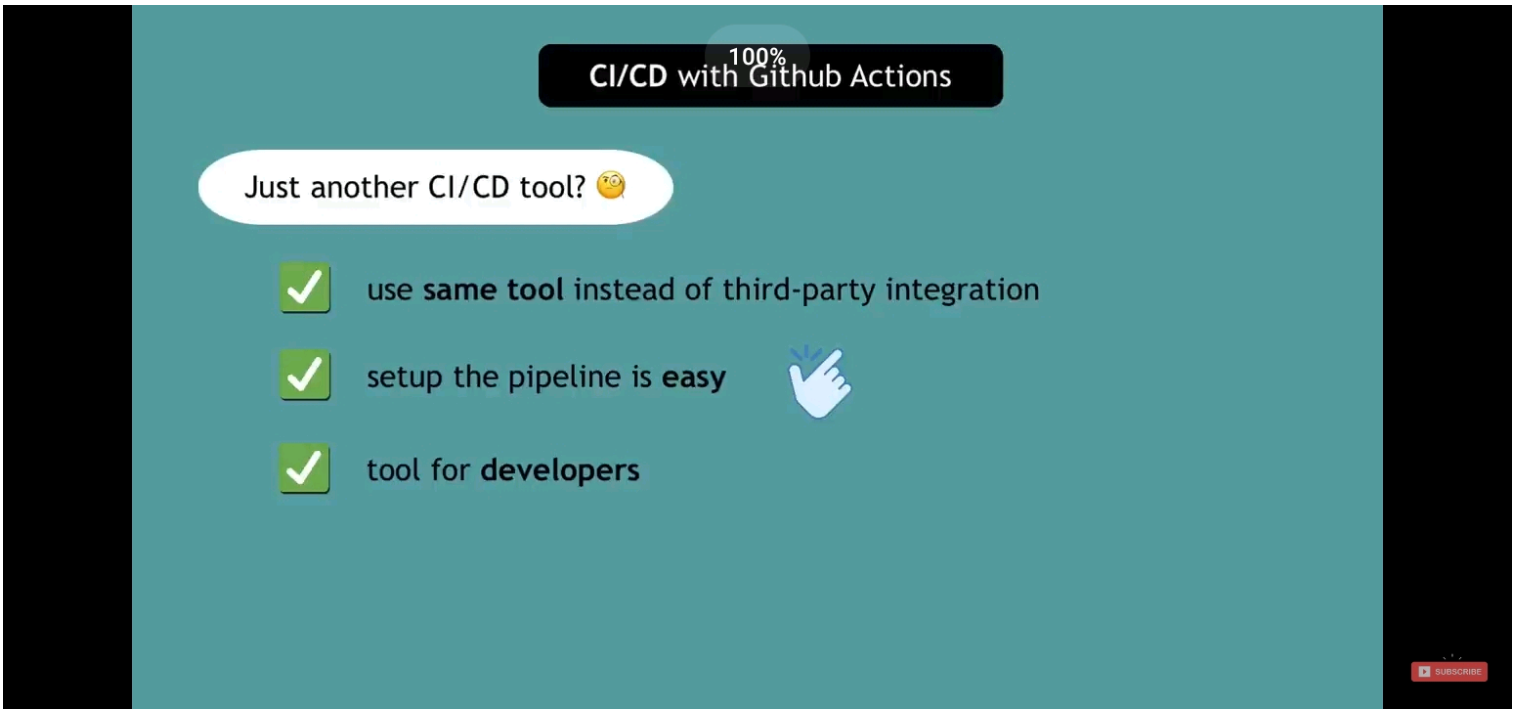
- automatic ACTIONS are executed in response

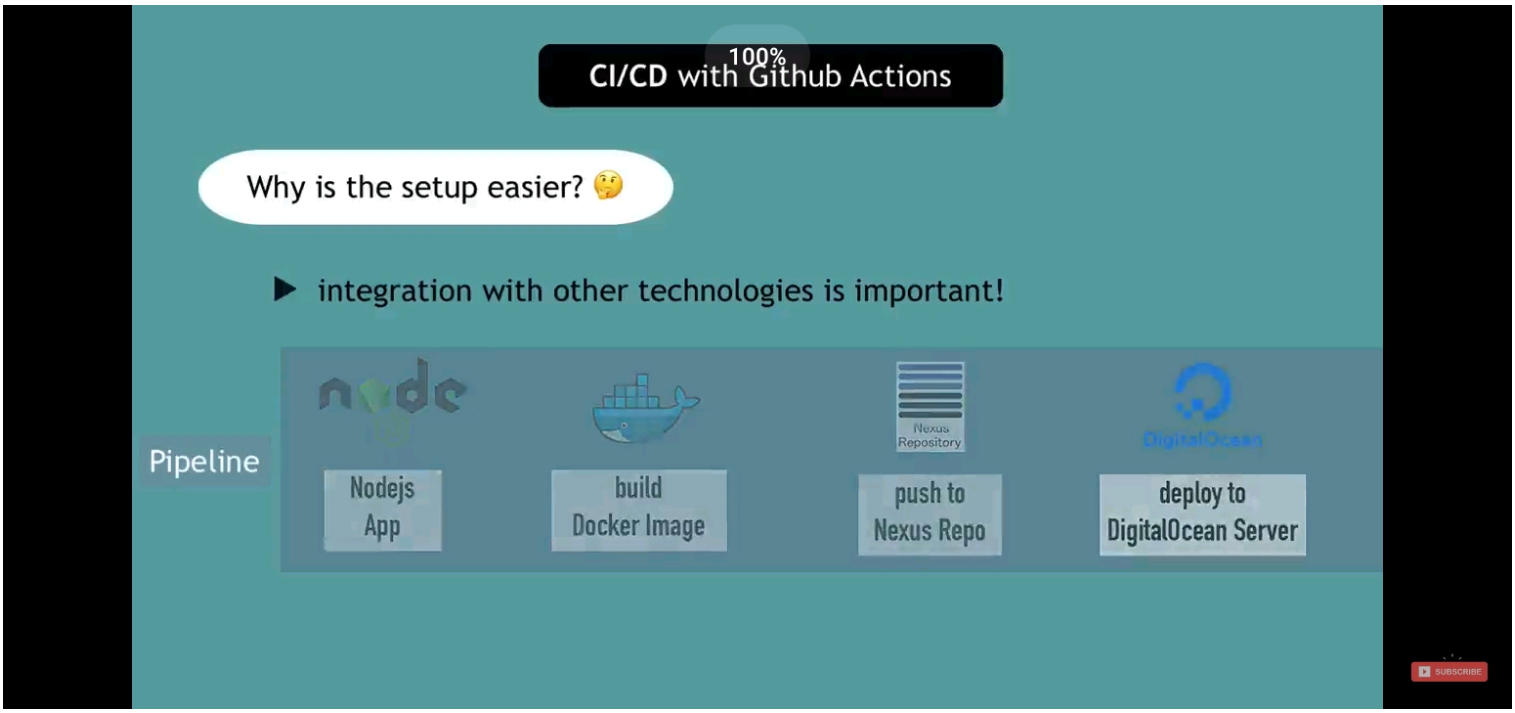

How GitHub Actions automate these workflows?
1) Listen to Event
PR created
Contr.
other apps
Issue created
PR merged
GitHub Events
2) Trigger workflow
Workflow
Sort
Label
Assign it
Reproduce
Action
Action
Action
Action
GitHub Actions

