# **🧠 Moringa AI Capstone Project: Beginner’s Toolkit with GenAI**

**Title:** *"Prompt-Powered Kickstart: Building a Beginner’s Toolkit for [Language/Framework/API/Library]"*

**Duration:** Monday 1st September – Thursday 4th September (11:59pm)

## **📍 Overview**

In this capstone, you’ll harness the power of **generative AI prompts** to explore and learn **a new technology** in software development. You'll create a **beginner-friendly toolkit** that helps anyone get started with that technology - whether it’s a programming language, a library, a framework, or a new API.

## **🎯 Project Goal**

Use AI prompts (via [ai.moringaschool.com](https://ai.moringaschool.com)) to:

* **Learn a new technology**.
* **Create a simple runnable project** (like a Hello World(excluding python , java and javascript) , API test, GUI render, etc.).
* **Document the steps clearly** so others can replicate your process.
* **Test and iterate** your guide with peers.

## **✅ Deliverables**

By Thursday, **4th September at 11:59pm**, you should submit:

1. **Toolkit Document** (Markdown or PDF) including:  
   * Overview of the chosen tech.
   * Set up instructions.
   * Minimal working example (Hello World, quick API call, etc.).
   * AI prompts used and your learning reflections. :: add this as documentation reference
   * Common errors & how to resolve them.
   * Reference resources (official docs, tutorials).
2. **Working Codebase**
   * On GitHub or zipped and submitted.
   * Should include README with instructions to run.

## **🛠️ Format Guide for the Toolkit Document**

Here’s a suggested layout for your submission:

### **1. Title & Objective**

*Example*: “Getting Started with TailwindCSS in React – A Beginner’s Guide”

* What technology did you choose?
* Why did you choose it?
* What’s the end goal (e.g., render a styled UI component)?

### **2. Quick Summary of the Technology**

*e.g.*: “TailwindCSS is a utility-first CSS framework...”

* What is it?
* Where is it used?
* One real-world example.

### **3. System Requirements**

* OS: Linux/Mac/Windows
* Tools/Editors required (e.g., VS Code, Node, Java JDK)
* Any packages (npm, pip, etc.)

### **4. Installation & Setup Instructions**

Step-by-step (with screenshots or terminal output if possible):

# Example: Install Tailwind via npm

npm install -D tailwindcss

npx tailwindcss init

### **5. Minimal Working Example**

* Describe what the example does.
* Paste code with inline comments.
* Provide expected output.

### **6. AI Prompt Journal**

For each prompt used, record:

* Prompt used:  
  Link to the curriculum for the prompt  
    
   “Give me a step-by-step guide to initialize TailwindCSS in a React app”
* AI’s response summary: Optional  
  Brief part of the response that addresses the problem   
    
   “The AI helped me scaffold the setup and fix an import error...”
* Your evaluation of its helpfulness.  
  Optional

### **7. Common Issues & Fixes**

* What didn’t work initially?
* Errors and how you resolved them.
* Links to StackOverflow, forums, etc.

### **8. References**

* Official docs
* Video links
* Helpful blog posts

## **🧠 AI Prompt Usage Expectations**

You’re encouraged to:

* Experiment with multiple prompts for learning.
* Refine prompts based on errors or dead-ends.
* Note down how AI improved your productivity or clarity. This is to be taken as feedback.

## **📅 Timeline**

| **Day** | **Task Focus** |
| --- | --- |
| **Monday (1st)** | Select tech, create AI prompt plan |
| **Tuesday** | Scaffold basic setup with AI help |
| **Wednesday** | Finalize minimal example, fix issues |
| **Thursday** | Document toolkit + test with a peer |
| **Friday (AM)** | Final edits, polish, and submit |

## **💡 Evaluation Criteria**

| **Criteria** | **Weight** |
| --- | --- |
| Clarity & completeness of docs | 30% |
| Use of GenAI for learning | 20% |
| Functionality of example | 20% |
| Testing & iteration | 20% |
| Creativity in chosen tech | 10% |

## **🔁 Submission Format**

* **Docs**: Markdown or PDF
* **Codebase**: GitHub repo or ZIP file
* **Submit via**: [(based on instructor's direction)]

## **🧃 Bonus Ideas (for the adventurous)**

* Add a short Loom video walkthrough.
* Compare two technologies (e.g., Flask vs FastAPI).
* Build a themed Hello World — like a chatbot, joke API, or UI animation.

## **🚀 Good Luck!**

This is your chance to show how far you’ve come, and how fast you can learn something new using the tools of the future. Have fun, prompt smart, and build something small but mighty.