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Human Computer Interaction

Lab Terminal

Submitted to:

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Question Paper

Case Study: Busy working parents often find it challenging to plan and prepare healthy meals due to limited time, lack of inspiration, and difficulty tracking their family's dietary needs. Your goal is to design a user-friendly and accessible mobile app that simplifies meal planning, provides quick and healthy recipes, and incorporates grocery management tools tailored to busy parents.

For the sake of simplicity let's suppose you have already done user research and found the following key points.

Methodology: Conducted interviews and surveys with 20 working parents or other busy people.

Key Insights:

- 75% of respondents struggled to plan meals due to time constraints.
- Parents wanted recipes based on ingredients they already had.
- Many preferred apps with minimal steps to accomplish a task.

Competitive Analysis

Analyzed existing meal-planning apps like **Tasty** and **Meatime** to identify strengths and pain points:

- Strengths: Visual appeal, variety of recipes.
- Pain Points: Overwhelming options and poor grocery integration.

Part 1

5 marks

Draw storyboard for the given Case study. Make sure your storyboard depicts the context of the application, the different activities that will be performed as well as the steps. If there are many different activities, then chose to focus on one or two main ones.

Part 2

5 marks

Draw a mood board that should convey the look and feel of your app. Also specify your main target audience. It can be busy parents, students living in hostels or people living alone and working.

Part 3

10 marks

Draw card based prototypes for the project. The prototypes should be detailed enough for you to show in depth interaction. Before you draw these make sure you know the difference between card based prototypes and sketching.

You can limit the number of use cases by focusing on the main ones and depicting them completely.

Part 4

10 marks

CLO 4

Evaluate your prototype using Formative Evaluation. Attach a link of the video of the evaluation in the document.

Part 5

15 marks

CLO 3

Draw high fidelity prototypes after solving the problems that you have seen during evaluation. Use Figma to draw the screens

Part 5

Viva

5 marks

Solution

Core Features of MealMentor App.

1. Disease-Specific Meal Planning

- Tailored meal suggestions for managing conditions like diabetes, psoriasis, and PCOS etc.
- Nutritional insights to explain how each meal supports disease management.
- Option to input dietary restrictions or allergies for further customization.

2. Ingredient-Based Recipe Suggestions

- Users can input available ingredients, and the app will generate quick, healthy recipes.
- Option to save favorite recipes for easy access.

3. Regular Meal Planning

- Weekly or monthly meal schedules with automatic suggestions.
- Adjustable portion sizes based on family size or specific needs.

4. Grocery Management Tools

- **Pantry Tracker:** Keeps track of items you have at home.
- **Shopping List Generator:** Automatically compiles a list of missing ingredients based on planned meals.
- **Shopping Categories:** Organizes items by section (e.g., produce, dairy) to make shopping trips faster.

5. Reminders & Notifications

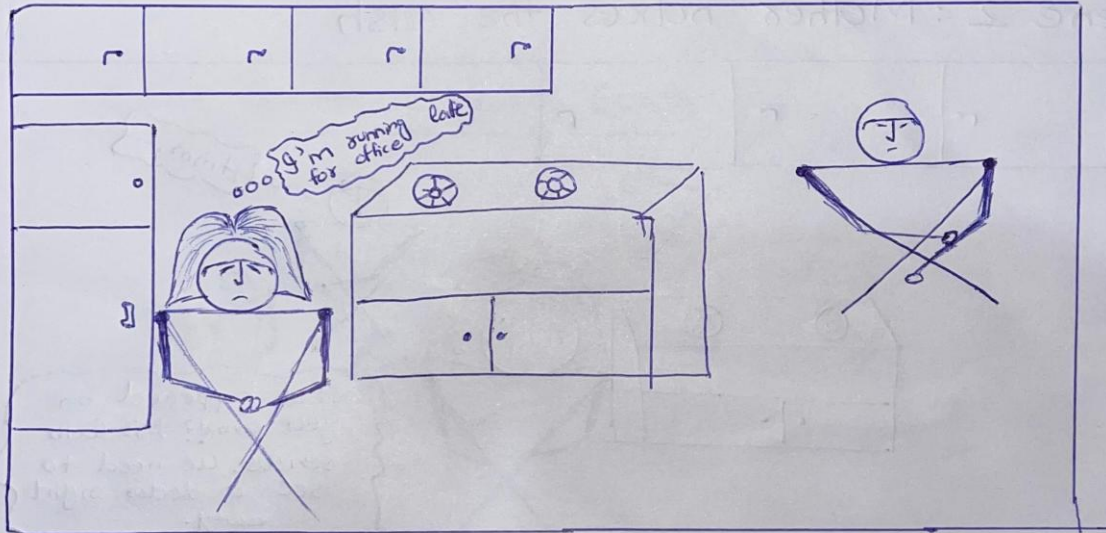
- Meal prep reminders to help users stay on track.
- Alerts when pantry items are running low or about to expire.

