

# Programming 1. 2020/21 II.

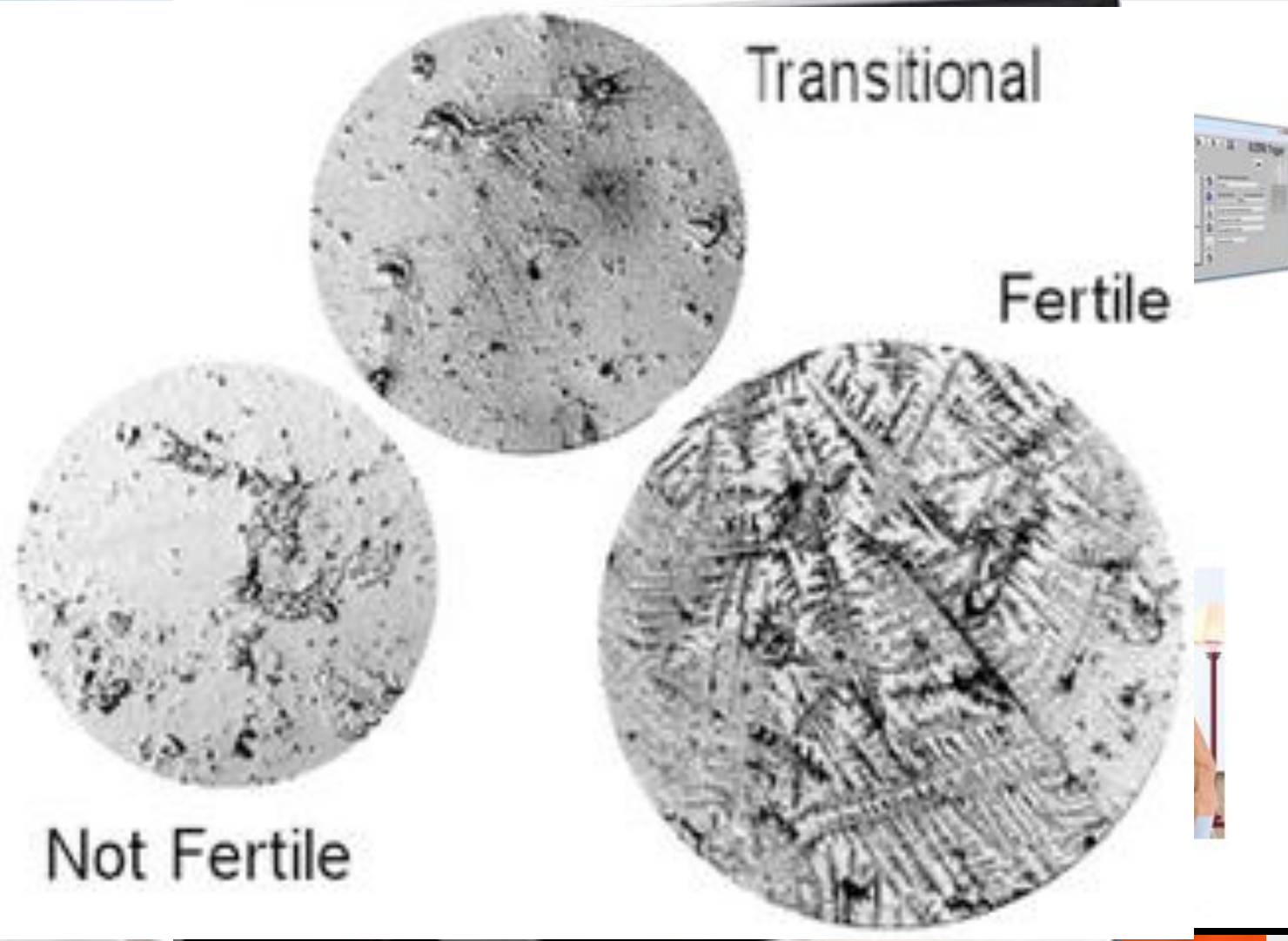
## Lecture 1

# Bemutató

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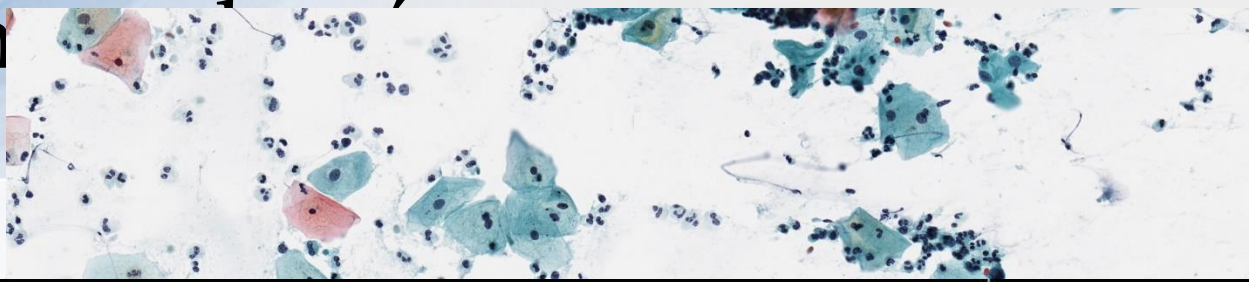
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Thursday: 14:00-15:00 (IK-121).

# Syllabus:

Labor contents:

<https://arato.inf.unideb.hu/harangi.balazs/prog1/>

- Syllabus\_hun(/eng).pdf
- Exercises
- Source codes

Github:

<https://github.com/Harabali/Programming1>

# Recommended literature and links:

- Nyékiné, G. Judit: Programozási nyelvek, Kiskapu Kiadó, 2002. ISBN: 9789639301467 (hun)
- Summerfield, Mark: Python 3 programozás, Kiskapu Kiadó, 2009, ISBN: 9789639637641
- Downey, Allen B. Think Python - How to Think Like a Computer Scientist, O'Reilly Media, 2012, ISBN: 9781449330729