CI/CD with Github Actions

- most common workflow for your repository




100%
CI/CD with Github Actions
Just another CI/CD tool?
use same tool instead of third-party integration
setup the pipeline is easy
tool for developers
SUBSCRIBE

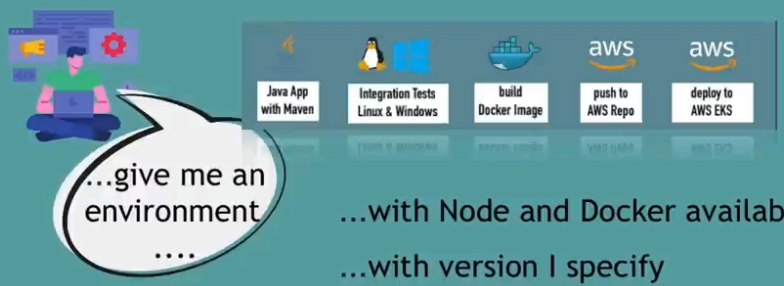

CI/CD with Github Actions
Why is the setup easier? 🤔
integration with other technologies is important!
Pipeline
Nodejs App
build Docker Image
push to Nexus Repo
deploy to DigitalOcean Server
Nexus Repository
DigitalOcean
SUBSCRIBE

CI/CD with Github Actions

Why is the setup easier? 🤔

GitHub Actions

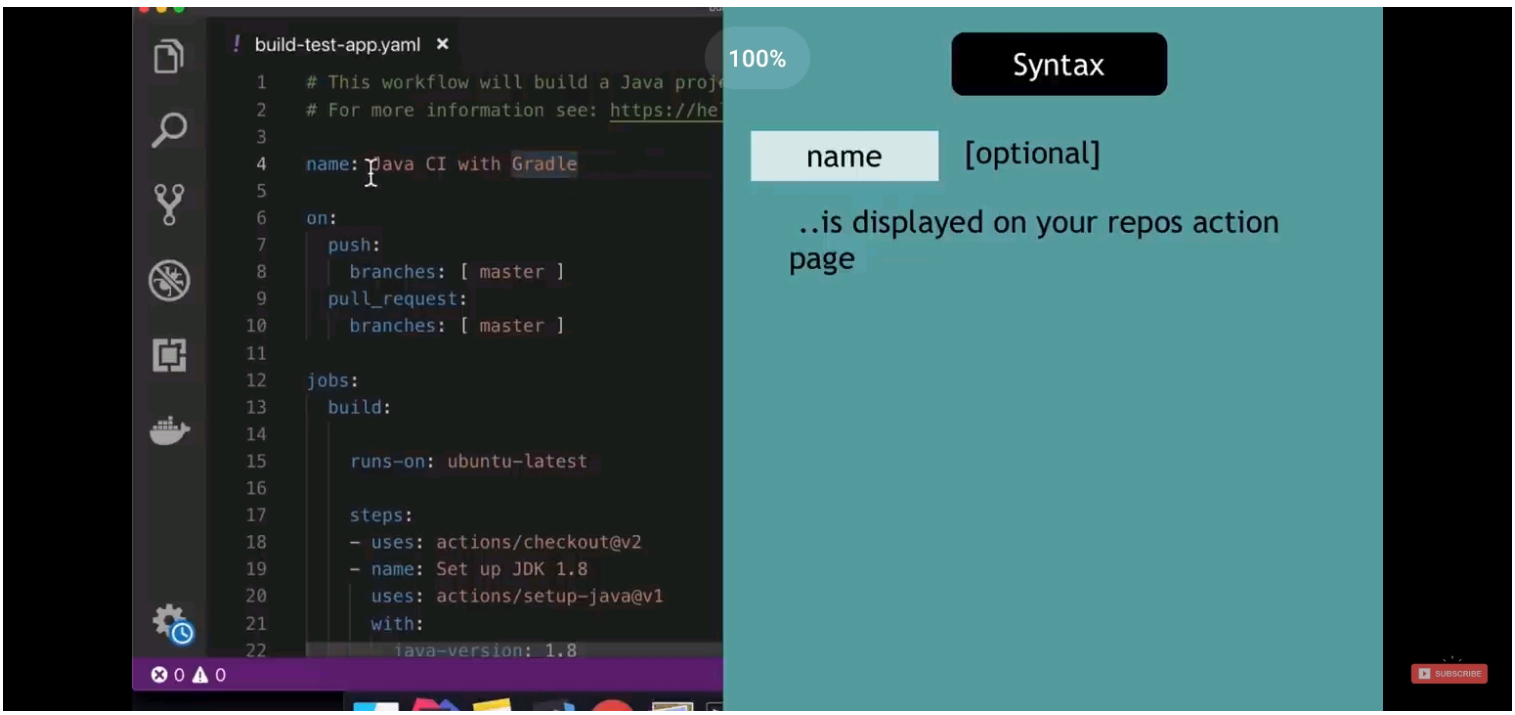
- integration with other technologies is important!

