Mental Model Assignment

Output Options & Instructions

Overview: Output Tiers

You may choose **any** of the following Tiers for Assignments 1, 2, or 3.

- Tier 1: Simple Manual Upload (No coding required)
- Tier 2: Simple Push to Remote (Intro to Git)
- Tier 3: Template Modification (Intro to HTML/Web)
- Tier 4: Freeform (Advanced or AI-assisted Coding)
- Tiers Summary Table

Note: For the Final Project, all students must utilize the Student Gallery Workflow at the end of this document (see 🔗[Student Gallery repo] for details).

Tier 1: Simple Manual Upload

Best for: Quick submissions focusing purely on visual content.

1. **Create:** Create your mental model using your chosen tool (Canva or Miro).
2. **Export:** Save your work as an image (`.png` or `.jpg`) or PDF.
3. **Upload:**
    - If you have not done so already, create a new repository on GitHub (> **Repositories** > **New**). (See Starmap Section)
    - Name it something relevant (e.g., `mental-model-assignments-[username]`).
    - Inside the repo, click **Add file** > **Upload files**.
    - Drag and drop your file.
    - **Commit changes:** Write a description and click **Commit changes**.
4. **Submit:** Copy the URL of your repository and submit it to Canvas.

Tier 2: Simple Push to Remote

Best for: Getting comfortable with the standard Git workflow.

1. **Create:** Create your mental model and save the file locally.
2. **Repo Setup:** If you have not done so already, create a new repository on GitHub (remote) for the class and **Clone** it to your computer (local). (See Starmap Section)
3. **Move File:** Move your image file *into* the local repository folder you just cloned.
4. **Push:**
    - Open the folder in **VS Code** or **GitHub Desktop**.
    - **Stage** the new file.
    - **Commit** with a message.
    - **Push** to origin.
5. **Verify:** Check your repository on GitHub.com to ensure the file is there.
6. **Submit:** Copy the URL of your repository and submit it to Canvas.

Tier 3: Incorporate into Template

Best for: Displaying your work on a webpage without writing code from scratch.

1. **Get the Template:**
    - Go to the class Tier 3 Template Repository. Follow the instructions there for greater detail.
    - Click **Use this template** > **Create a new repository**.
    - Name it something relevant (e.g., `mental-model-webpage-[username]`).
2. **Clone:** Clone your new repository to your local machine.
3. **Add Your Content:**
    - Save or move your mental model image to the `images/` folder within the repo.
    - Open the repository folder in VS Code.
    - Open `index.html`.
    - Find the code comment `<!-- INSERT IMAGE HERE -->`.
    - Change the image source code to match your filename: `<img src="images/your-file-name.png">`.
4. **Preview:** View the webpage preview using the **Live Server** (by Ritwick Dey) extension or ask Copilot to run the webpage on a local host.
5. ***[Optional]* Customize:** Customize the webpage with your preferred colors, fonts, or other. Ask Copilot to make changes or try yourself - explore using AI assistance!
6. **Push:** Stage, Commit, and Push your changes.
7. ***[Optional]* Deploy:** Host your project using GitHub Pages. (See Starmap section)
8. **Submit:**
    - If you chose to deploy the webpage, submit both the webpage URL and the repository URL.
    - If you did not deploy the webpage, submit a repository URL and a screenshot of the webpage preview.

Tier 4: Freeform using IDE

Best for: Students who want full creative control to build a React App, custom HTML site, or interactive visualization.

1. **Initialize:** Create a repository from scratch using `npx create-react-app` or your preferred stack.
2. **Develop:** Code your project. Ensure you have a `.gitignore` file to exclude `node_modules` (choose "Node" and ask Copilot to ensure it is configured properly if unsure). Explore using AI assistance!
3. **Push:** Initialize a Git repo locally, connect it to a remote GitHub repository, and push your code.
4. ***[Optional]* Deploy:** Host your project using GitHub Pages. (See Starmap section)
5. **Submit:**
    a. If you chose to deploy the webpage, submit both the webpage URL and the repository URL.
    b. If you did not deploy the webpage, submit a repository URL and a screenshot of the webpage preview.

Tiers Summary Table:

Tier	Process Steps	Tools Required	Skill Level
Tier 1: Simple Manual Upload to Remote Repo **(Low Complexity)**	1. Download mental model output to computer 2. Upload manually to GitHub repo	Web Browser, GitHub Account, Tool	Beginner
Tier 2: Simple Push to Remote Repo **(Medium Complexity)**	1. Download/move mental model output to local repository 2. Open local repository (folder) as a workspace in VS Code OR open GitHub desktop app 3. Push to remote GitHub repo	VS Code and/or GitHub Desktop, GitHub Account, Local File System, Tool	Beginner
Tier 3: Incorporate into Template using IDE **(High Complexity)**	1. Create new repo from template repo 2. Download/move output to local repository 3. Follow instructions to use mental model within template 4. Customize if desired 5. Push to remote GitHub repo	VS Code, Web Browser, GitHub Account, Local File System, Tool	Intermediate
Tier 4: Freeform using IDE **(Advanced Complexity)**	1. Download mental model output to local repository 2. Create/code from scratch with complete creative freedom. Use AI to assist you and experiment! 3. Push to remote GitHub repo	VS Code, Web Browser, GitHub Account, Local File System, Tool	Advanced

FINAL PROJECT: Student Gallery Workflow

*Mandatory for the final assignment. See the **Student Gallery Repository** for detailed instructions.*

Objective: Add your final project to the class gallery. Your entry will be displayed as a card featuring your **Name**, a **Thumbnail** of your work, and a **Short Description**.

1. **Fork:** Go to the Student Gallery Repository and click **Fork**.
2. **Clone:** Clone *your forked repository* to your computer.
3. **Add Your Entry:**
    - **Upload Image:** Navigate to the `submissions/images/` folder. Add your image file here. **Important:** You MUST name the file `your-username.png` (e.g., `jdoe.png`) to avoid overwriting other students' work.
    - **Create Data File:** Navigate back to the `submissions/` folder. Create a new file named `your-username.json`.
    - **Fill Details:** Copy the template code from the README into your file. You must fill in the following fields for your entry to display correctly:
        - **`name`**: Your actual name.
        - **`description`**: A short sentence about your mental model.
        - **`imagePath`**: The path to the image you just uploaded (e.g., `"images/jdoe.png"`).
        - **`projectUrl`**: The link to your live webpage or repo.
4. **Push:** Commit and Push changes to *your* fork.
5. **Pull Request:**
    - Go to the original Student Gallery Repository.
    - Click **Pull Requests** > **New Pull Request**.
    - Click **compare across forks**.
    - Select your fork as the "head repository."
    - Click **Create Pull Request**.