- Swinnen, Gérard: Tanuljunk meg programozni Python nyelven, 2002 (hun)

# Recommended literature and links:

## IDEs:

- <https://www.python.org/downloads/>
- <https://www.jetbrains.com/pycharm/>
- <https://www.anaconda.com/download/>

## Helps:

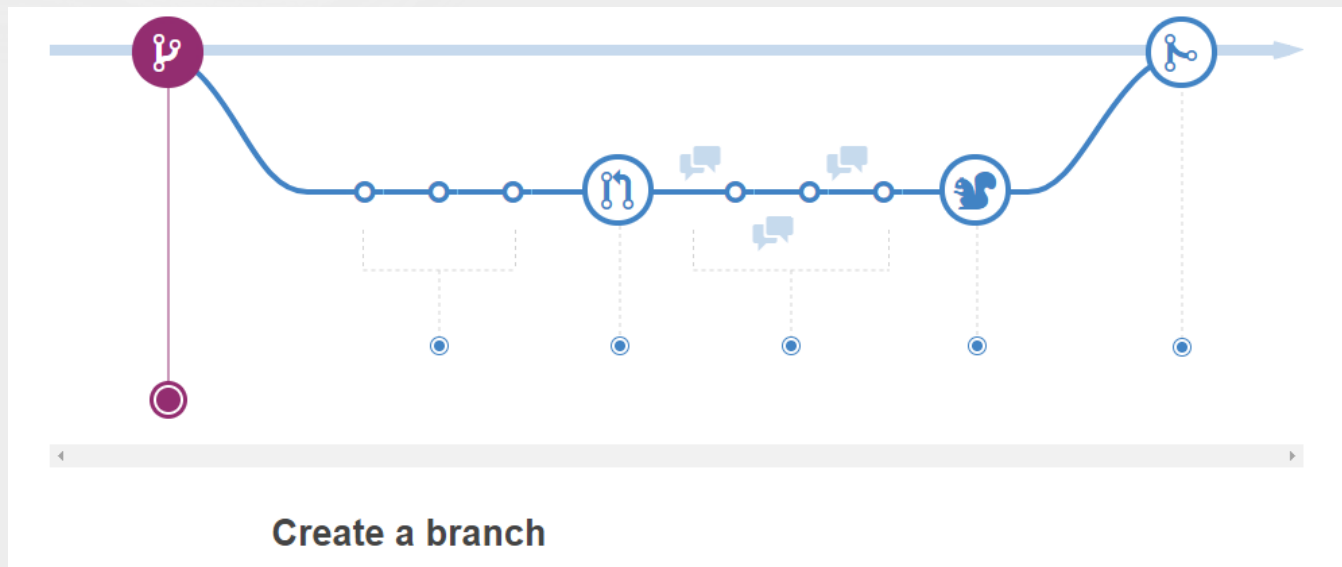
- <https://docs.python.org/3/tutorial/>
- <https://www.tutorialspoint.com/python/index.htm>
- <https://www.learnpython.org/>
- <https://www.py4e.com/lectures3/>

# What is a subversioning or version control system (VCS)?

## Create a branch

When you're working on a project, you're going to have a bunch of different features or ideas in progress at any given time – some of which are ready to go, and others which are not. Branching exists to help you manage this workflow.

