

Project Plan Presentation

Enhanced Shopping Experience Using AI

The Capstone Experience

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*From Students...
...to Professionals*

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

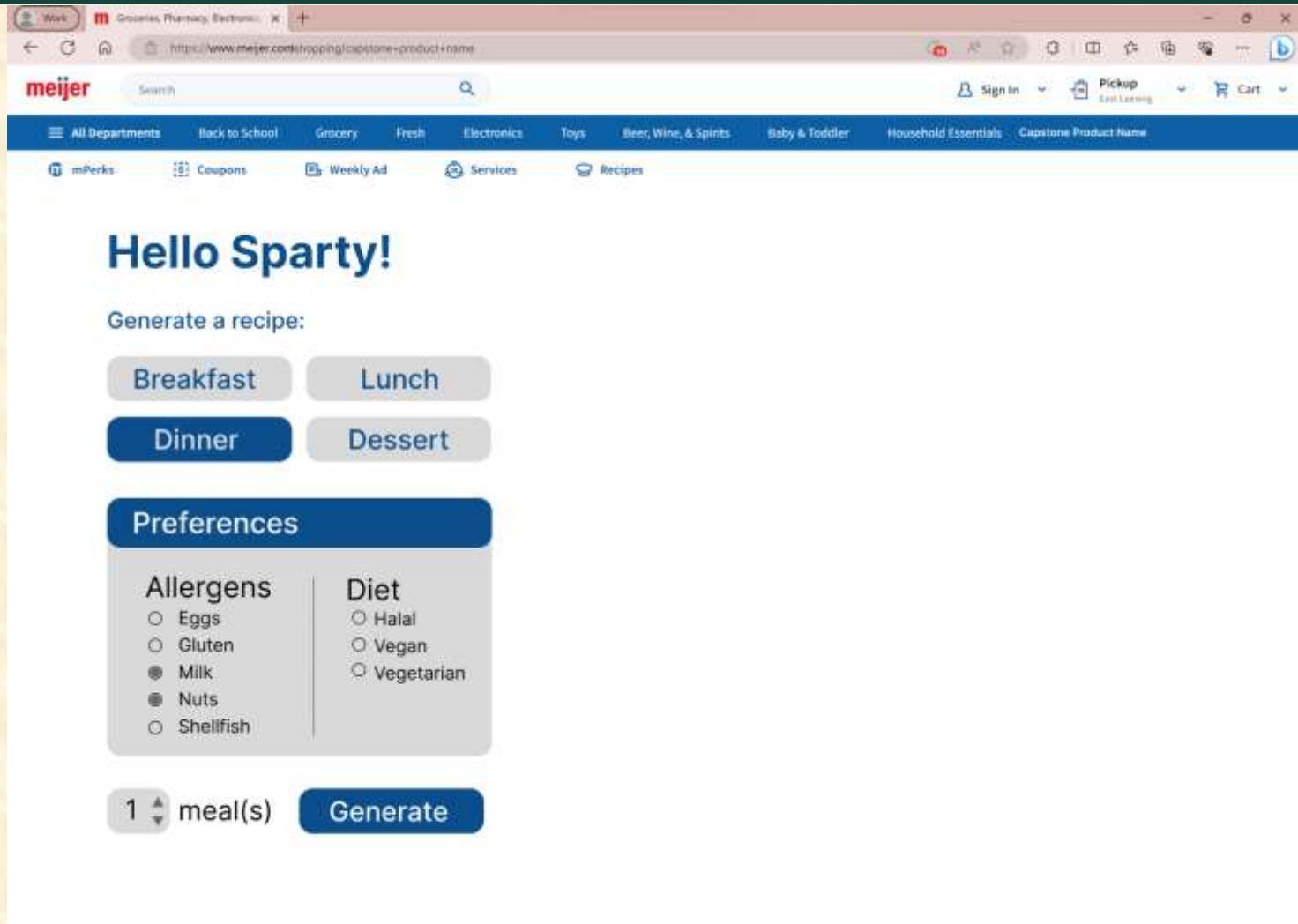


Project Design Specifications

- Web page fits Meijer's current aesthetic
- Continuous webpage
 - No need to go back and forth between tabs



