

Project Plan

Cheap Staples

By: Jan Bermudez, Garrett Bunkers, Dylan Hopper, Timothy Nadeau, Patrick Rodriguez

Team Members & Job Descriptions

Team Organizer (Timothy)

- Will be in charge of making sure our system's documentation is clearly defined, well organized, and that our code is commented clearly
- Will keep track of notes, meetings, and the project timeline
- Reviews all documentation prior to submission
- Whenever needed, can assist in function implementation

Grocery Store Scraping Engineers (Dylan & Garrett)

- Focuses on getting a scraper to work on a couple store's websites, then format and input the data into a database
- Each engineer will work on a scraper for a different store
- Once scrapers are functioning, will assist in frontend development

Ingredient-Chooser Display Developer (Jan)

- Will create a coherent User Interface (UI) that will be easily able to select what you would like to view, and process a visual output given the output from our data processing
- Will use the interface to take given input from the user and format it into passing along to input processing
- Will also plan out the main executable function

Input Processing & Location-Price Data Storage Engineer (Patrick)

- In charge of getting an online MySQL database setup and ready for pairing with the data processing module, alongside managing data processing functionalities
- Will plan out and develop a set of functions to take data from database and format it for UI to visualize

Every member:

- Plan and provide a roadmap of functions to get from the module input to module output
- Commenting functions they create
- Peer review another person's code

Meetings, Monitoring, Reporting, & Communicating

To keep up-to-date on the state of the project, our team will meet twice a week in-person. At those meetings, we report what we've done so far, what needs to happen next, and who will do what before adjourning. These meetings will have some structure as we discuss those topics in that order, and make sure the group has come to a consensus before proceeding to the next item on the agenda. Then after the meeting has adjourned, and everyone has their tasks, members will access our meeting notes and markoff their tasks on a shared Google doc.

Furthermore, whilst we're not meeting in person and working independently on our assigned tasks, we will be using Discord to communicate. To summarize the rules and our standings around this, we have created some guidelines for the team to follow:

Discord Guidelines:

- Communication within the discord will pertain only to the project at hand, leaving our personal lives and matters at the door. Topics related to the project at hand include, but are not limited to:
 - Clarifying questions
 - Reports / updates on project work
 - Idea Brainstorming
 - Meeting notifications
- Each member is expected to be active on Discord during weekdays from 10am - 5pm, and respond within a two hour window from when a message is posted. *(Since most classes we have are ~1 ½ hours)*
- If a team member needs to get ahold of someone more urgently, or want to emphasize an important detail, the member will use Discord's @user functionality to notify another of the message
- Most messages will be through text, and voice calls will only be required when the team agrees at an in-person meeting to have an online Discord meeting. These meetings typically take place before a deadline.

When we finish our meetings, we'll work on our tasks assigned to us at the previous meeting. When a team member completes their task, they'll mark it off in the Google Doc. If that task required revisions to the code in the repository, we'll push our revisions to the repo and notify the group via Discord that there's been an update to the code. From meeting to meeting we'll keep track of how far along everyone is on their tasks, and update the gantt chart accordingly.

Schedule, Milestones, & Build Plan

For tackling the project ahead, we have set up some milestones to keep us on track to meet our deadlines. By following this plan, we will be able to measure our progress and have some structure to follow. Stated earlier in this document is our list of members and their focuses. In light of that, each member will mainly work on a module of their focus, but can assist in another module if needed. Since we know our modules and how they will interact, during our

design phase, we will have clear definitions of the baton-handoffs between each module so each module can focus on getting an input and an output.

Milestones

W7 - Sunday 2/19/23: (Requirements Analysis)

- ☒ ~~DUE~~ Initial 3-page proposal @ 8pm

W7 - Thursday, 2/23/23:

- ☒ Revised SRS / SDS / PP started

W8 - Sunday, 2/26/23:

- ☒ SRS Completed
- ☒ SDS Completed
- ☒ Project Plan Completed
- ☐ ~~DUE~~ SRS/SDS/PP @ 8pm (postponed)

W8 - Tuesday, 2/28/23: (Design)

- ☒ Brainstorming for pseudo-code for each module has begun
- ☒ ~~DUE~~ SRS/SDS/PP @ 8pm

W8 - Thursday, 3/2/23: (Implementation)

- ☒ Have module designs brainstormed and functions planned out
- ☒ Implementation begins on modules

W8 - Saturday 3/4/23:

- ☒ Module Work
 - ☒ Serapers writes necessary info to files
 - ☒ Data processing is halfway done (success in small scale tests)
 - ☒ UI has all buttons required and produce input to output
 - ☒ Database is setup and can be accessed