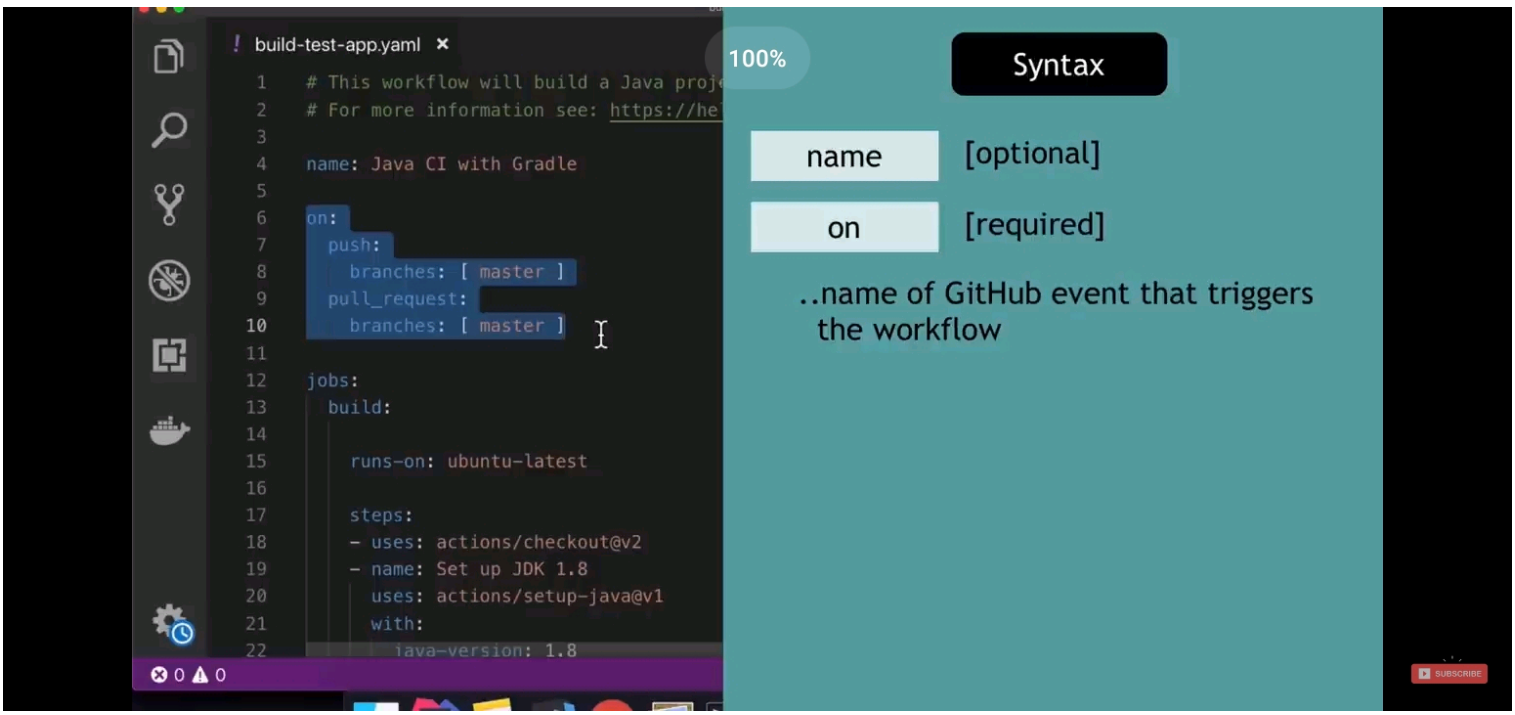


...with Node and Docker available

...with version I specify

...simply connect to target and deploy


build-test-app.yaml
This workflow will build a Java proje
For more information see: https://he
name: Java CI with Gradle
on:
push:
branches: [master]
pull_request:
branches: [master]
jobs:
build:
runs-on: ubuntu-latest
steps:
- uses: actions/checkout@v2
- name: Set up JDK 1.8
uses: actions/setup-java@v1
with:
java-version: 1.8
0 0
100%
Syntax
