



GITHUB WORKSHOP

Computer Engineering Apprentices Club

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A decorative graphic on the left side of the slide, composed of several overlapping geometric shapes and patterns. It includes a blue triangle with white diagonal lines, a light blue circle, a dark blue square with concentric circles, a dark purple triangle, a bright pink square with white concentric circles, and a grey square with a dark purple triangle and white concentric circles.

AGENDA

- Overview of Git and GitHub
- Installing Git and VS Code
- GitHub basics: Repositories, Branches, Pull Requests
- VS Code integration with GitHub
- Collaborative workflows
- Q&A and troubleshooting



WHAT IS GIT AND GITHUB?

- **Git**: Version control system to manage code.
- **GitHub**: Cloud-based hosting platform for Git repositories.
- **Benefits**: Collaboration, tracking, and versioning.



WHY USE VISUAL STUDIO CODE?

- Lightweight code editor with built-in Git support.
- Extensions for GitHub and easy code management.
- Seamless integration with repositories.

WORKSHOP SET-UP

Install Git:

<https://git-scm.com/downloadsInstall>

VS Code:

<https://code.visualstudio.com/download>

Create a GitHub Account:

<https://github.com/signup>



GITHUB BASICS

Repository: A project folder tracked by Git.

Commit: Save point with a message.

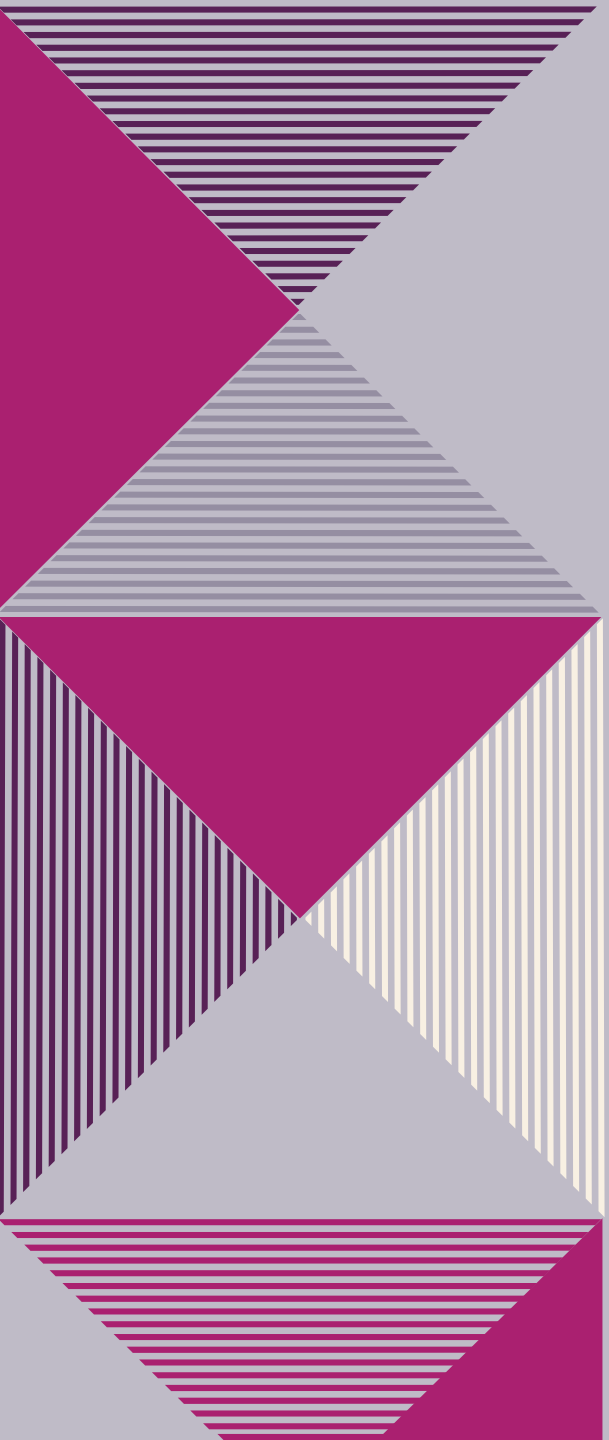
Branch: Parallel version of a project.

Fork: Create a copy of someone's repository.

Pull Request: Request to merge changes into the main branch.

DEMO - CREATING A REPOSITORY ON GITHUB

Please refer to the document "Creating a Repository on GitHub"



GITHUB + VS CODE INTEGRATION

- Clone a repository using Ctrl+Shift+P > “Git: Clone”.
 - This should be the last step in the document!
- Make changes locally in VS Code.
- Commit changes and push to GitHub.



HANDS-ON EXERCISE #1



- **Task:** Fork the workshop repository.
- **Goal:** Make a change and open a pull request.

***COLLABORATIVE WORKFLOWS**

- Create branches for new features.
- Open issues to track bugs.
- Resolve merge conflicts using VS Code.



***TROUBLESHOOTING COMMON ERRORS**

- Authentication Issues: Use personal access tokens.
 - Merge Conflicts: How to resolve them in VS Code.
 - Syncing Issues: Ensuring commits are pushed correctly.
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***SUMMARY AND NEXT STEPS**

- Practice with the provided exercises.
- Explore GitHub Pages for static sites.
- Resources for further learning.

Q & A

- Any questions?



THANK YOU!

@dita-deb on GitHub

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