GitHub KanBan (Project) Board Tutorial

Contents

Time required: 30 minutes

What is KanBan?

The idea of KanBan came originally from lean manufacturing. "Kanban" is the Japanese word for "visual signal." If you work in services or technology, your work is often invisible and intangible. A KanBan board helps make your work visible so the team knows what you are doing and keep everyone on the same page.

A KanBan board is an agile project management tool designed to help visualize work, limit work-in-progress, and maximize efficiency (or flow).

Pseudocode First

ALWAYS start your project or any assignment by solving the problem and developing pseudocode.

Pseudocode is used to breakdown your project into project tasks. Task can be a small as a single method.

1. Pseudocode first.
2. Pseudocode first.

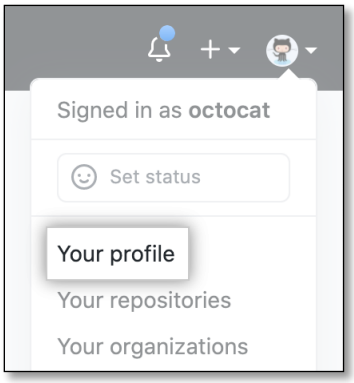
3. Pseudocode first.

Work Breakdown Structure

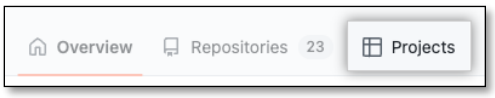
A Work Breakdown Structure (WBS) is a breakdown of all the tasks of a project. It is much like a to do or task list. We are going to use GitHub Project KanBan boards to track our project progress.

Create a GitHub KanBan Board

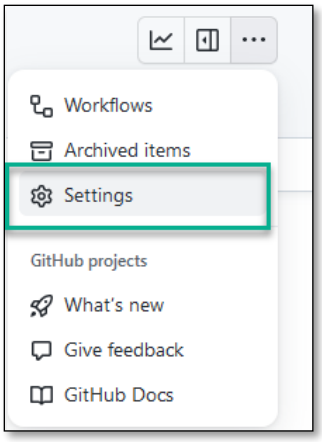
1. Sign into **GitHub**. Click the Sign in Icon → **Your profle**.



2. Click **Projects** → **New project**.



3. Click **Create a project**.
4. Select a template: **Board → Create.**
5. **In your new project: Got to the . . . menu → Settings**



6. **Project name:** Give your board a descriptive name
7. **Add a description:** Add a description
8. Click **Create project.**
9. Go to your GitHub Repository → Project tab.
10. Click Add project → Select your project.

Use a GitHub KanBan Board

This is an outline of the general process.

1. Guild live meeting to create the pseudocode.
2. Break down the tasks into a task list (WBS) in the KanBan board.
3. Assign tasks to team members.
4. Move the tasks across the board to reflect the stages of completion.

Sample Pseudocode

Below is some sample incomplete pseudocode in three stages of development.

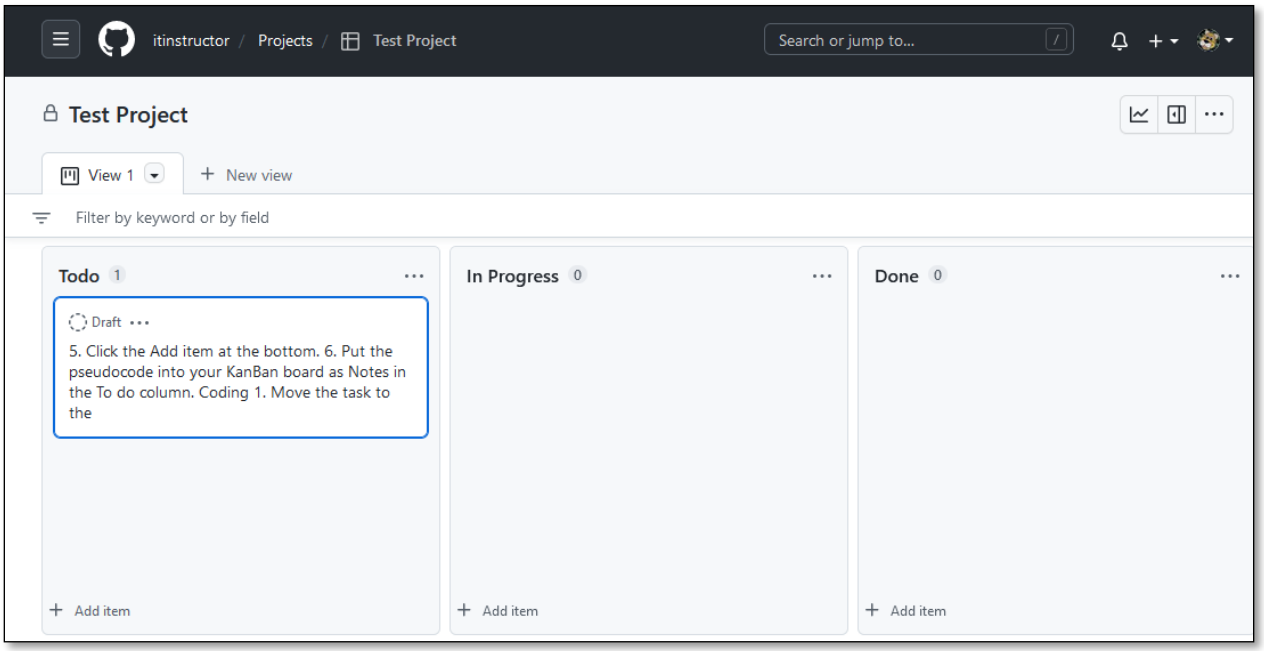
- The constants are completed.
- The main() function is outlined.
- The other two functions have placeholders.

```
Declare Constants
GRANDMAS_INVESTMENT = 50.00
COST_OF_LEMON = 0.25
COST_OF_LB_SUGAR  = 2.00
COST_OF_CUP = 0.10

main():
    # Input
    Use imported input function to get purchase quantities one at a time
    Subtract and test the amount spent from Grandma's investment
    Don't allow a purchase if you overspend


-- Functions
display_current_purchase()


display_total_purchase()
```



5. Click the **Add item** at the bottom.
6. Paste the pseudocode or type in the item. Press Enter.

Coding

1. Move the task to the **In progress** column while you work on it.
    a. Put your name in the note so your team knows who is working on this task.
2. **Commit** your code to GitHub.

    a. Use descriptive Commit comments that indicate why and what you did.

3. Move the task to the **Done** column.

Along with descriptive **Commit** comments, a KanBan board helps a team communicate and coordinate a coding project as they work on it.

Software Engineering Process in a Nutshell

1. Pseudocode
2. KanBan
3. Write, Pull, and Commit code

Assignment Submission

This is an individual assignment in your Guild repository.

1. Create a KanBan board for your Guild project.
2. Each Guild member creates an Item and moves it to **Done**.
3. Submit this assignment in Blackboard with a note saying you are done.