Screen Mockup: Home Page



Screen Mockup: Recipe Page

The screenshot shows a web browser displaying the Meijer website. The page features a navigation bar with categories like 'All Departments', 'Back to School', 'Grocery', 'Fresh', 'Electronics', 'Toys', 'Beer, Wine, & Spirits', 'Baby & Toddler', 'Household Essentials', and 'Capstone Product Name'. Below the navigation bar, there are links for 'mPerks', 'Coupons', 'Weekly Ad', 'Services', and 'Recipes'. The main content area is divided into two sections. On the left, a 'Hello Sparty!' section allows users to 'Generate a recipe:' with buttons for 'Breakfast', 'Lunch', 'Dinner', and 'Dessert'. Below this is a 'Preferences' section with 'Allergens' (Eggs, Gluten, Milk, Nuts, Shellfish) and 'Diet' (Halal, Vegan, Vegetarian) options. At the bottom of this section is a 'Generate' button and a quantity selector set to '1 meal(s)'. On the right, a 'Recipes' section highlights 'Mexican Steak Tacos' with a 'Buy Now' button. The recipe details include: 'Put a mini soft taco bar on your table in 20 minutes. Total Time: 20 min | Serves: 6'. The ingredients are listed for the steak and guacamole. The preparation steps are: 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

The screenshot shows a web browser displaying the Meijer website. The URL is <https://www.meijer.com/shopping/capstone-product-name>. The Meijer logo is in the top left, and navigation links for departments like 'All Departments', 'Back to School', 'Grocery', 'Fresh', 'Electronics', 'Toys', 'Beer, Wine, & Spirits', 'Baby & Toddler', 'Household Essentials', and 'Capstone Product Name' are in a blue bar. A search bar and 'Sign in', 'Pickup East Lansing', and 'Cart' buttons are on the right. A grey instruction box reads: '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.'

Ingredients for Mexican Steak Tacos

serves 6 x $- 2 +$ = serves 12

 <p>$- 2 +$</p> <p>Certified Angus Beef Boneless Top Sirloin Filet \$12.99 / lb Approx. 0.75 lb \$9.74 each</p> <p>In stock at East Lansing</p>	 <p>$- 2 +$</p> <p>Cilantro</p> <p>\$0.89 / bundle</p> <p>In stock at East Lansing</p>	 <p>$- 2 +$</p> <p>Lime, large</p> <p>\$0.49</p> <p>In stock at East Lansing</p>	 <p>$- 2 +$</p> <p>Avocado, small</p> <p>\$0.89</p> <p>In stock at East Lansing</p>
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Screen Mockup: Ingredients Page Continued

The screenshot displays a Meijer website interface with a grid of eight product cards. The top navigation bar includes the Meijer logo, a search bar, and links for 'Sign In', 'Pickup East Lansing', and 'Cart'. Below the navigation bar is a category menu with options like 'All Departments', 'Back to School', 'Grocery', 'Fresh', 'Electronics', 'Toys', 'Beer, Wine, & Spirits', 'Baby & Toddler', 'Household Essentials', and 'Capstone Product Name'. The product cards are arranged in two rows of four. The first row contains: 'Boneless Top Sirloin Filet' (\$12.99/lb, approx. 0.75 lb, \$9.74 each), '\$0.89 / bundle', '\$0.49', and '\$0.89'. The second row contains: 'La Banderita 6" Yellow Corn Tortilla - 30 Count' (\$2.39), 'Yellow Onions, 3 lb' (\$3.39 / bag), 'Meijer All Natural Sour Cream, 16 oz' (\$1.95), and 'Meijer Chili Powder, 2.5 oz' (\$1.99). The 'Sour Cream' card is greyed out with the text 'Hidden due to your preferences'. At the bottom, a summary bar shows 'Cost of selected ingredients: \$31.79' and two buttons: 'Add to cart' and 'Copy to clipboard'.