When you create a branch in your project, you're creating an environment where you can try out new ideas. Changes you make on a branch don't affect the master branch, so you're free to experiment and commit changes, safe in the knowledge that your branch won't be merged until it's ready to be reviewed by someone you're collaborating with.



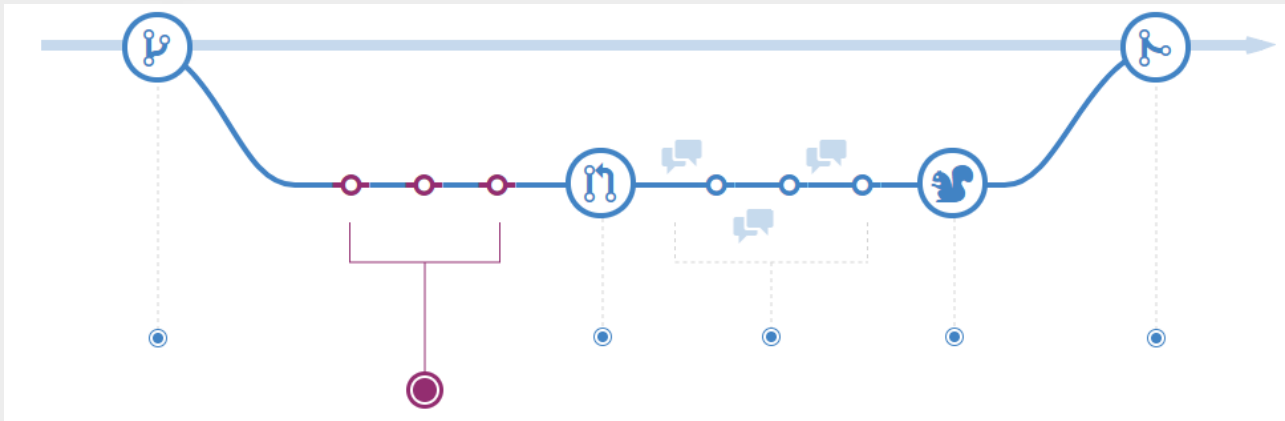


# What is a subversioning or version control system (VCS)?

## Add commits

Once your branch has been created, it's time to start making changes. Whenever you add, edit, or delete a file, you're making a commit, and adding them to your branch. This process of adding commits keeps track of your progress as you work on a feature branch.

Commits also create a transparent history of your work that others can follow to understand what you've done and why. Each commit has an associated commit message, which is a description explaining why a particular change was made. Furthermore, each commit is considered a separate unit of change. This lets you roll back changes if a bug is found, or if you decide to head in a different direction.

