

A close-up photograph of a person's hand reaching into an open box of donuts. The box is pink with colorful confetti-like sprinkles. Several donuts are visible: one dark chocolate one with yellow sprinkles, one green one with white sprinkles, and one yellow one. The background is a plain, light-colored wall.

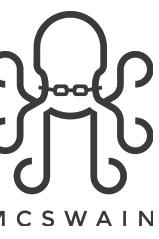
MGT 3745 B: mermaid, filter/map, and try/catch



AGENDA

September 5, 2023
(99 days = 14 weeks, 1 day)

- review key terms
(markdown, version control)
- mermaid
- js filter and map methods
- assignments



Key Terms

Business (Computational Thinking) Communications

Repository (repo) - contains all of a project's files and each file's revision history

Version control - systems responsible for managing changes to computer programs, documents, large websites, or other collections of information (e.g., git)

Markdown (*.md) - plain text files that contain a lightweight markup language for creating formatted text using a plain-text editor.

README.md - markdown file containing a summary of a repo/code to help others understand and navigate code. A README.md is typically included for every repository and contains a repository license, citation file, contribution guidelines, and a code of conduct, which communicates expectations for your project.

Mermaid - JavaScript-based diagramming and charting tool that renders Markdown-inspired text definitions to create and modify diagrams dynamically.

Source: <https://docs.github.com/en/repositories/creating-and-managing-repositories/about-repositories>

Source: https://en.wikipedia.org/wiki/Version_control

Source: <https://en.wikipedia.org/wiki/Markdown>

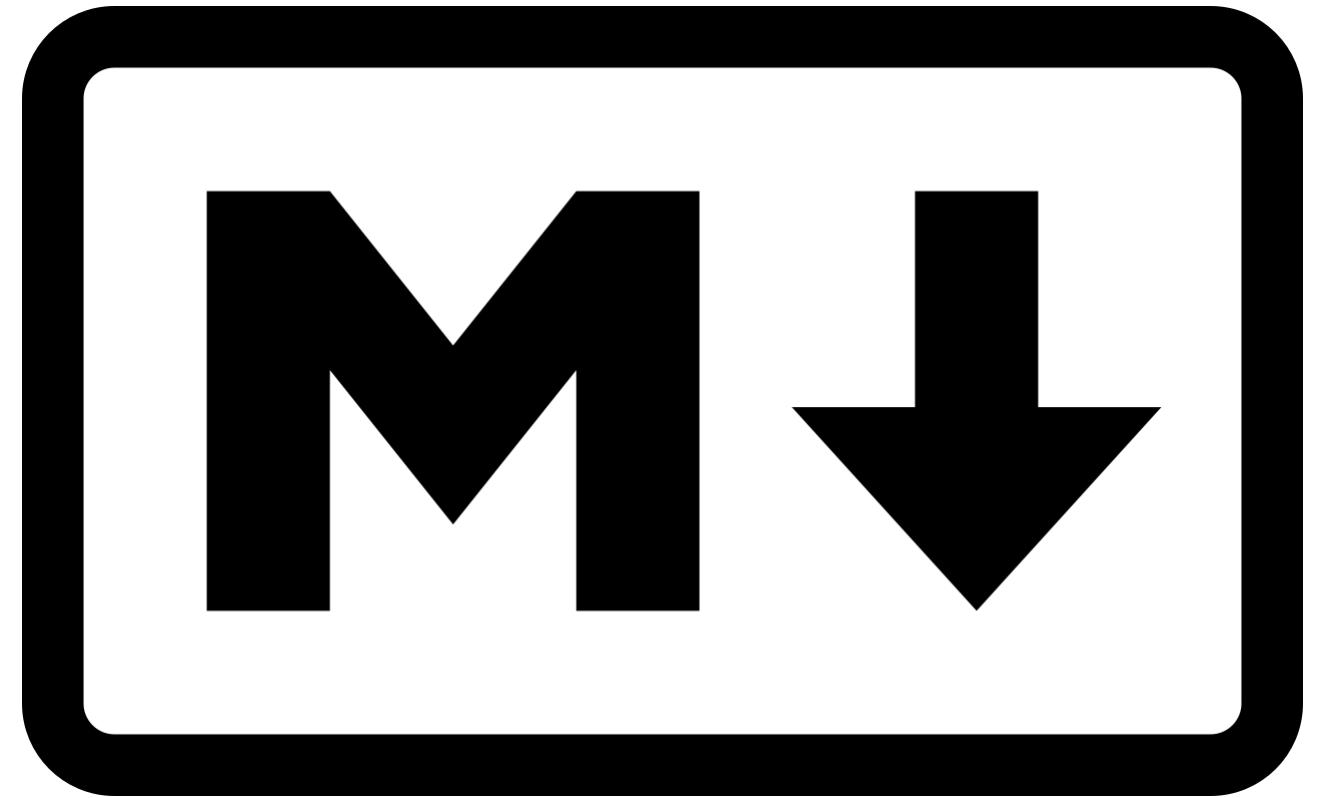
Source: <https://docs.github.com/en/repositories/managing-your-repositorys-settings-and-features/customizing-your-repository/about-readmes>