6. Visual Meal Guides

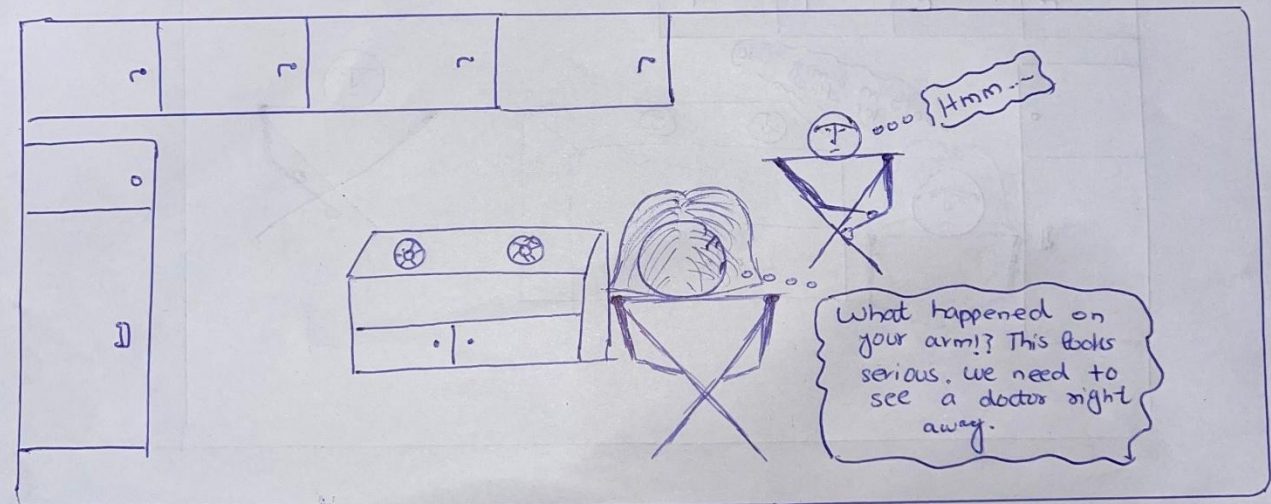
- Step-by-step recipe instructions with images or videos.
- Estimated preparation and cooking time for each dish.

