

CI/CD

Lecture 2-Continuous Integration

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Continuous Integration is a **software development practice** where members of a team **integrate** their work **frequently**, usually each person integrates at least daily - leading to **multiple integrations per day**.

-Martin Fowler

CI: Beginning of Automation Pipeline

Developer's day

- ① Develop a feature
- ② Integration locally
 - ① Pull the changes by others, if any
 - ② Resolve the conflicts, if any
- ③ Build
- ④ Unit test
- ⑤ Commit to central repository
- ⑥ Build on integration server
- ⑦ Testing
- ⑧ Feedback
 - ① Passed: Move to next feature
 - ② Failed: Improve the code

How to make it effective

- Single source repository
- Automate build
- Make your build self-testing
- Commit frequently; everyday if possible
- Every commit should build the mainline
- Fix broken builds immediately
- Make your build fast
- Test in a clone of production environment
- Make it easy for everyone to get the latest executable
- Visible progress