

Bit by Bit

Capstone Midterm Progress Report, Anna Pitera

Overview

- Bit by Bit is a habit tracker and to-do list website with game-like elements
- Users can set goals and add tasks they hope to achieve each day
- Users are rewarded in-game for completing tasks and being consistent
- Encourages users to maintain good habits and complete their daily tasks



Main Ideas

01

To-Do List

- Add, edit, and complete tasks
- Task due dates

02

Game Elements

- Users are rewarded with currency for completing tasks/maintaining habits

03

Customization

- Currency can be spent on UI themes and character accessories

04

Accounts

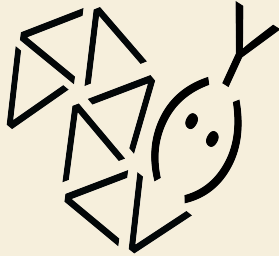
- Tasks, currency, etc save per user account
- Accounts stored in a database

Technologies



Django

Powerful website framework with form and database capabilities



Python Anywhere

Website for hosting websites running on Django's framework



HTML/CSS/JS

Create website elements for interactivity and design



MySQL

Store data in databases with CRUD functionality



Progress Made: Backend



PythonAnywhere

- Created account and set up website hosting using Django and PythonAnywhere tutorials
- Set up PythonAnywhere MySQL database with an admin username and password
- Figured out a workflow for transferring VS Code code to PythonAnywhere because of file path differences between the two coding environments
- Figured out transferring files out of PythonAnywhere (zipping in console)

All
Web apps

annapitera.pythonanywhere.com

Open Web tab

Django

- Set up static CSS and font files for Django and used collect static command to update Django site
- Connected PythonAnywhere MySQL database to Django site
- Added ability to create tasks on the site
- For right now, all tasks will remain listed on the site unless deleted through the Django admin screen
- Created forms for adding tasks to the database



The install worked successfully! Congratulations!

You are seeing this page because `DEBUG=True` is in your settings file and you have not configured any URLs.

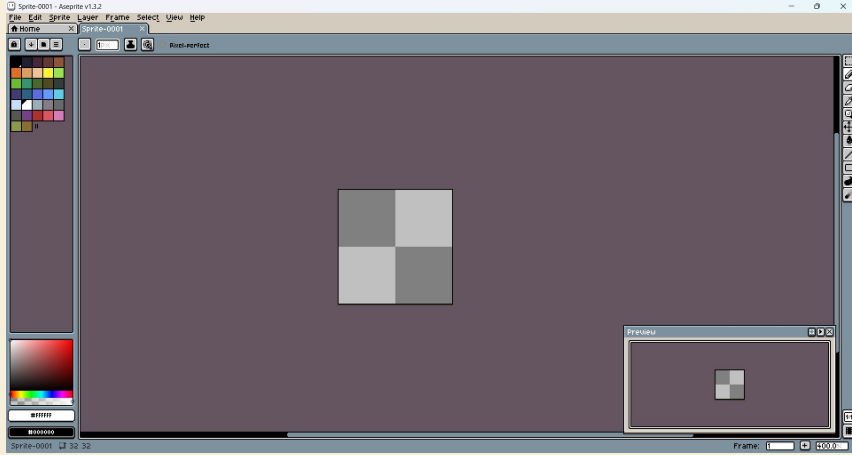
- Created input boxes for typing in tasks to be added to the database
- Added URL patterns for “home page” (index.html)



Progress Made: Frontend



Frontend



- Played around with basic tools in Aseprite (pixel art and animation software)

- Figured out a couple different ways to incorporate retro pixel art style into site
- Ended up using a custom CSS pixelated border generator website to create text box and button borders
- Implemented pixelated font
- Came up with basic layout and format of website (split screen with to-do list functionality on one side and character profile box/customization functionality on the other)



Issues Encountered & Lessons Learned

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- Serving Django static files was confusing with PythonAnywhere
- Django as a whole was very confusing and somewhat abstract at first
- Lots of issues and confusion with databases and Django forms
- Don't rush into frontend development without having a better idea of backend (first week or two)
- With things like Django, there's almost always someone online who has had the same problem as you
- SHIFT + Reload button hard refreshes tabs on most browsers, preventing issues with browser caches and reloading repeatedly



Upcoming Goals & Possible Changes

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- Implement full CRUD functionality into Django forms (not just adding tasks)
 - Account system with Django and database
 - Work more on aesthetics and frontend development (pixel art and Aseprite)
 - Mobile compatibility (reach goal)
- Possibly use JavaScript instead of Phaser for character customization/gameplay elements for a couple of reasons:
 - JavaScript seems a lot easier to integrate with MySQL databases
 - More documentation on Javascript online
 - Javascript might do the job less painfully overall



Thank you!
Feedback?