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CI/CD Notes
Sprint 7

CI/CD: method of software development where code changes are reliable and seamlessly updated through automation to production

- This is important because software can be shipped more efficiently
- CI is while they are writing code, and CD is after the code is completed

CI: Continuous Integration

- Developers make small changes
- CI streamlines the changes
- It is automated to build, test and package applications
- Something like git will integrate into the main code base

CD: Continuous Delivery

- Runs automated tests to ensure code is functional
- Consistent automated way for code to test
- Continuous deployment takes passing tests to a staging environment
- Production deployment releases changes to users

Benefits:

- Faster release cycles
- Improved quality
- Collaboration
- Reduced risk
- Cost-effective

Implementing:

- Github
    - Developers can automate workflows by defining custom scripts
    - Actions are triggered by events like push or pull
    - Actions defined in the YAML file, which specifies the steps to complete a task
    - Event triggers a workflow, which runs the steps in the order specified
    - Create a .github/workflows directory and place a YAML file within the directory

YAML file

name: name of workflow
#Set up triggers
On:
    Push:
        Branches:
            - main
jobs:
Name of job:
Runs on: operating system
Steps:

- Name: checkout code
- Uses: actions/checkout@v2 - checks out the code

- Run: yarn test

Sources:
https://www.synopsys.com/glossary/what-is-cicd.html#:~:text=CI%20and%20CD%20stand%20for,are%20made%20frequently%20and%20reliably.
https://www.freecodecamp.org/news/what-is-ci-cd/#:~:text=Continuous%20Integration%20and%20Continuous%20Delivery,of%20software%20changes%20to%20production.