name
[optional]
..is displayed on your repos action page
SUBSCRIBE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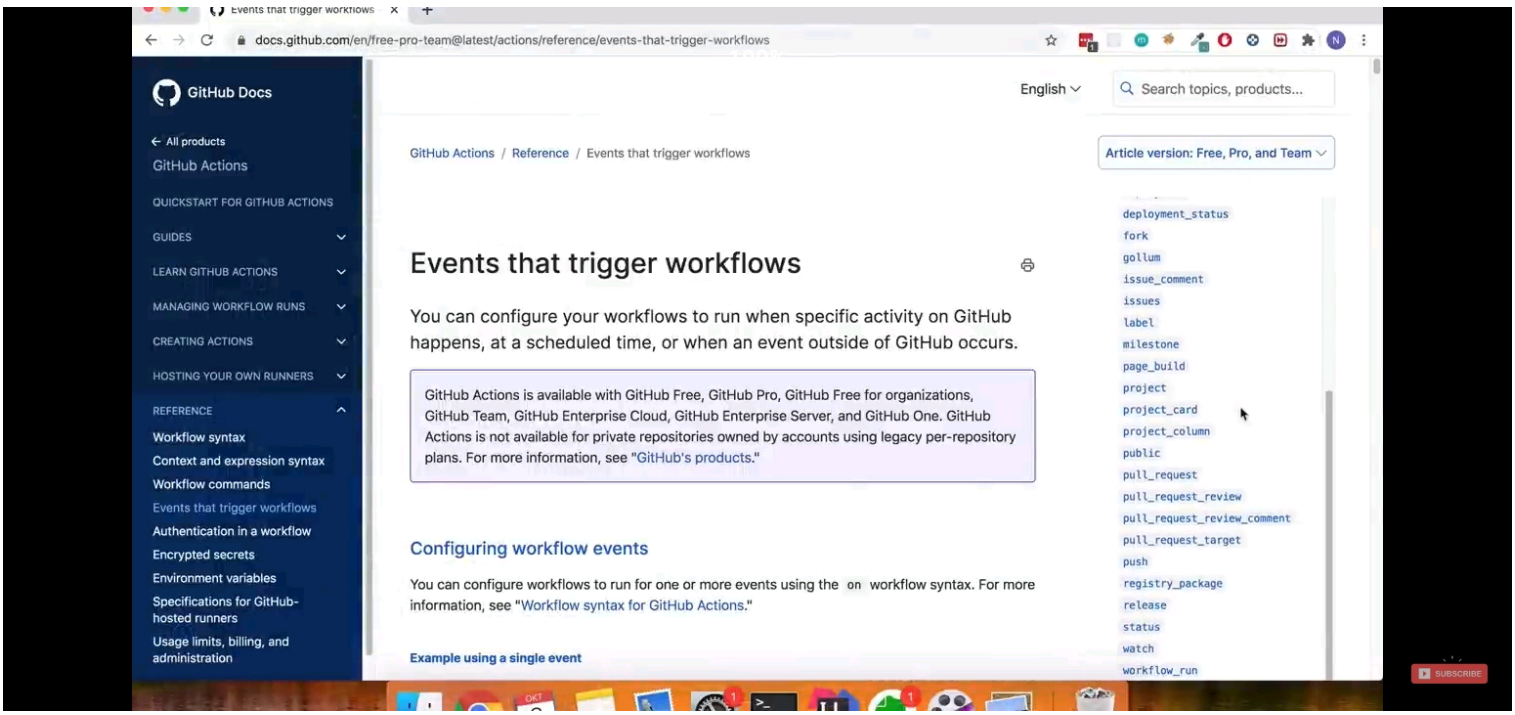
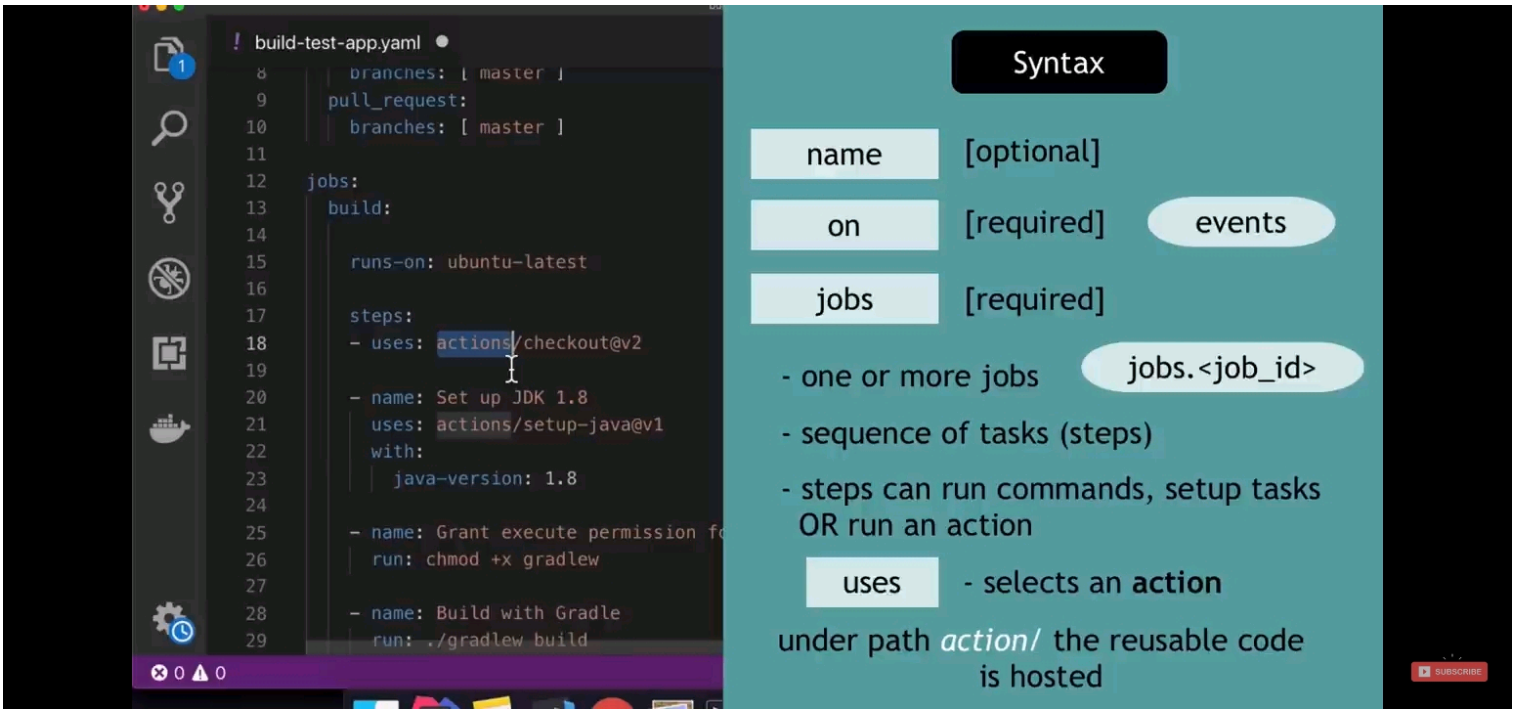
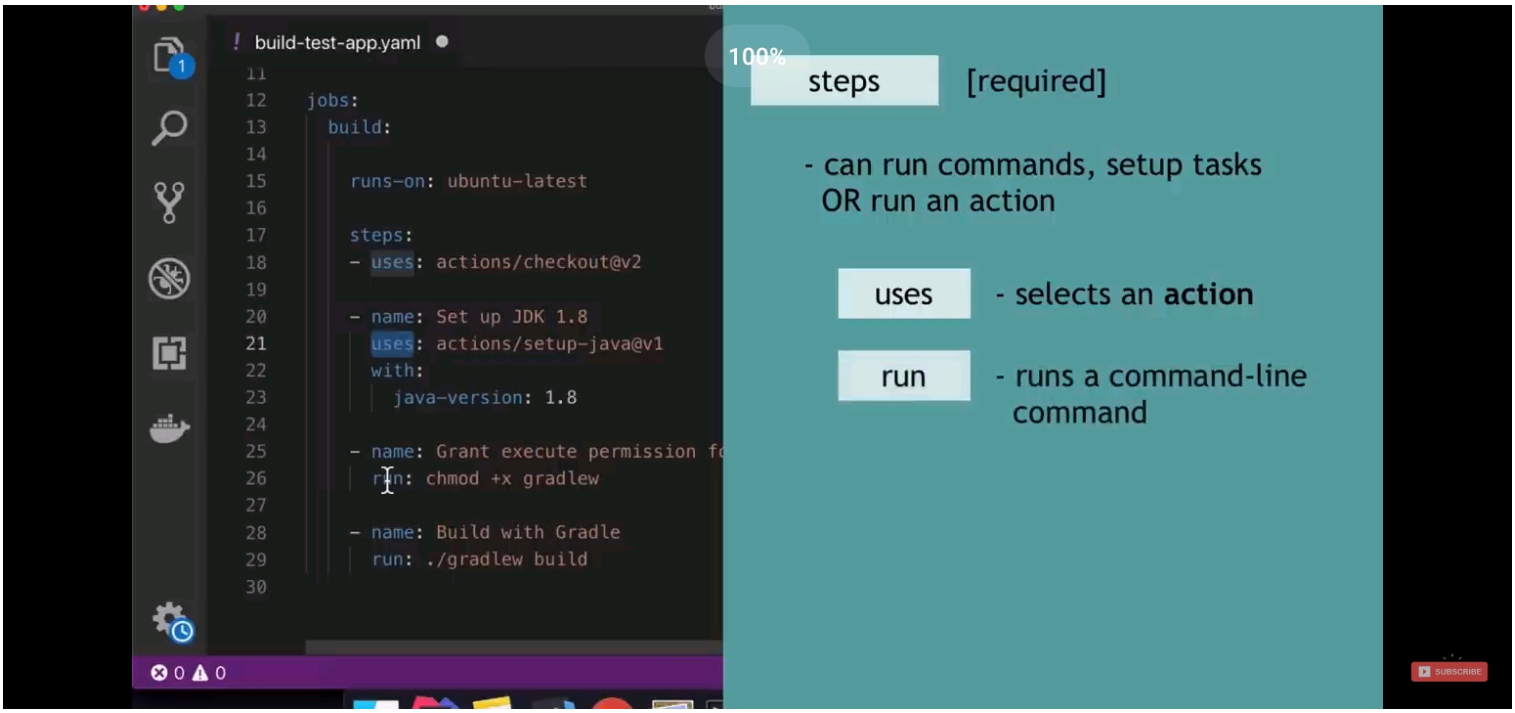
build:
runs-on: ubuntu-latest
steps:
- uses: actions/checkout@v2
- name: Set up JDK 1.8
uses: actions/setup-java@v1
with:
java-version: 1.8
0 0
100%
Syntax
name
[optional]
on
[required]
..name of GitHub event that triggers the workflow
SUBSCRIBE

