Week 1 Commit

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A. Explore Wayscript, go through the tutorial about how to use the website. Write a summary on:

1. *What's your understanding on Wayscript and what are they trying to do for users?*

   Wayscript is a visual programming platform. It allows users to program by simply dragging and dropping. It provides basic widgets, such as variables, logic, functions, and it also supports many third-party APIs, such as weather, locations, emails, etc.

   Wayscript intends to build a platform where people can develop tools and software easily and rapidly. People with and without any programming background can all utilize this product. Wayscript is also designed to handle some tasks automatically. It also allows people to share and collaborate their work through this platform.

2. *As a user, how would you make use of their product?*

   I will use Wayscript in the following ways:
   - Education. Since Wayscript is a visual platform, it is an ideal tool for teaching. We can use Wayscript to show visualized structure, logic, and flow of a program. Students can also use Wayscript to create simple programs.
   - Build some automatic procedures, like those in IFTTT, or bots in Discord. For example, if I get a calendar notification, then send a text message to me; or push the news to a discord channel.
   - REST APIs. We can use Webhook trigger and python scripts to create simple APIs.
   - Collaboration. We can share our programs with others, so they can use or edit them.

B. Explore the repo. Professor and I added a few setup for it. Try to figure out:

1. *What is a makefile? Why is it important in DevOps?*

   A makefile is a file used by **make** - a widely used auto-build tool. It defines a set of rules, which tells **make** how to compile and link. (In makefile, a rule usually consists of build target, dependencies and system commands) It also allows us to insert automated tests(like unit tests) into build.

   Makefiles are important because it automates the build process and improves efficiency. In DevOps, CI/CD(continuous integration and continuous delivery) is an important practice. We can use **make** as part of our CI/CD pipeline. Instead of manually remember all commands, handling dependencies and updates every time, using **make** saves us a significant amount of labor and time. It also reduces mistakes and errors. Thus, developers can focus on more important tasks, such as code writing.

2. *What is the ptml file in the html_src folder? Why we are doing in this way? (A close look into the makefile will give a lot of hints)*

   The ptml stands for pre-html. We process these pre-html files to generate html files (by running **make local**). In detail, the **make** will first take the ptml files in html_src and run an html checker; then it will take txt files in template folder and run an AWK script, which will use template content(such as head, menu, logo) and ptml files to generate html files; finally, it will stage all changes.

   The reason for using ptml is because we have a lot of common code in the html files (such as head, menu, logo). Instead of repeating the code in many files, writing the common code in one place is more efficient, and less likely to make mistakes. Also, if we want to make changes to the text contents, it is easier for us to navigate to the place we want to edit. By automatically generating the html files, we can also check html syntax and find errors when we build. This improves efficiency and reduces errors.