Project Plan Presentation
Enhanced Shopping Experience Using AI

The Capstone Experience

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Project Sponsor Overview

• General merchandise supercenter chain
• Founded in 1934 in Greenville, MI
• Credited with pioneering the modern supercenter (Walmart, Target, etc.)
• Headquarters located in Grand Rapids, MI
Project Functional Specifications

• Customers are given a unique recipe based on their personal and regional preferences
• Appealing and intuitive web interface
  ▪ Minimize the number of steps from recipe shown to customer and ingredients arriving at their doorstep
• Customers can choose between breakfast, lunch, dinner, and dessert recipes
Project Design Specifications

• Web page fits Meijer’s current aesthetic
• Continuous webpage
  ▪ No need to go back and forth between tabs
Screen Mockup: Home Page

Hello Sparty!
Generate a recipe:
- Breakfast
- Lunch
- Dinner
- Dessert

Preferences
- Allergens:
  - Eggs
  - Gluten
  - Milk
  - Nuts
  - Shellfish
- Diet:
  - Halal
  - Vegan
  - Vegetarian

1 meal(s) Generate
Screen Mockup: Recipe Page

Hello Sparty!

Generate a recipe:
- Breakfast
- Lunch
- Dinner
- Dessert

Preferences

Allergens
- Eggs
- Gluten
- Milk
- Nuts
- Shellfish

Diet
- Halal
- Vegan
- Vegetarian

1 meal(s) Generate

Recipes

Mexican Steak Tacos

Put a mini soft taco bar on your table in 20 minutes.
Total Time: 20 min | Serves: 6
Ingredients
For the Steak:
- 1 1/4 lb Top sirloin or flank steaks
- 1 tsp Chili powder
- 1/4 tsp Salt
- 1/4 tsp Pepper
- 1/2 cup Chopped fresh cilantro
- 1 Lime cut into wedges
- 1/4 cup Chopped onions (optional)
- 1/4 cup Sour cream (optional)
- 12 (6-inch diameter) Flour or corn tortillas
For the Guacamole:
- 1 Firm-ripe avocado diced
- 1/4 cup Chopped onion
- 1/4 cup Fresh cilantro coarsely chopped
- 1 tsp Fresh lime juice
- Salt

Preparation
1. Coat a large nonstick skillet with cooking spray and preheat it over medium-high heat or preheat the grill. In a small bowl, stir together the chili powder, salt, and pepper. Rub the spice mixture into both sides of the steaks.
2. Grill or broil the steaks for 4 minutes per side, turning once, for medium rare or to your desired degree of doneness. Remove from the grill and let the meat rest for
Screen Mockup: Ingredients Page

Ingredients for **Mexican Steak Tacos**

serves 6 x 2 = serves 12

- **Certified Angus Beef Boneless Top Sirloin Filet**
  - $12.99 / lb
  - Approx. 0.75 lb
  - $9.74 each
  - In stock at East Lansing

- **Cilantro**
  - $0.89 / bundle
  - In stock at East Lansing

- **Lime, large**
  - $0.49 each
  - In stock at East Lansing

- **Avocado, small**
  - $0.89 each
  - In stock at East Lansing

medium bowl until chunky. Add the chopped onions, cilantro, and lime, then combine until fully mixed. Place in a small bowl and serve with tacos.
Screen Mockup: Ingredients Page Continued
Project Technical Specifications

• Next.js
  ▪ Modern React Framework
  ▪ JS, CSS, HTML, Node.js

• Azure, Microsoft
  ▪ Application hosting
  ▪ Database hosting

• GPT-4, OpenAI
  ▪ Dynamically generate recipes
  ▪ Alter recipes based on user preferences
Project System Architecture

- Customers
- Web Application
  - Next.js Frontend
  - Node.js Backend
- Meijer Ordering API
- Microsoft Azure
  - OpenAI
    - ChatGPT
  - SQL Database
- Web Browser
Project System Components

• Software Platforms / Technologies
  ▪ Web Framework – Next.js
  ▪ Cloud Computing Service – Microsoft Azure
  ▪ AI – GPT-4
Project Risks

• Implementing AI to Develop Recipes
  ▪ Team Meijer is unfamiliar with training AI models
  ▪ Mitigation: Research training AI models (YouTube, Google Cloud)

Risk 2

• Implementing AI to Choose Images for Recipes & Ingredients
  ▪ Should photos of recipes and ingredients come from a database? Or should they be skimmed from the web?
  ▪ Mitigation: Exploring each option extensively through testing

• Matching Website to Meijer’s Current Aesthetic & Functionality
  ▪ Meijer’s current website was developed using Microsoft Blazor. Team Meijer’s website will be developed using Next.js
  ▪ Mitigation: Research of Next.js and its similarities/differences from Microsoft Blazor
Questions?