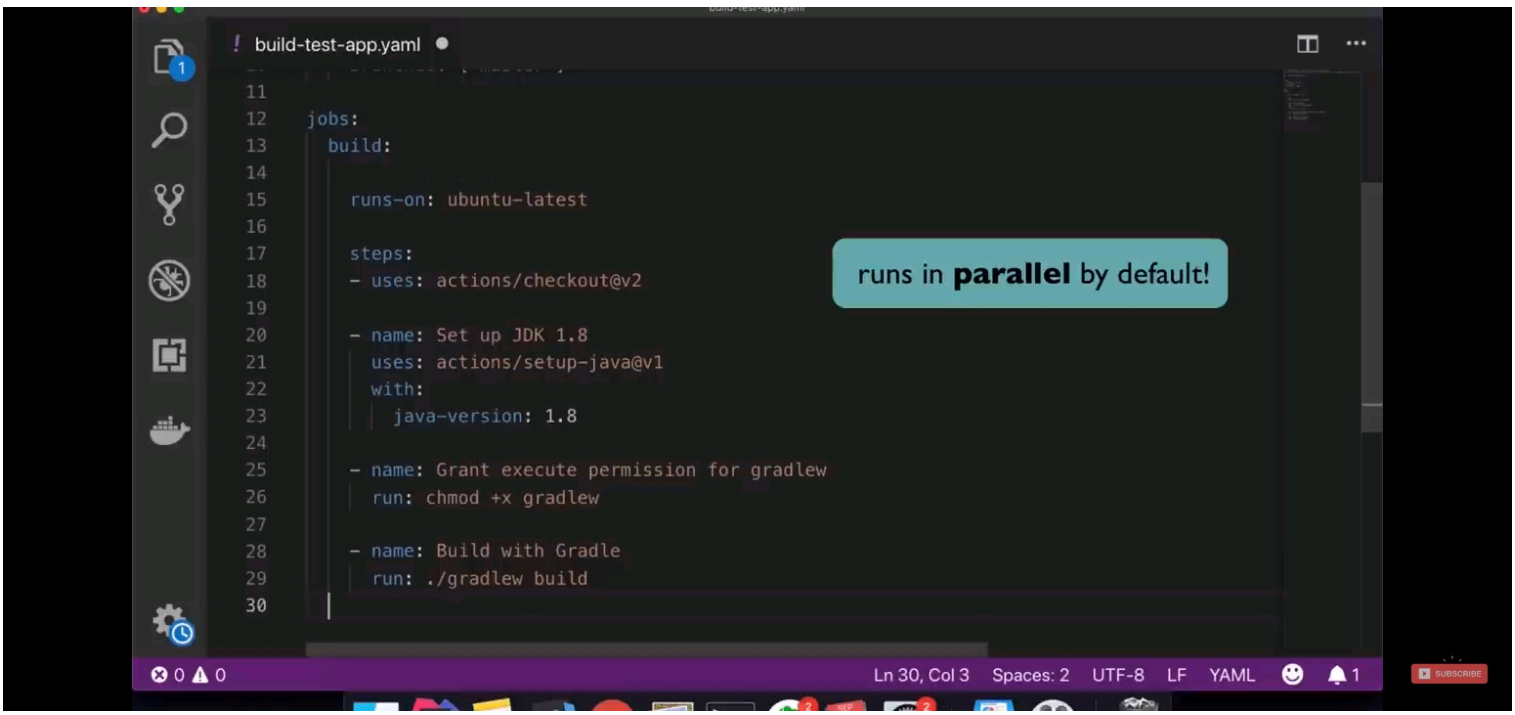

Events that trigger workflows
docs.github.com/en/free-pro-team@latest/actions/reference/events-that-trigger-workflows
GitHub Docs
English
Search topics, products...
All products
GitHub Actions
QUICKSTART FOR GITHUB ACTIONS
GUIDES
LEARN GITHUB ACTIONS
MANAGING WORKFLOW RUNS
CREATING ACTIONS
HOSTING YOUR OWN RUNNERS
REFERENCE
Workflow syntax
Context and expression syntax
Workflow commands
Events that trigger workflows
Authentication in a workflow
Encrypted secrets
Environment variables
Specifications for GitHub-hosted runners
Usage limits, billing, and administration
GitHub Actions / Reference / Events that trigger workflows
Article version: Free, Pro, and Team
Events that trigger workflows
You can configure your workflows to run when specific activity on GitHub happens, at a scheduled time, or when an event outside of GitHub occurs.
GitHub Actions is available with GitHub Free, GitHub Pro, GitHub Free for organizations, GitHub Team, GitHub Enterprise Cloud, GitHub Enterprise Server, and GitHub One. GitHub Actions is not available for private repositories owned by accounts using legacy per-repository plans. For more information, see "GitHub's products."
Configuring workflow events
You can configure workflows to run for one or more events using the on workflow syntax. For more information, see "Workflow syntax for GitHub Actions."
Example using a single event
deployment_status
fork
gollum
issue_comment
issues
label
milestone
page_build
project
project_card
project_column
public
pull_request
pull_request_review
pull_request_review_comment
pull_request_target
push
registry_package
release
status
watch
workflow_run
SUBSCRIBE