Source: <https://mermaid.js.org/intro/>

Typora

Markdown Editor

- ▶ Supports Mermaid
- ▶ Supports HTML-embedded Markdown files
- ▶ Supports Windows, Mac, Linux
- ▶ Free to download (15-day trial / \$14.99)
- ▶ <https://typora.io/#feature>



Obsidian

Markdown Editor

- ▶ Add visualizations to internal/external markdown file relationships
- ▶ Supports Mermaid
- ▶ Offers web hosted documents via Sync and Publish (paid but includes edu discounts)
- ▶ Supports Windows, Mac, Linux
- ▶ Free to run locally
- ▶ <https://obsidian.md>



Mermaid

Diagramming and charting tool

- ▶ Ease to generate, modify and render diagrams when you make them
- ▶ Multiple integrations and plugins
- ▶ Include on a (company's) website or repo
- ▶ <https://mermaid.js.org/>
- ▶ <https://mermaid.live/>



Key Terms

Examples of Business Problems

searches (e.g., filtering) - processes and algorithms used to solve a search problem (finding "y" within "x")

sorting - ordering/categorizing data

counting - start/maintain a count of the number of iterations/cycles/instances

lists - start/maintain a structure of values

personalization - tailoring a service or a product to accommodate specific individuals, sometimes tied to groups or segments of individuals

robustness - ability of a computer system to cope with errors during execution and cope with erroneous input

Source: https://en.wikipedia.org/wiki/Search_problem

Source: https://en.wikipedia.org/wiki/Random_number_generation

Source: <https://en.wikipedia.org/wiki/Personalization>

Source: [https://en.wikipedia.org/wiki/Robustness_\(computer_science\)](https://en.wikipedia.org/wiki/Robustness_(computer_science))



Key Terms

Coding Syntax

map() - creates a new array filled with elements that pass a test provided by a function

filter() - creates a new array from calling a function for every array element

callback - a function passed into another function as an argument, which is invoked inside the outer function to complete some kind of routine or action

try/catch - a series of code blocks to handle exceptions or errors thrown while the code is being run

Source: https://www.w3schools.com/jsref/jsref_map.asp

Source: https://www.w3schools.com/jsref/jsref_filter.asp

Source: https://developer.mozilla.org/en-US/docs/Glossary/Callback_function

Source: <https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Statements/try...catch>

Key Terms

Problem Solving Methodology

Create a **problem statement**

Use computational thinking as the process which **produces an algorithm/pseudocode** (plain language description of the steps) that generates the desired condition or result