W9 - Tuesday, 3/7/23:

- ☒ Have modules ready for joining
 - ☒ Serapers write to database
 - ☒ Data processing has shown success in a full-scale test
 - ☒ UI can produce a visual output
- ☒ Have main() written
- ☒ Have final (programmer/user) documentation started

W9 - Thursday, 3/9/23: (Testing)

- ☒ Have project functioning and ready for testing/debugging
- ☒ Start on presentation slides (Created a template & shared w/ group)

W10 - Sunday 3/12/23:

- ☐ Meet & submit project
- ☐ Practice presentation
- ☐ **DUE** Entire Project Due to submit @ 8pm
- ☐ **DUE** Present Presentation so it gets Presented

Build Plan Rationale

By breaking our system down into a few modules, as long as we clearly define *exactly* the inputs and outputs of each module, pairing them together will go quite smoothly. If we also wanted to add other modules in the future, that can be done as well by mimicking an input/output. Another advantage of this approach would be each person can work in parallel with each other, decreasing development time. Also by having each person mainly work on one module, each person will build a familiarity and expertise of the code they're working on. If each person knows the ins and outs of their module, this can make editing that module easier and faster by putting that person on it. The biggest risk we face in this build plan however, is miscommunication. If we do not clearly define the way our modules interact between each other, then we'll be going in different directions and experience delays in testing and deployment by having to suspend the testing phase and pull each module together.

Meeting Structure Times, Structure, & Notes (to date)

Meeting Times:

Tu/Th 10am @ Computer Science Library. (Room numbers change)

How Meetings are Structured:

- 1) Reports of what's been done
- 2) Questions we have for each other
- 3) What to get done this meeting
 - a) Old business
 - b) New business
- 4) What to get to by next meeting
 - a) Divvy up work
 - b) Sendoff w/ tasks
- 5) What to do next meeting
- 6) Questions
- 7) Adjourn

"It is not rude to leave, it is rude to make someone stay and waste their time." - Elon Musk

Note regarding milestones & tasks:

When a milestone or task is crossed out, that means that goal has been completed/reached.

Meeting #1: __init__()

2/16/2023

Roll Call:

Tim Nadeau, Garrett Bunkers, Dylan Hopper, Patrick Rodriguez, Jan B

Reports:

- n/a

Get done this meeting:

- ☒ ~~Meet each other~~
 - ☒ ~~Share names, emails for Google doc sharing~~
- ☒ ~~Discord use intent / policies~~
- ☒ ~~Meeting times~~
- ☒ ~~Why do we meet?~~
- ☒ ~~What did y'all learn from last project's group dynamic/organization? (and ideas to improve on it this time)~~
 - ☒ ~~What are y'all's strong suits & what did you do last project?~~
- ☒ ~~What to do during meetings (I would like to keep them brief. Idk if this wants to be a work time.)~~
- ☒ ~~Get on same page of plan~~
 - ☒ ~~Environment/languages used~~
 - ☐ ~~Such that we can all write out the same requirements~~
 - ☒ ~~Title~~
 - ☐ ~~(last project we ran into this issue where we thought we were on the same page, but the last few hours it turned out we really weren't, and some hasty coding and things were done)~~
- ☐ ~~Set up milestones~~
- ☒ ~~Get started on SRS/SDS/Project Plan~~
 - ☐ ~~[SRS:](#)~~
 - ☐ ~~<text>~~
 - ☐ ~~[SDS](#)~~
 - ☐ ~~<text>~~
 - ☐ ~~Project Plan~~
 - ☐ ~~Create timeline / Gantt Chart?~~

NOTES:

- Need an idea of how close we are, so no crunch at the end
- Build Gantt chart
- System used
- Very difficult to track community fridges with this system. Would be nearly impossible to do.
- System
 - Pick MEALS First
 - Checkoff ingredients you do/don't have
 - Submit search request

Get done by next meeting:**Overall:**

- ☒ ~~Get SDS/SRS Written & Turned in~~
 - ☒ ~~Get Modules sorted & written~~
 - ☒ ~~Get drawings done & implemented~~
- ☒ ~~Get github setup (*I highly recommend github desktop*)~~

Garrett

- ☒ ~~SRS~~

Dylan

- ☒ ~~SDS: Overview~~

Tim

- ☒ ~~Project plan / Gantt chart / milestones~~

Patrick

- ☒ ~~SDS: System Arch~~

Jan

- ☒ ~~SRS / Assistance wherever needed~~

What to do *next* meeting:

- Milestones
- Solidify modules & architecture

Questions:

- none

Adjourned: 11:31 am 2/15/2023

Meeting #2: Duck Aligning

2/23/2023

Roll Call:

