CSC207 Tutorial 2

TUT0401 - 15th September

some info about me

- my name is York

- 4th year undergrad in CS

- **experience:** web dev (Next.js, Node.js, Angular, Django), ML applications (RAG, CV), DevOps

- **research interest:** multilingual NLP (cross-lingual transfer)

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lab overview

- Activity 1 (a): Learning Git branching

- Activity 1(b): Practicing Git branching, merging & pull requests

- Activity 2: Translating Python code to Java

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git basics
key concepts

- **Repository:** a database of the project's files and history

- **Branch:** represents a timeline / linked list of commits

  - under the hood, they're just a reference to a specific commit

- **Commits:** a snapshot of your project

- **Merging:** to combine two branches

- **Pull request:** a request to merge (GitHub feature, not part of Git)

git basics
branching commands

- git branch <name>: create a branch

- git checkout <name>: "go" to a branch (i.e. change your working directory to reflect the current state of the branch)

- git merge <name>: "merge" the changes from *another branch* to *your current branch*

- git rebase <name>: "rebase" all changes in *your current branch* to the beginning ("HEAD") of *another branch*

git basics
why use branching?

- **Isolate changes:** each branch can represent some specific "change" (e.g. new feature, bug fix)

- **Work in parallel:** each team member works on their own branch simultaneously, while the "master" branch remains untouched

- **Collaborative features:** before incorporating changes, we can review, test and discuss them => pull requests

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