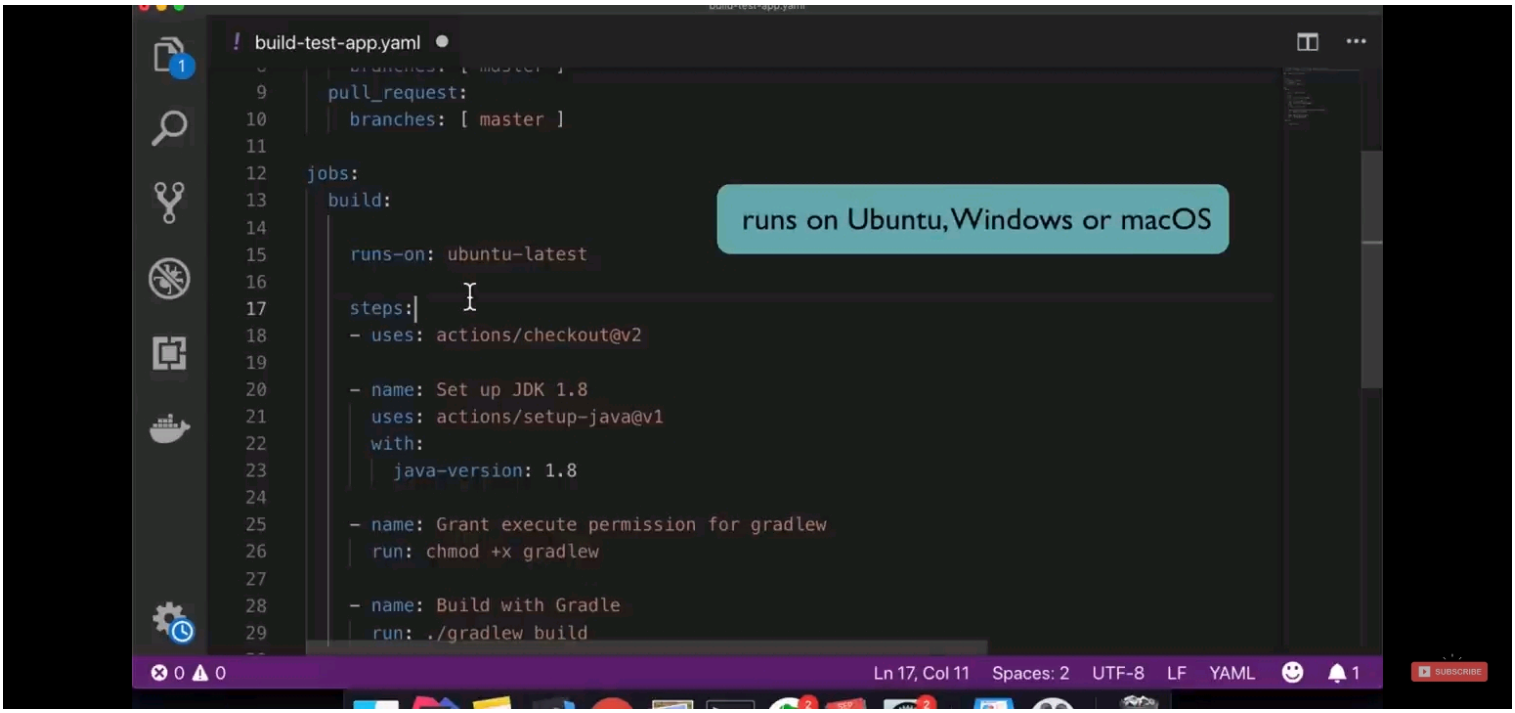

build-test-app.yaml
branches: [master]
pull_request:
branches: [master]
jobs:
build:
runs-on: ubuntu-latest
steps:
- uses: actions/checkout@v2
- name: Set up JDK 1.8
uses: actions/setup-java@v1
with:
java-version: 1.8
- name: Grant execute permission fo
run: chmod +x gradlew
- name: Build with Gradle
run: ./gradlew build
Syntax
name [optional]
on [required]
events
jobs [required]
- one or more jobs
jobs.<job_id>
- sequence of tasks (steps)
- steps can run commands, setup tasks OR run an action
uses - selects an action
under path action/ the reusable code is hosted

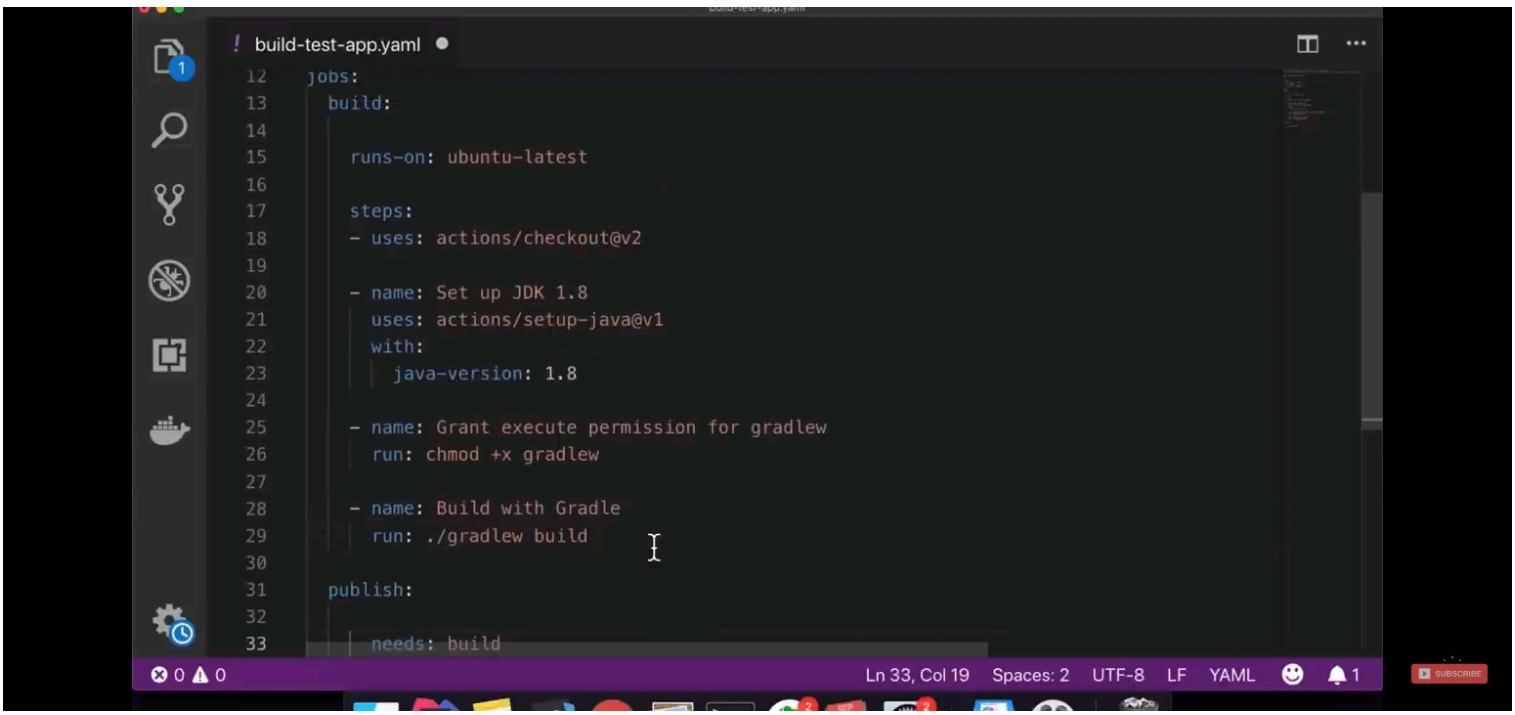

build-test-app.yaml
jobs:
build:
runs-on: ubuntu-latest
steps:
- uses: actions/checkout@v2
- name: Set up JDK 1.8
uses: actions/setup-java@v1
with:
java-version: 1.8
- name: Grant execute permission fo
run: chmod +x gradlew
- name: Build with Gradle
run: ./gradlew build
100%
steps [required]
- can run commands, setup tasks OR run an action
uses - selects an action
run - runs a command-line command
SUBSCRIBE