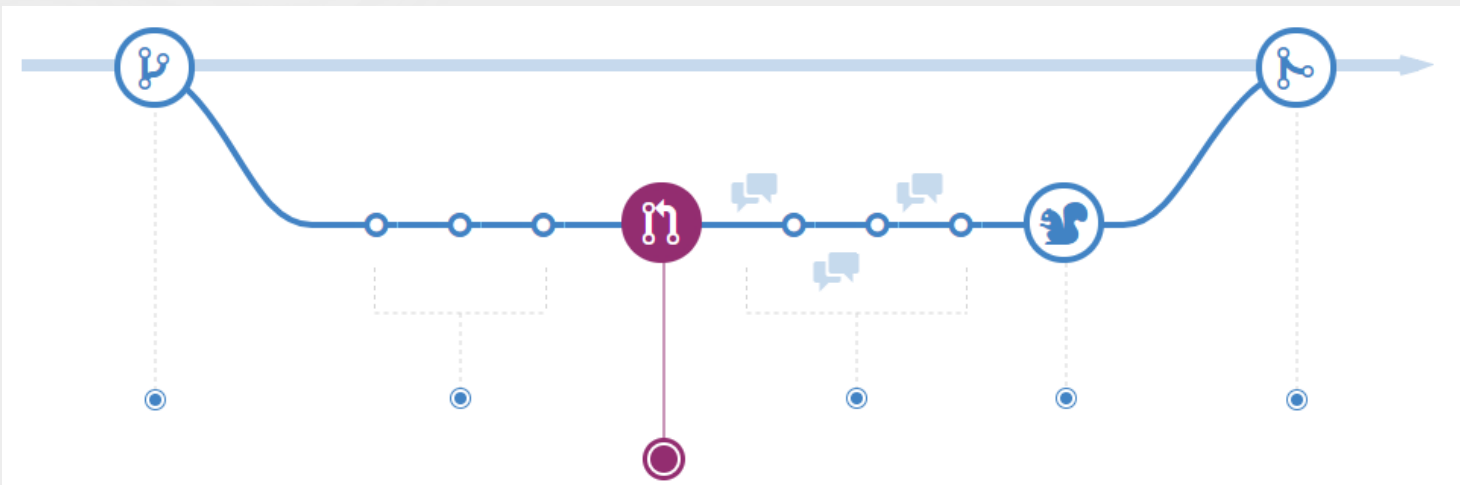


# What is a subversioning or version control system (VCS)?

## Open a Pull Request

Pull Requests initiate discussion about your commits. Because they're tightly integrated with the underlying Git repository, anyone can see exactly what changes would be merged if they accept your request.

You can open a Pull Request at any point during the development process: when you have little or no code but want to share some screenshots or general ideas, when you're stuck and need help or advice, or when you're ready for someone to review your work.

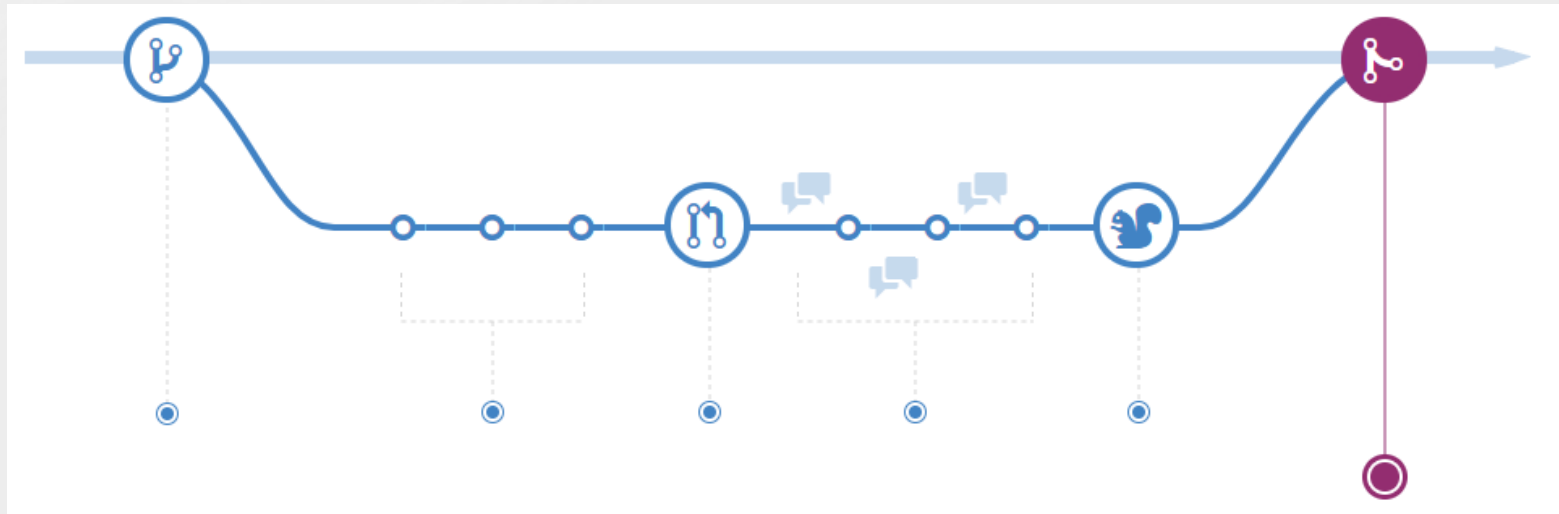


# What is a subversioning or version control system (VCS)?

## Merge

Now that your changes have been verified in production, it is time to merge your code into the master branch.

Once merged, Pull Requests preserve a record of the historical changes to your code. Because they're searchable, they let anyone go back in time to understand why and how a decision was made.



# GitHub

## Join GitHub

The best way to design, build, and ship software.

<https://github.com/join?source=header-home>

<https://guides.github.com/activities/hello-world/>

- Create and use a repository
- Start and manage a new branch
- Make changes to a file and push them to GitHub as commits
- Open and merge a pull request

### PyCharm:

#### Using Git integration

<https://www.jetbrains.com/help/pycharm/using-git-integration.html#set-passwords-for-git-remotes>

#### Set up a Git repository

<https://www.jetbrains.com/help/pycharm/set-up-a-git-repository.html>