Convert algorithms/pseudocode, or **encode**, into JavaScript

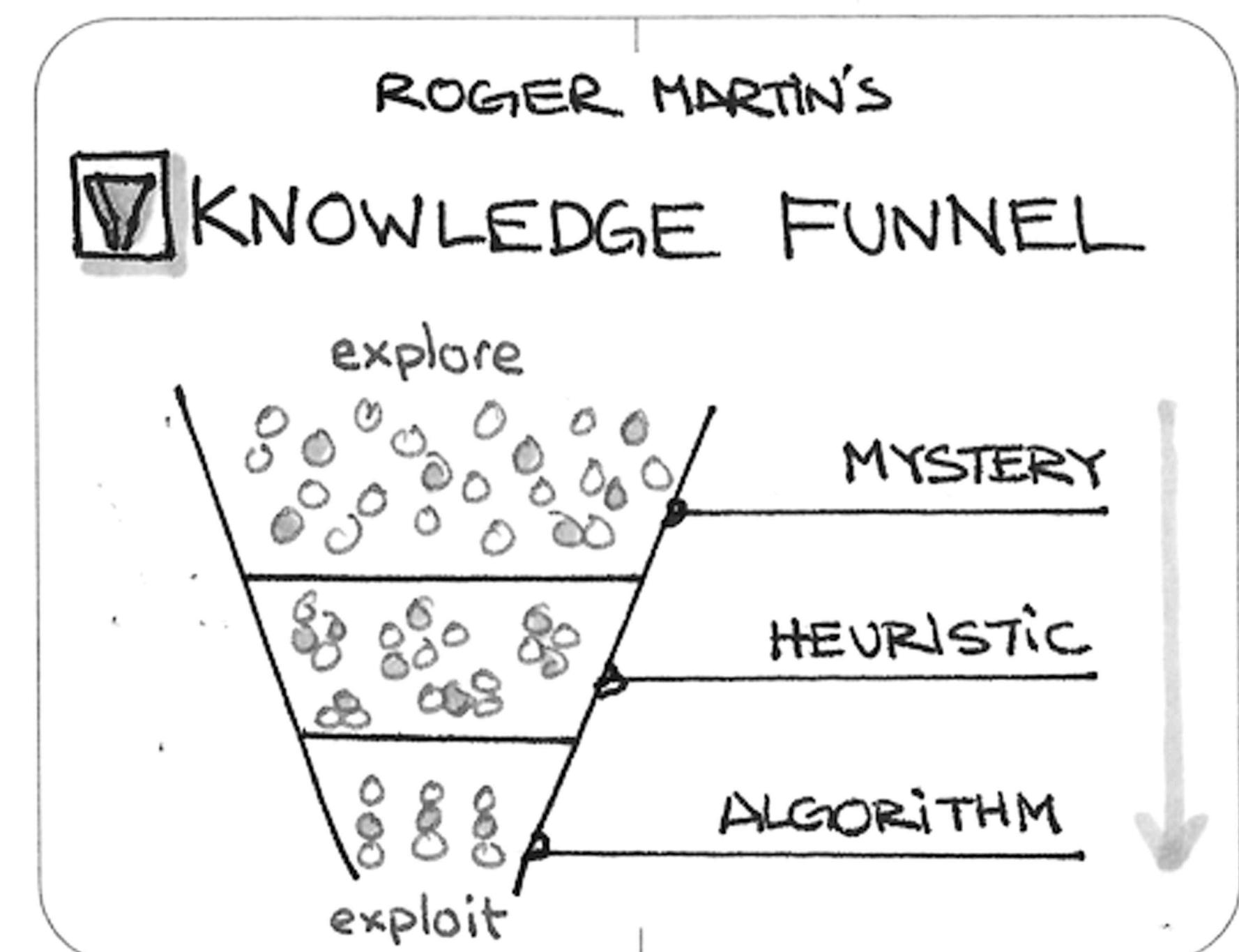
In-class exercise: <https://replit.com/@johnmcswain/>
<https://replit.com/johnmcswain/MGT3745Fall2023Sept5>

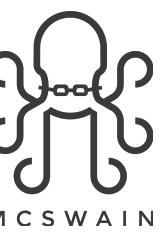
Source: <https://en.wikipedia.org/wiki/Pseudocode>

Source: <https://rogerlmartin.com/lets-read/the-design-of-business>

sketchplanations.com

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Assignments

Homework 2

<https://gatech.instructure.com/courses/347044/assignments/1504834>

Week 2 Discussion

https://gatech.instructure.com/courses/347044/discussion_topics/1542015

Week 3 Discussion

https://gatech.instructure.com/courses/347044/discussion_topics/1554913



Assignments

Installations (Optional)

Download and install [Obsidian](#)

Download and install [Typora](#)

Readings

[The art of business communication \(Chapt 3, 5\)](#)

[The art of business communication \(Chapt 7-8\)](#)

[Mermaid Live Editor](#)

[W3Schools HTML](#) (new)

[Docs for Developers](#)

[GitHub: About READMEs](#)

[Markdown Basic Syntax](#)

Questions?