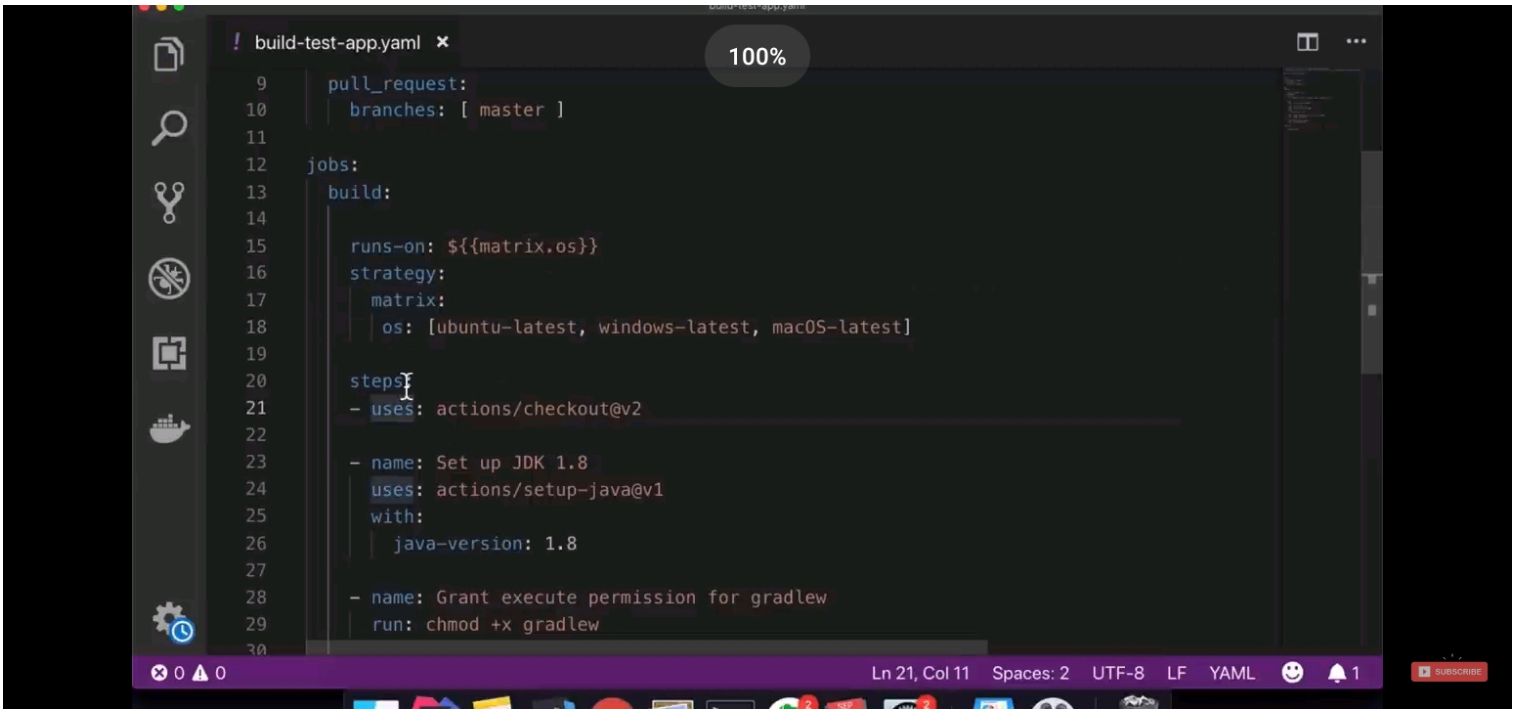
Where does this code **run?** 🤔

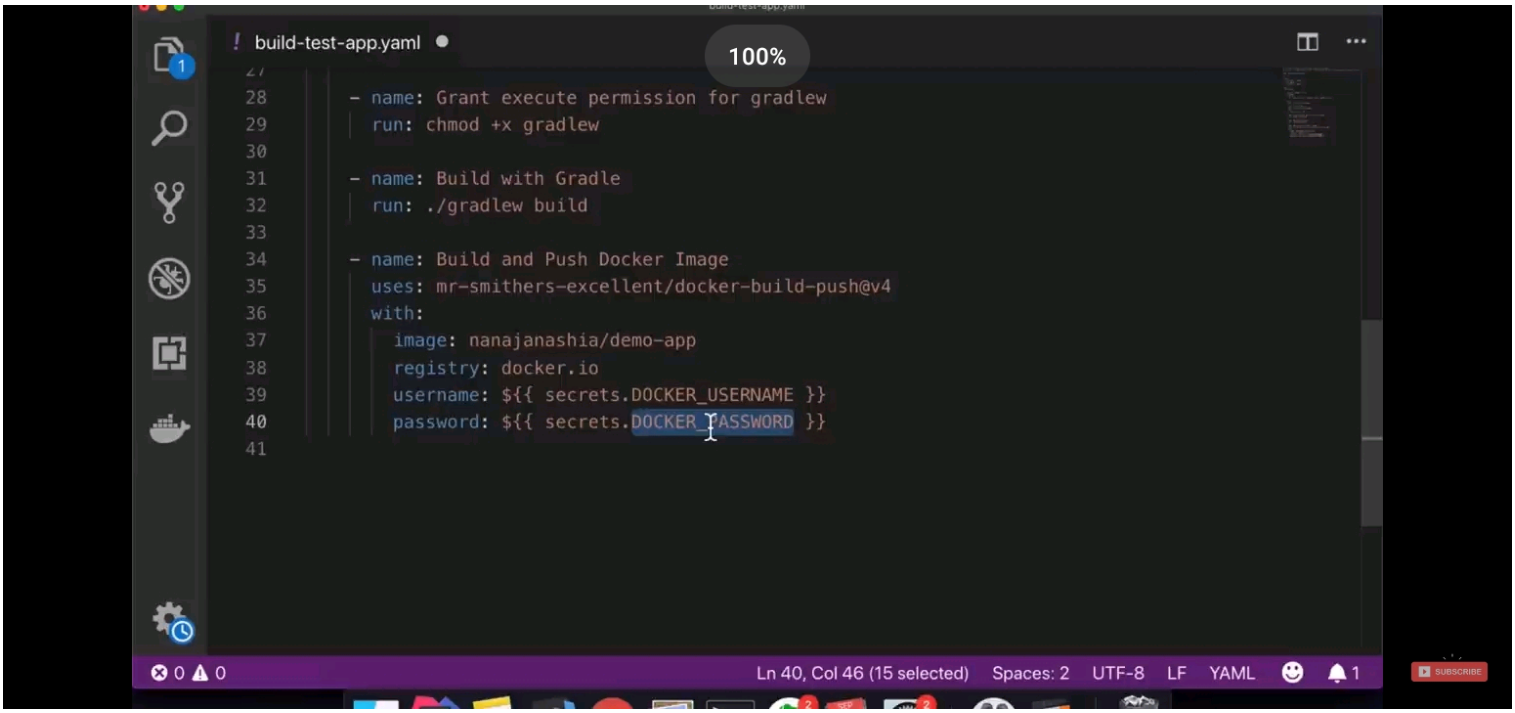
- managed by GitHub (BUT you can also host your own!)
- **each job** in a workflow **runs in a fresh** virtual environment