Part 1: Storyboard for MealMentor App

Scene 1: Morning Chaos At Home Kitchen



Scene 2: Mother notices the rash



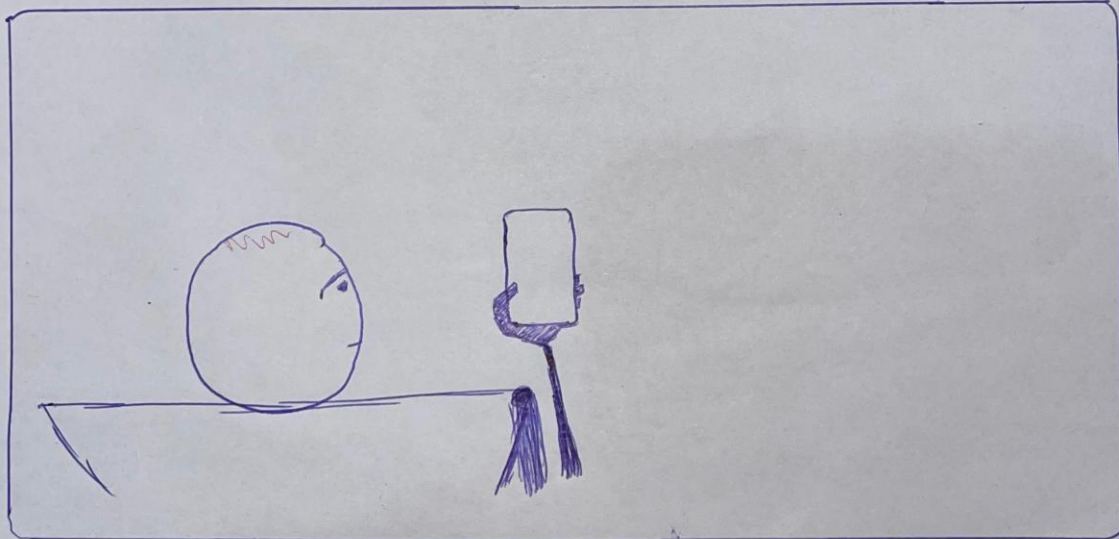
Scene 3: At Doctor's Clinic



Scene 4: The Friend's Recommendation



Scene 5: Exploring the App (A Happy & Healthy Family)



Part 2: Moodboard for MealMentor App

Mood board

Icons



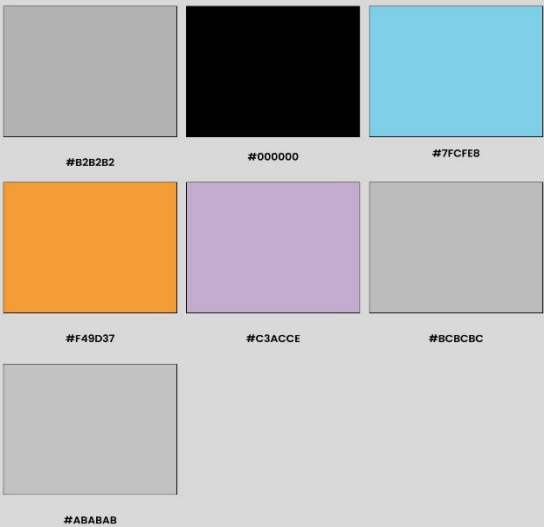
Images



Fonts name, weight & size

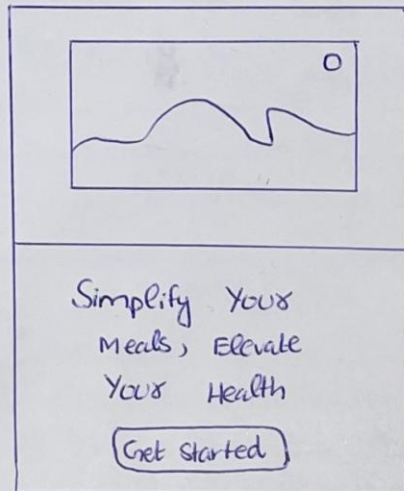
Poppins, Semibold, 32
Poppins, Semibold, 20
Poppins, Semibold, 16
Poppins, Semibold, 24
Poppins, Medium, 12