Product Name	Price	Stock Status
Boneless Top Sirloin Filet	\$12.99 / lb Approx. 0.75 lb \$9.74 each	In stock at East Lansing
	\$0.89 / bundle	In stock at East Lansing
	\$0.49	In stock at East Lansing
	\$0.89	In stock at East Lansing
La Banderita 6" Yellow Corn Tortilla - 30 Count	\$2.39	In stock at East Lansing
Yellow Onions, 3 lb	\$3.39 / bag	In stock at East Lansing
Meijer All Natural Sour Cream, 16 oz	\$1.95	In stock at East Lansing
Meijer Chili Powder, 2.5 oz	\$1.99	In stock at East Lansing

Cost of selected ingredients: \$31.79 [Add to cart](#) [Copy to clipboard](#)

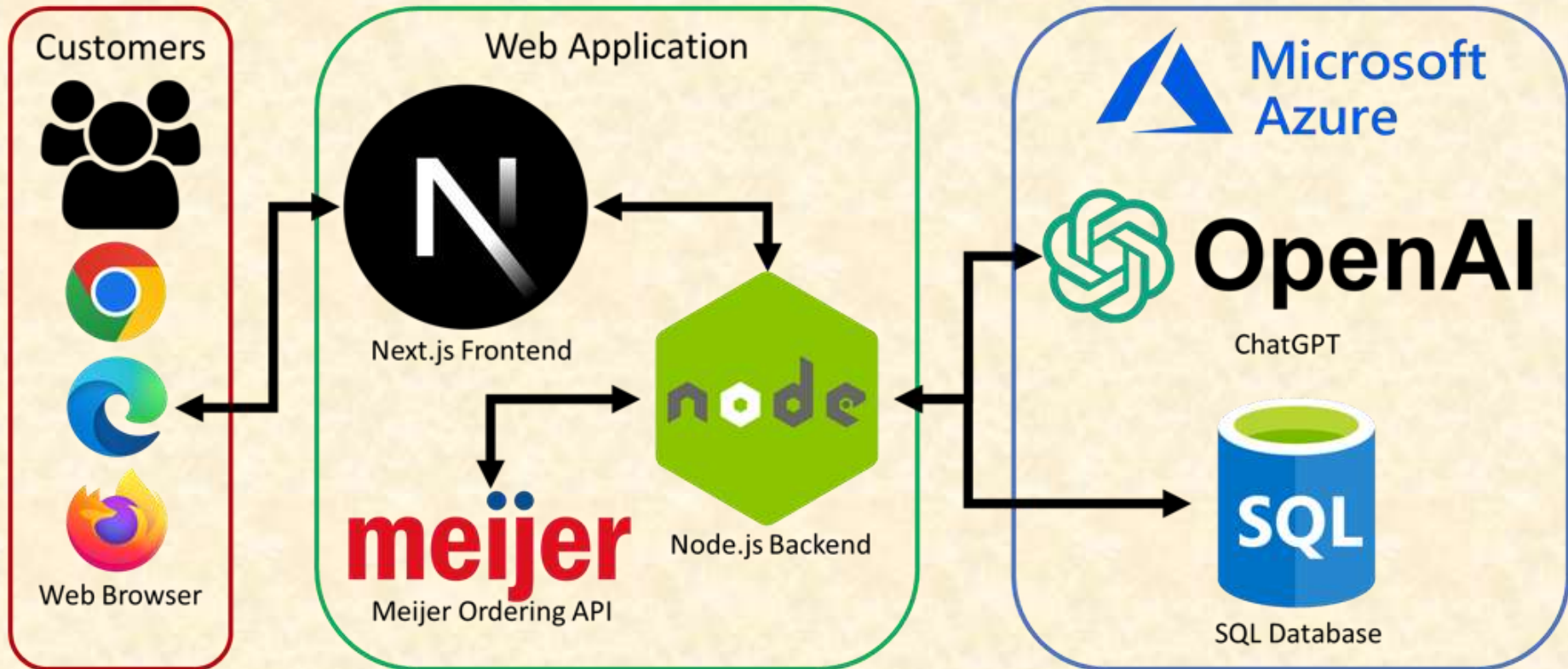


Project Technical Specifications

- 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



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)
- 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?

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