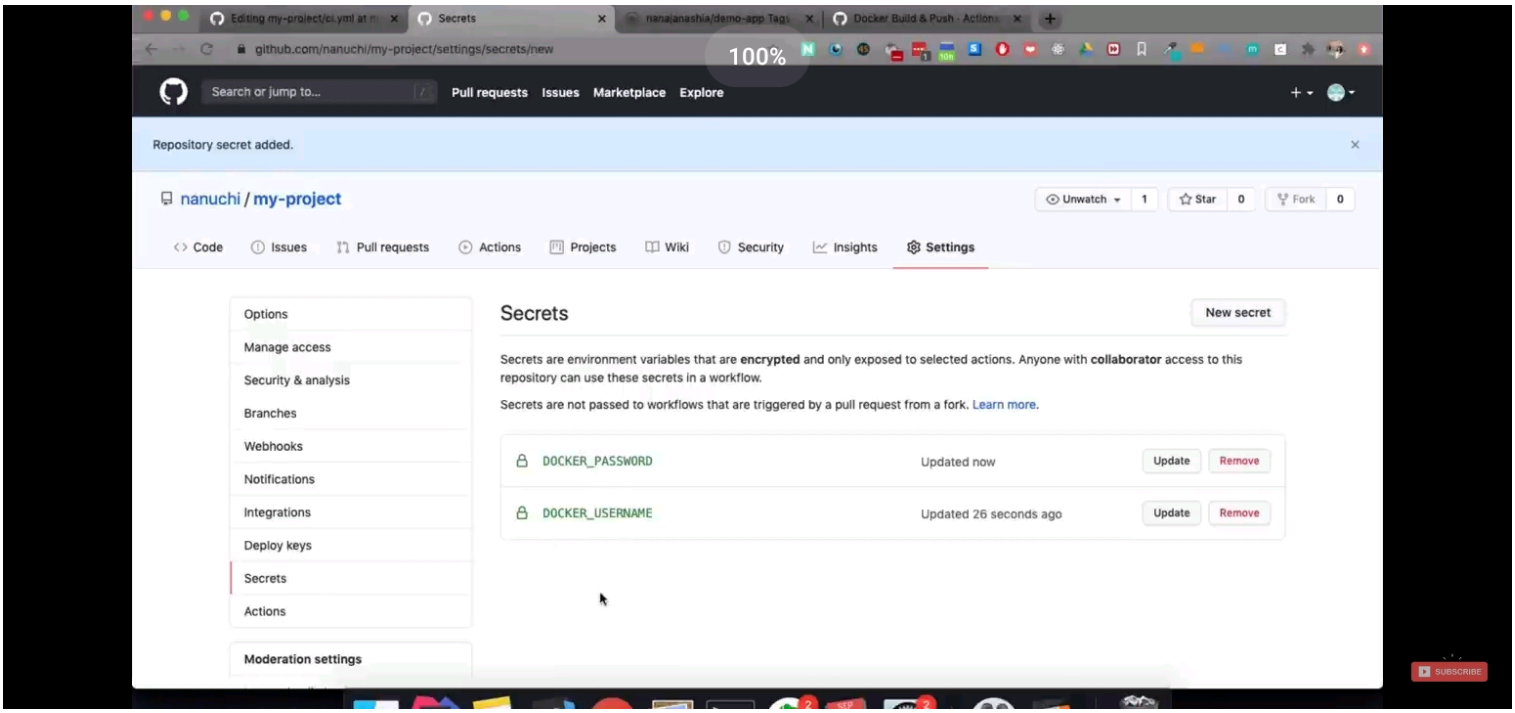

build-test-app.yaml
jobs:
build:
runs-on: ubuntu-latest
steps:
- uses: actions/checkout@v2
- name: Set up JDK 1.8
uses: actions/setup-java@v1
with:
java-version: 1.8
- name: Grant execute permission for gradlew
run: chmod +x gradlew
- name: Build with Gradle
run: ./gradlew build
runs in parallel by default!
Ln 30, Col 3
Spaces: 2
UTF-8
LF
YAML
SUBSCRIBE


build-test-app.yaml
pull_request:
branches: [master]
jobs:
build:
runs-on: ubuntu-latest
steps:
- uses: actions/checkout@v2
- name: Set up JDK 1.8
uses: actions/setup-java@v1
with:
java-version: 1.8
- name: Grant execute permission for gradlew
run: chmod +x gradlew
- name: Build with Gradle
run: ./gradlew build
runs on Ubuntu, Windows or macOS
Ln 17, Col 11
Spaces: 2
UTF-8
LF
YAML
SUBSCRIBE


build-test-app.yaml
jobs:
build:
runs-on: ubuntu-latest
steps:
- uses: actions/checkout@v2
- name: Set up JDK 1.8
uses: actions/setup-java@v1
with:
java-version: 1.8
- name: Grant execute permission for gradlew
run: chmod +x gradlew
- name: Build with Gradle
run: ./gradlew build
publish:
needs: build
Ln 33, Col 19
Spaces: 2
UTF-8
LF
YAML
SUBSCRIBE


build-test-app.yaml
100%
pull_request:
branches: [master]
jobs:
build:
runs-on: ${{matrix.os}}
strategy:
matrix:
os: [ubuntu-latest, windows-latest, macOS-latest]
steps:
- uses: actions/checkout@v2
- name: Set up JDK 1.8
uses: actions/setup-java@v1
with:
java-version: 1.8
- name: Grant execute permission for gradlew
run: chmod +x gradlew
Ln 21, Col 11
Spaces: 2
UTF-8
LF
YAML
SUBSCRIBE


build-test-app.yaml
100%
- name: Grant execute permission for gradlew
run: chmod +x gradlew
- name: Build with Gradle
run: ./gradlew build
- name: Build and Push Docker Image
uses: mr-smithers-excellent/docker-build-push@v4
with:
image: nanajanashia/demo-app
registry: docker.io
username: ${{ secrets.DOCKER_USERNAME }}
password: ${{ secrets.DOCKER_PASSWORD }}
Ln 40, Col 46 (15 selected)
Spaces: 2
UTF-8
LF
YAML
SUBSCRIBE


github.com/nanuchi/my-project/settings/secrets/new
100%
Search or jump to...
Pull requests
Issues
Marketplace
Explore
Repository secret added.
nanuchi / my-project
Unwatch 1
Star 0
Fork 0
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
Options
Manage access
Security & analysis
Branches
Webhooks
Notifications
Integrations
Deploy keys
Secrets
Actions
Moderation settings
Secrets
New secret
Secrets are environment variables that are encrypted and only exposed to selected actions. Anyone with collaborator access to this repository can use these secrets in a workflow.
Secrets are not passed to workflows that are triggered by a pull request from a fork. Learn more.
DOCKER_PASSWORD
Updated now
Update
Remove
DOCKER_USERNAME
Updated 26 seconds ago
Update
Remove
SUBSCRIBE