Tim Nadeau, Garrett Bunkers, Dylan Hopper, Patrick R

Absent: Jan B

Reports:

- Office Hour Discussion by Tim/Dylan
- Update on scope of project

Get done this meeting:

- ☒ ~~Get on same page of plan~~
 - ☒ ~~Such that we can all write out the same requirements~~
- ☐ Milestones
- ☒ Solidify Modules & Architecture
- ☒ SRS / SDS / PP Distribution ~~(Due Sunday)~~
 - ☒ ~~SRS:~~
 - ☒ ~~SDS~~
 - ☒ ~~Project Plan~~

NOTES:

- Recipes are gone
- 2 Scrapers: Walmart, Winco, fred meyer
- Executable, not website.
- Ideally on a website, but this is for proof of concept.
- Update flag/button

Get done by next meeting:

Overall:

- ☐ Interviews
- ☐ Have SRS/SDS/PP Finished
 - ☒ ~~SRS:~~
 - ☒ ~~Revision history~~
 - ☒ ~~Individual Sections~~
 - ☐ Acknowledgements
 - ☐ References
 - ☐ ~~SDS:~~
 - ☒ ~~Revision History~~
 - ☒ ~~Individual Sections~~
 - ☐ Acknowledgements
 - ☐ References
 - ☒ ~~Project Plan~~

Garrett

- ☐ SRS:
 - ☐ User classes
 - ☐ Modes of Operation
 - ☐ Operation Scenarios

Dylan

- ☐ SRS:
 - ☐ Current System
 - ☐ Justification for new one
 - ☐ Operational Features

Tim

- ☒ ~~Project Plan~~
- ☒ ~~Update Timeline~~
- ☒ ~~SDS:~~
 - ☒ ~~System Overview~~
 - ☒ ~~UI Module~~
 - ☒ ~~Dynamic Models~~

Patrick

- ☒ ~~SRS:~~
 - ☒ ~~External Interfaces~~
 - ☒ ~~Functions~~
 - ☒ ~~Usability Requirements~~
- ☐ SDS:
 - ☐ Software Architecture
 - ☐ Database Module

Jan

- ☐ SRS:
 - ☐ Performance Requirements
 - ☐ Software System Attributes
- ☐ SDS:
 - ☐ Scraper Module
 - ☐ Data Processing Module

What to do *next* meeting:

- Brainstorming modules and main(), creating functions that work together that go from input to output
- Review SRS/SDS/PP before submission

Questions:

- none

Adjourned: 10:57am on 2/23/2023

Meeting #3: Code Brainstorming

2/28/2023

Roll Call:

Tim Nadeau, Jan B, Garrett P, Dylan Hopper

Absent: Garrett Bunkers

Reports:

- SRS/SDS/PP Updates

Get done this meeting:

- ☒ Review SRS/SDS/PP
- ☒ Discord Policies for PP?
- ☒ Baton Handoffs between modules / Brainstorming

NOTES:

- Discussion about current SRS/SDS revision. Meeting @ 6 tonight to revise
- Need tkinter-er (Jan), 2 scrapers (Dylan & Garrett)
- Show entire list? Update srs/sds
 - Have functionality to show entire list of groceries instead of just selected ones
 - This will need to have SDS/SRS slightly updated
- Have functionality to choose ones to want, and all at once
 - Srs/sds revision
- Have a back button, so user can go back a page
- Potential stores: Walmart, Target, Winco, Fred Meyer
- Baton Handoffs
 - UI
 - Input: User input
 - Output: List of strings to Processing
 - Processing:
 - Input: List of strings
 - MySQL Query
 - MySQL Database
 - Input
 - Output: List of Tuples
 - Output: 'Table' class to UI
 - UI
 - Input: Table class
 - Output: Visualized table class
- If no data, then update.
- Select items, then view.
 - Unless we had it so every time you select an item, it appends it to a list and fetches it from the database and updates it in "realtime" sorta
- Discord Meeting @ 6:30 pm

Get done by next meeting:**Overall:**

- ☐ Get functions planned, and header comments done
- ☐ SRS/SDS Review

Garrett

- ☐ Plan functions for scraper

Dylan

- ☐ Plan functions for scraper

Tim

- ☐ Plan a main() function

Patrick

- ☐ Plan functions for Data processing & Database management

Jan

- ☐ Plan functions for UI use

What to do *next* meeting:

- Discuss brainstormed roadmaps & divide & conquer on functions

Questions:

- Discord meeting?
 - @ 6:30 pm tonight

Adjourned: 11:09 am on 2/28/2023

Meeting #4: Rubber meets the Road

3/2/2023

Roll Call:

