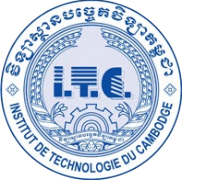# Programming Env

GitHub project
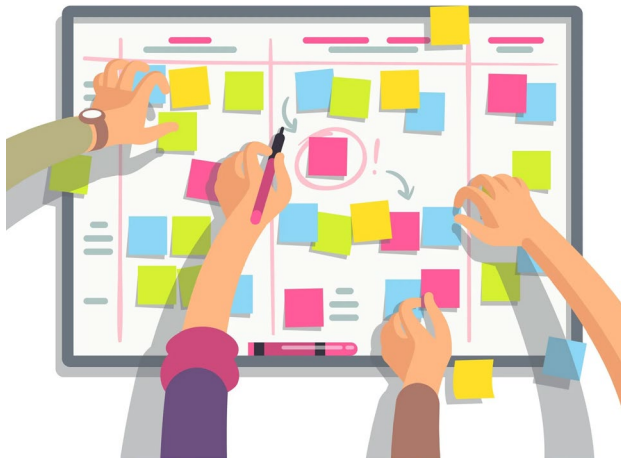Leveraging Issues & Milestones for Efficient Development

Outlines

- GitHub as a Project Management Tool

- What Are GitHub Issues?

- Example: List of Issues

- Using Labels & Templates

- What Are Milestones?

- Example: Milestones in Action

- Planning Workflow

GitHub as a Project Management Tool

- Source control + collaboration

- Planning through Issues & Milestones

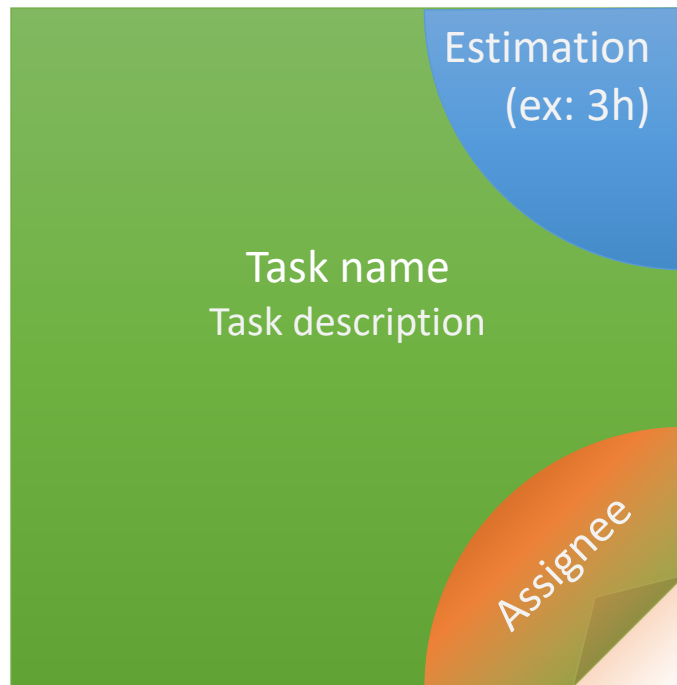- Integration with Projects, Actions, Discussions

Planning

Collaboration

What Are GitHub Issues?

- Tasks, enhancements, bugs, documentation needs
- Include labels, assignees, and checklists
- Support discussions & references to code/commits

Estimation (ex: 3h)
Task name
Task description
Assignee

Example: List of Issues

- Title
- Labels (e.g., bug, feature, enhancement)
- Assignee
- Status (open/closed)

Label	Description
bug	Something isn't working
documentation	Improvements or additions to documentation
duplicate	This issue or pull request already exists
enhancement	New feature or request
good first issue	Good for newcomers
help wanted	Extra attention is needed
invalid	This doesn't seem right
question	Further information is requested
wontfix	This will not be worked on

Using Labels & Templates

- **Labels categorize issues**: bug, help wanted, documentation

- **Issue templates streamline reporting**

Add template: select ▾

Bug report
Standard bug report template

Feature request
Standard feature request template

Custom template
Blank template for other issue types

What Are Milestones?

- Group issues around a common goal or release
- Add due dates to track progress
- Used for sprints, versions, or phases

Create milestone

Create a new milestone to help organize your issues and pull requests. Learn more about milestones and issues.

Title

Milestone name

Due date (optional)

🗓 May 30, 2025

Description (optional)

Describe your milestone

Cancel   **Create milestone**

Example: Milestones in Action

- Show % complete (open vs closed issues)
- Example milestone: v1.0 Launch

Planning Workflow

- Create milestone (e.g., Sprint 1)
- Break work into issues
- Prioritize and label issues
- Assign team members
- Track progress

Benefits of This Approach

- Clear roadmap and accountability
- Better collaboration and visibility
- Easier tracking and retrospectives

Post-test: Q1

- What is the primary purpose of GitHub Issues in project management?
    A.   To store code backups
    B.   To track individual tasks, bugs, or enhancements
    C.   To generate project documentation
    D.   To assign user roles

Post-test: Q2

- Which of the following best describes GitHub Milestones?
    - A. A way to merge multiple repositories
    - B. A tool for real-time code editing
    - C. A grouping of issues around a specific goal or release
    - D. A feature used to deploy applications to production

Post-test: Q3

- What happens when a pull request includes a phrase like "Fixes #45"?
    A. It renames the issue to match the pull request
    B. It deletes the referenced issue
    C. It automatically closes the issue when the pull request is merged
    D. It creates a duplicate issue for testing