Colors



Part 3: Card based prototypes for the project

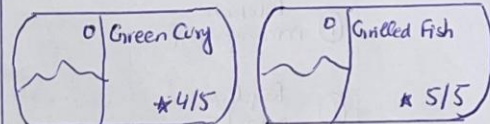
① Landing Page



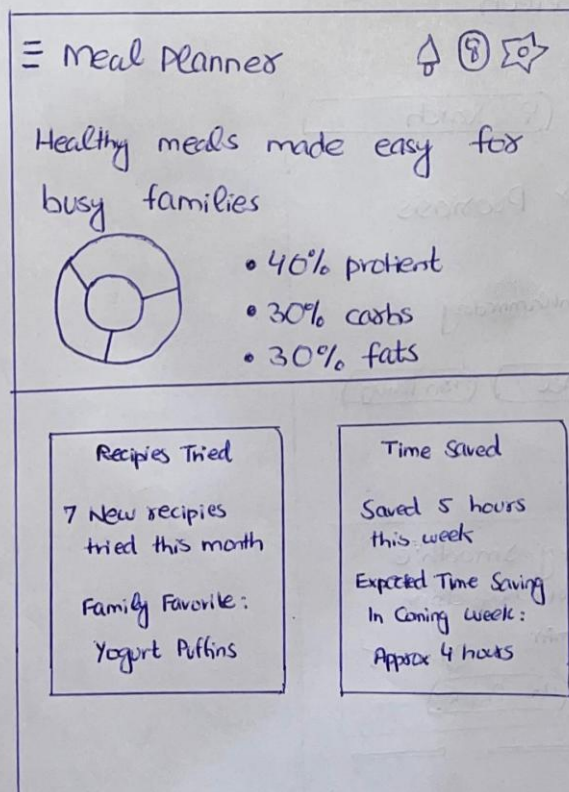
Weekly Highlights

🎉 Congratulations! You have completed 10 meals from Psoriasis diet plan

meal Ratings



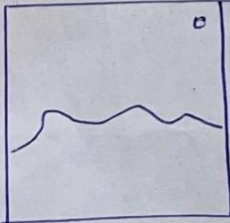
② Dashboard



③ - Sidebar Options

MealMentor ≡	
①	Disease management
①	Kitchen management
①	Regular meals
①	Favorite Cook List
①	Planned Meals
①	Settings

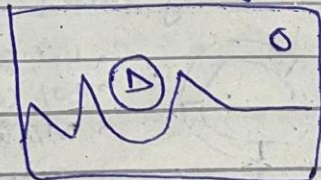
④ - Disease management Screen

≡ MealMentor		🔍 Search	
meal management for Psoriasis			
keep it up!			
If You logged 6 anti-inflammatory meals this week			
Recommend Recipes		All	From Pintry
Breakfast			
		<p>Berry Smoothie A refreshing drink 35 min ♥ 5/5 <u>How Prepare?</u></p>	
Lunch			

How to prepare?

~~Grilled fish~~

Grilled fish
(Anti inflammatory dinner)

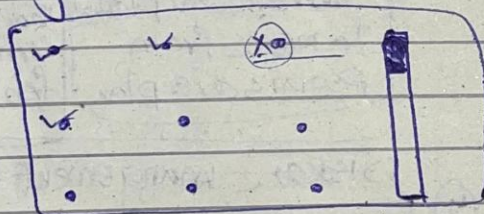


40 mins

Description:

A quick and healthy fish with omega 3's, perfect for reducing inflammation.

Ingredients



Not available

Buy now

Explore other recipe

Steps:

Nutrition information:

Health benefits

Rich in omega-3 fatty acids which help reduce inflammation

set reminder
incomplete ingredients

Reminder:

- after receiving missing stuff
- for later preparation

go to later preparation screen

Give notifications for preparation

Buy missing items

ketchup	3
vegetable oil	4
cooking time	35 min
subtotal	35
tax	4
TOTAL	\$ 39

checked

Your stuff is on the way

Go to preparation screen

start preparing

Kitchen management

≡ MealMentor

Cook Smart, Plan Better

My Pantry list

What's in my kitchen!

Items	Qty
Oil	2
Onions	4
Lemon	3

Add grocery items

≡ MealMentor

Add Items To
Your Pantry

Q Search

Oil and Fats ▲

Olive oil - +

Coconut oil - +

Sunflower oil - +

Vegetable oil - +

Vegetables ▼

Done

Cart screen

≡ Mealmentor

Your Cart

(9 Your cart)

Items	Qty	Price
Olive Oil	- 2 +	\$ 4
Lemon	- 4 +	\$ 8
Onions	- 3 +	\$ 6
Subtotal		\$ 18
Tax		\$ 10
Total		\$ 28

Checkout

Reminder Settings

≡ Meal Mentor

Set Reminder

Mediterranean Plate (Estimated Time: 40 min)

Select Date

◀ August 2025 ▶						
Sunday	Mon	Tue	Wed	Thu	Fri	Sat

Select Time

01 : 34 AM

(02 : 35 AM)

Repeat	Never >
Sound	Blues >

Set Reminder

Part 4: Formative Evaluation

<https://drive.google.com/drive/folders/1-3A33zBLuoaOeq7IBenLomBy24H9-svg>

Part 5: High fidelity prototypes

<https://www.figma.com/design/QLqOhw2cJg8lLHrX7S4ib/MealMentor-HCI-Lab-Terminal?node-id=0-1&t=jJ1JF3vmjofjzSFj-1>

