

# Software project basics

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- Code changes are stored in git
- Setup continuous integration (e.g., GitHub Actions)
- Use dependency management (e.g., uv)
- Have a testing framework (e.g., pytest)
- Define a code standard, enforced through tools and not documentation (e.g., ruff)
- Prefer typed function/method over dynamic types
- On every commit to git
  - Code quality check
  - Code style check
  - Unit/functional/integration/system tests
    - \* Code coverage should be recorded during tests and a report made available
- Prior to pushing
  - Use an LLM tool to review the changes to identify potential issues
- On pushes, the CI should
  - Code quality check
  - Code style check
  - Unit/functional/integration/system tests
- A project repository must have
  - a `README.md` explaining how to run the project on your own computer
  - a `RELEASING.md` explaining how to release the code
  - a `CHANGELOG.md` listing relevant changes made
- Responsibilities are made explicit in terms of roles
- Critical roles, such as project lead, must have a backup/shadow individual
- Setup telemetry, alerts, profiling, logging