Tim Nadeau, Garrett Bunkers

Absent: Jan B, Dylan H, Patrick R

Reports:

- Brainstorm updates

Get done this meeting:

- ☒ ~~Review Brainstormed ideas~~
- ☒ ~~Split up Functions~~

NOTES:

- Files
 - CheapStaples.py - Main executable file for terminal
- Made list of Staples to select from:

- Apples	- Cream Cheese	- Peanut Butter
- Bacon	- Eggs	- Pepper
- Baking Powder	- Flour (enriched)	- Pinto Beans
- Baking Soda	- Ground Beef	- Salt (table salt)
- Bananas	- Ice Cream (vanilla)	- Spaghetti
- Black Beans	- Ketchup	- Staples
- Bread	- Mayo	- Sugar (white granulated)
- Butter	- Milk	- Tomatoes
- Canola Oil	- Mustard	- Vanilla (extract)
- Cheese (cheddar shredded)	- Oats	- Vegetable Oil
- Chicken breasts	- Olive Oil	- White rice
- Corn		
- Find a way to run an installer.py to download the necessary libraries instead of having the user manually do that.

Get done by next meeting:

Overall:

- ☐ Work on modules and functions you've written out

Garrett

- ☒ ~~Get a scraper working~~

Dylan

- ☒ ~~Get a scraper working~~

Tim

- ☒ ~~Work on a main()~~
- ☒ ~~Setup images folder~~
- ☒ ~~Interface~~

Patrick

☒ Database & Processing work

Jan

☒ Interface work

What to do *next* meeting:

- Discuss progress on modulus and attempt to pair them

Adjourned: 10:43 am on 3/2/2023

Meeting #4: Module Update

3/7/2023

Roll Call:

Tim Nadeau, Garrett Bunkers

Absent: Jan B, Dylan H, Patrick R.

Reports:

- Scraper is tough, but we're getting there
 - Get done tonight
- Output is ready and we can get a test table visualized
- Installer Module

Get done this meeting:

- ☐ Discuss progress on modulus and attempt to pair them

NOTES:

- List of imports we're using
 - Tkinter
 - Bs4
 - Selenium

Get done by next meeting:

Overall:

- ☐ Finish our modules

Garrett

- ☒ Finish w/ scraper

Dylan

- ☒ Finish w/ scraper

Tim

- ☒ ~~Get started on presentation slides~~
- ☐ Get started on User Documentation & Installation instructions
- ☒ ~~UI Assistance~~
- ☒ ~~Update Gantt Chart~~

Patrick

- ☒ ~~Working on Backend & Database~~

Jan

- ☒ ~~Work on UI~~

What to do *next* meeting:

- Join & Test the system
- Make plan forward to Sunday

Adjourned: 10:37 am on 3/7/2023

Meeting #5: Module Potluck

3/9/2023

Roll Call (DISCORD):

Tim Nadeau, Jan B, Garrett B, Dylan H, Patrick R

Absent:

Reports:

- Fred Meyer Scraper takes some time to run
 - Option to add user argument agent. Helps with identifying computer and scraper easier.
 - But is unique to computer by computer basis
- MySQL servers down (rip)
- Interviews
 - Questions to be thrown in discord
- Presentation slides are up

Get done this meeting:

- ☐ Join & Pair (*things to wait on*)
- ☒ Discuss about Interviews
- ☒ Discuss feedback from SRS/SDS/PP
- ☒ Presentation distribution
- ☒ Discuss final meeting

NOTES:

- *Reports*
- Final meeting in-person
 - On sunday 2pm
- Tim will go through documentation & to write up things
- Presentation slide distribution

Get done by next meeting:

Overall:

- ☐ Get to work on Presentation
- ☐ Finish and push modules
- ☐ Comment code
- ☐ Work on documentation

Garrett

- ☐ Get Scraper time down/working
- ☐ Presentation Slide

Dylan

- ☐ Get scraper finish
- ☐ Presentation Slide

Tim

- ☐ User Documentation (awaiting program to be complete b4 taking screenshot of a given use case)

- ☐ Programmer's Documentation (waiting on files to be uploaded to finish)
 - ☒ ~~Installation Instructions~~
 - ☐ README.pdf (waiting on files to be uploaded to finish)
 - ☐ SRS/SDS/PP Revision
 - ☐ Presentation Slide
 - ☐ Main() (waiting on files to be uploaded to finish)
- Patrick
- ☐ MySQL fix
 - ☐ Presentation Slide
- Jan
- ☐ UI finish
 - ☐ Presentation Slide