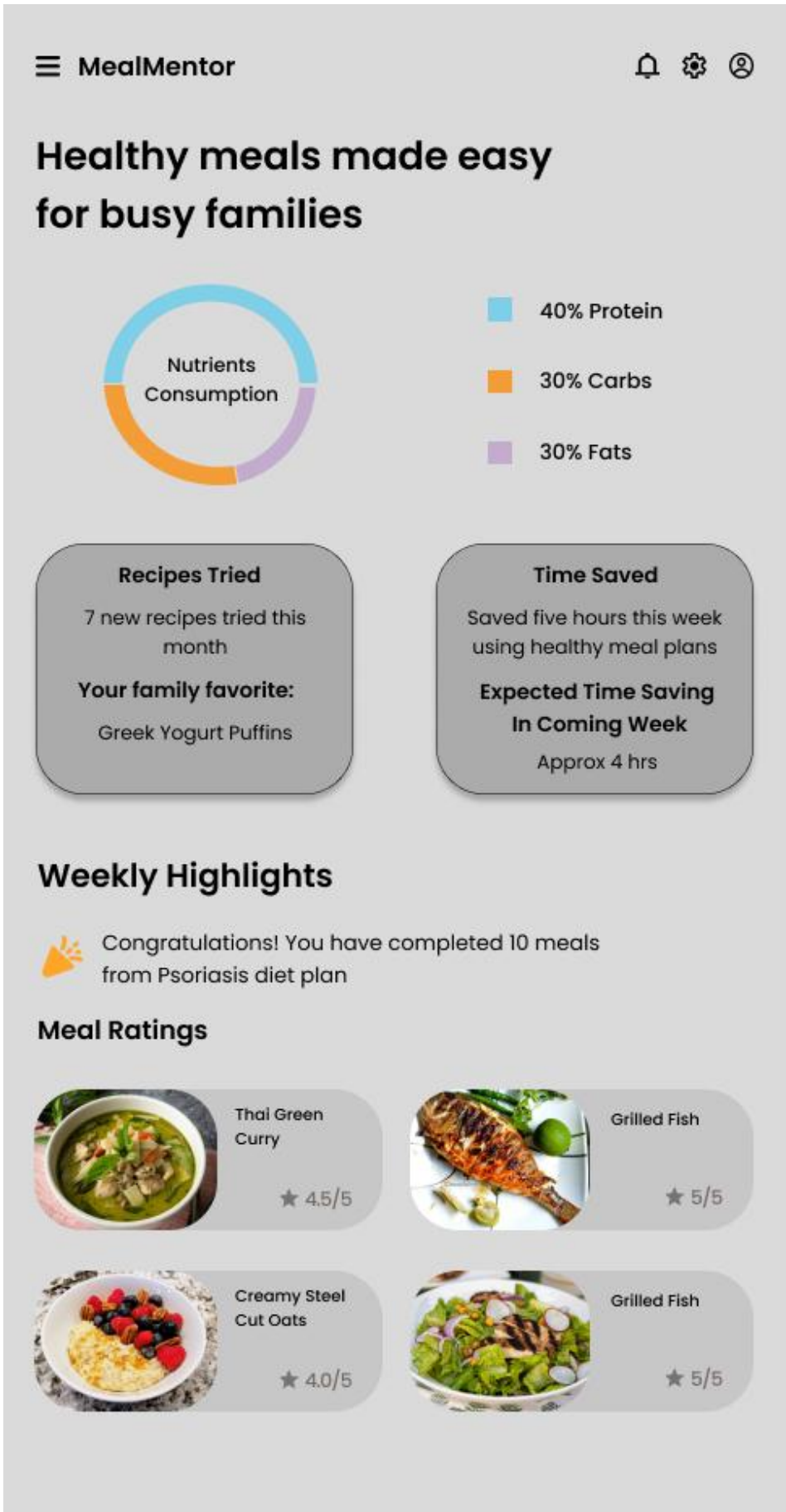
Get Started Screen



**Simplify Your Meals,
Elevate Your Health**

Your journey to stress-free cooking
begins here

Get Started



Sidebar Options

MealMentor

Disease Management

Kitchen Management

Regular Meals

Favorite Cook list

Planned Meals

Settings

side easy

40% Protein

30% Carbs

30% Fats

Time Saved

Saved five hours this week using healthy meal plans

Expected Time Saving In Coming Week

Approx 4 hrs

completed 10 meals

Grilled Fish

★ 5/5

Grilled Fish

★ 5/5

Logout

MealMentor

Search disease based meals

Meal management for Psoriasis

Keep it up!


You logged 6 anti-inflammatory meals this week

Recommended Recipes

All

From Pantry

Breakfast



Berry and Flaxseed Smoothie


A refreshing Berry and Flaxseed Smoothie packed with antioxidants, fiber, and omega-3s. Perfect for a healthy breakfast or a quick energy boost!

35 min

★ 5/5

How to prepare?

Lunch



Mediterranean Plate

A vibrant Mediterranean Plate featuring hummus, fresh cucumber, cherry tomatoes, olives, and whole-grain pita—perfect for a healthy, balanced meal.

1h 30min

★ 5/5

How to prepare?

How To Prepare Screen

MealMentor

Add Reminder


Servings ▼

Mediterranean Plate

(Anti-inflammatory lunch)

!

Incomplete ingredients



1hr 30min

Description

A vibrant Mediterranean Plate featuring hummus, fresh cucumber, cherry tomatoes, olives, and whole-grain pita—perfect for a healthy, balanced meal.

Ingredients

✓

Fresh herbs

✓

Lemon wedges

✓

Olives

!

Whole-Grain pita

✓

Cucumber

!

Feta cheese

Buy missing ingredients

Explore other recipes

Steps to prepare

1. Wash and slice the cucumber and cherry tomatoes. Arrange them on a plate.

2. Scoop the hummus into a small bowl or directly onto the plate. Drizzle with olive oil if desired.

3. Place the olives next to the vegetables.

4. Lightly toast or warm the whole-grain pita bread in the oven or on a skillet. Cut into triangles for easy dipping.

5. Sprinkle crumbled feta cheese over the veggies and hummus. Garnish with fresh parsley or mint.

6. Add lemon wedges for squeezing and enjoy your fresh, flavorful Mediterranean Plate!

Nutrition information

1. Calories: 300–350 kcal

2. Protein: 8–12 g

3. Fat: 15–18 g (healthy fats from olive oil, hummus, and olives)

4. Carbohydrates: 35–40 g (mainly from pita and vegetables)

5. Fiber: 6–8 g

6. Sugars: 5–7 g (natural from veggies)

7. Sodium: 400–600 mg (from olives, feta, and hummus)

Start Preparing



Add Grocery Items

MealMentor

Add Items To Your Pantry

Q

Search Items

Add items to your pantry

Oils and fats

Olive oil

-

1

+

Coconut oil

-

2

+

Sunflower oil

-

0

+

Vegetable oil

-

0

+

Sauces

Soy sauce

-

1

+

Mustard sauce

-

2

+

Red chili sauce

-

0

+

Viniger

-

0

+

Vegetables

Meat

Done

MealMentor

Your Cart

Q Search Items

Items to buy

Items	Quantity	Price
Olive oil	- 1 +	\$5
Coconut oil	- 2 +	\$3
Soy sauce	- 1 +	\$3
Mustard sauce	- 2 +	\$8
Onions	- 10 +	\$9
Tomatoes	- 15 +	\$9
Yogurt	- 3 +	\$9
Subtotal		\$30
Tax		\$10
Total		\$40

Checkout

Set Reminder Screen

Set Reminder

Mediterranean Plate (Estimated Time: 40min)

Select Date

August 2020						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Select Time

01

34

AM

02

:

35

PM

03

36

Repeat

Never >

Sound

Blues >

Set Reminder

MealMentor

Search meals

Regular Meals Made Easy:


Nutritious, Quick, and Tailored for Your Day!

Recommended Recipes

All

From Pantry

Breakfast



Avocado Toast Delight


Whole-grain toast topped with creamy avocado, a sprinkle of chili flakes, and a squeeze of lemon for a nutrient-packed start.

35 min

★ 5/5

How to prepare?

Lunch



Quinoa and Kale Power Bowl


Fluffy quinoa topped with kale, roasted sweet potatoes, avocado slices, and a lemon-tahini dressing for a nutrient boost.

1h 30min

★ 5/5

How to prepare?

Dinner



Stuffed Bell Peppers

Colorful bell peppers filled with a mix of ground turkey, brown rice, diced tomatoes, and Italian herbs, baked to perfection.

1h 30min

★ 5/5