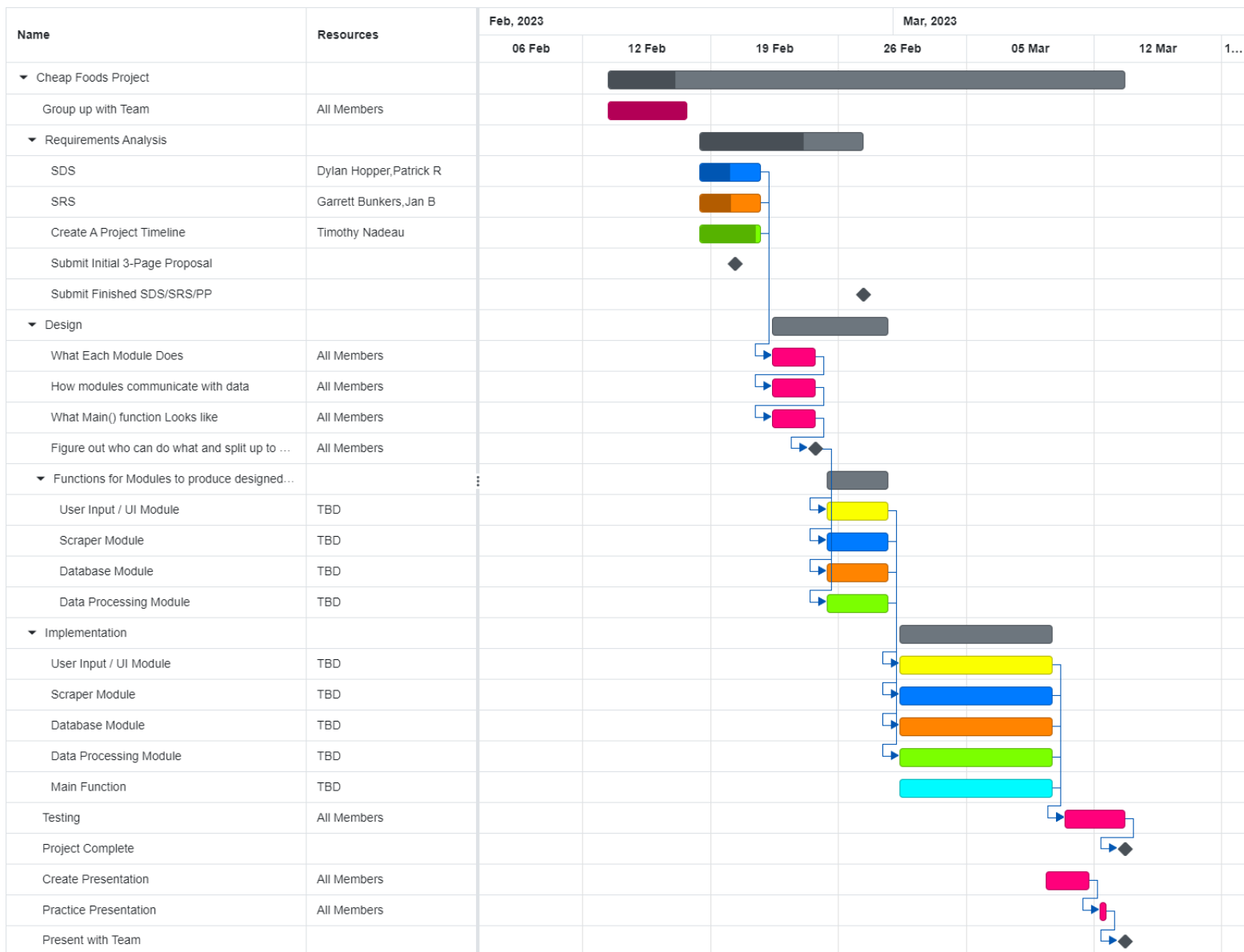
What to do *next* meeting:

- Make sure system works
- Iron out kinks
- Review documentation and slides
- Comment code
- Submit
- Practice Presentation

Adjourned: 10:41 am on 3/9/2023

Gantt Charts

Initial Chart (2/19/23):



Updated 2/25/23:

- **Extended Requirements Analysis Phase Timeline**
 - **Extension on SRS/SDS/PP Deadline**
 - **Needed more time for Requirements Analysis**
- **Shortened Design Phase Timeline**
 - **If our system is clearly defined, this phase should be easier for planning our modules**



Updated 2/28/23:

- Progress Made on SRS/SDS/PP
- Figured out roles for each module



Updated 3/8/23:

- Progress made on Design Phase
- Implementation has begun



Updated 3/11/23:

- Modules are Mostly ready for pairing
- Presentation preparation underway

