

Umrah Navigation Messenger MVP (v0.1)

Tech Stack: Next.js + Postgres + RapidAPI Audience: Developers & Managers Version: v0.1

0. Overview

A lightweight, web-based messenger for Umrah groups. Guides create groups, pilgrims join via code, and everyone communicates through text + image messages. No GPS, maps, or payments in v0.1. Designed to be built in 1-3 days.

1. Product Summary (Manager View)

1.1 Goal

Enable a guide to coordinate pilgrims during Umrah using a simple chat system with text and photo sharing.

1.2 Why This MVP

- Pilgrims frequently get lost and cannot explain where they are.
- Photos are enough for guides to identify location.
- A simple website is faster than an app.
- Early beta will be free.

1.3 Roles

Guide

- Create groups
- Share join code
- Send announcements
- View/sort incoming text + photo messages

Pilgrim

- Join group via code
- Send text + photos
- Receive instructions

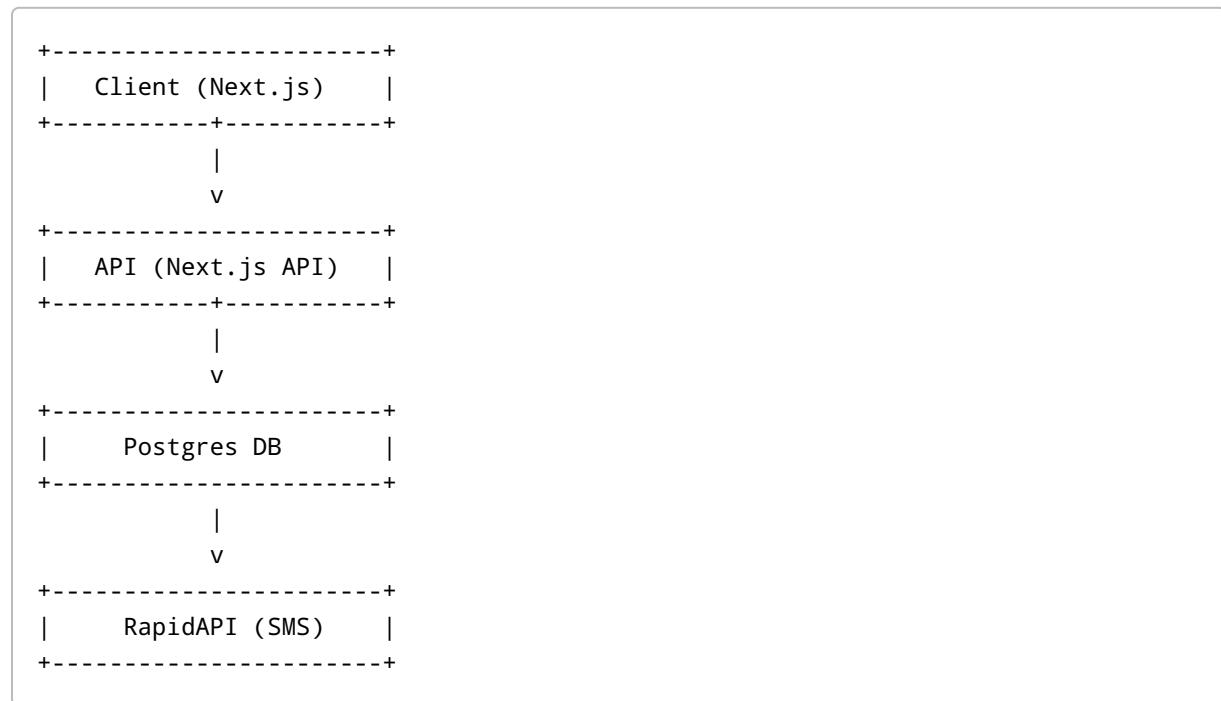
1.4 In Scope

- Web only (mobile browser optimized)
- Role selection
- Group creation & join-by-code
- Text and image chat
- Guide announcements
- RapidAPI SMS for announcements (optional)

1.5 Out of Scope

- GPS
- Maps
- Payments
- AI
- Push notifications

2. Architecture



3. Database Schema (Postgres)

3.1 ER Diagram

users	1	*	groups	1	*	messages	1

3.2 Tables

users

Add fields: - `role` TEXT ('guide'/'pilgrim') - `current_group_id` UUID - `phone` TEXT (optional for SMS)

groups

- `id` UUID PK
- `name` TEXT
- `code` TEXT UNIQUE
- `guide_id` UUID FK → users

messages

- `id` UUID PK
- `group_id` UUID FK
- `sender_id` UUID FK
- `type` TEXT ('text', 'image', 'announcement')
- `text` TEXT
- `image_url` TEXT
- `created_at` timestamp

4. API Endpoints (Next.js API Routes)

4.1 Create Group (Guide)

`POST /api/umrah/groups` - Validates guide role - Generates random group code - Returns group data

4.2 Join Group (Pilgrim)

`POST /api/umrah/groups/join` - Validates role - Matches code → assigns current_group_id

4.3 Get Current Group + Messages

GET /api/umrah/groups/current - Returns group & all messages

4.4 Send Text Message

POST /api/umrah/messages

4.5 Send Image Message

POST /api/umrah/messages/image - Multipart upload - Stores image in S3 or configured file storage

4.6 Send Announcement (Guide Only)

POST /api/umrah/messages/announcement - Inserts announcement - Sends SMS via RapidAPI (optional)

5. Frontend Pages (Next.js)

5.1 /umrah/role

- Role selection UI
- Save user role → redirect

5.2 /umrah/guide

- Create group form
- List groups created by guide

5.3 /umrah/join

- Pilgrim enters group code

5.4 /umrah/chat

- Shared chat interface
- Message list
- Text box
- Image upload
- Announcement button (guide only)
- Polling every 3–5 seconds

ASCII Layout:

+-----+	
Group Title (Code for guide)	
+-----+	
Messages list	
- text/image/announcement	
+-----+	
[Input...] [Send] [Attach] [Announce]*	
+-----+	

*Guide only

6. UI Screen Designs (ASCII)

This section defines the core UI screens as ASCII wireframes. Each screen has an ID (S1, S2, ...) that can be used in tasks, tickets, and discussions.

S1 – Entry / Role Selection (`/umrah/role`)

+-----+	
	UMRAH GUIDE APP
+-----+	
[App Logo]	
Welcome! Please choose your role:	
(1) I am a GUIDE	
- Create and manage a group	
(2) I am a PILGRIM	
- Join an existing group	
[CONTINUE] (enabled after selecting a role)	
[Footer: small help text / link]	
+-----+	

Notes: - On mobile, everything is centered and vertical. - Ties to: Workflow W1 (role & auth).

S2 - Guide Dashboard (`/umrah/guide`)

[< Back]	My Umrah Groups	

Create New Group		

Group Name: [_____]		

[CREATE GROUP]		

Existing Groups (owned by me):		

Group Name	Code	Actions

My Umrah Group 1	ABC123	[OPEN]
Evening Tawaf Group	X7Z9KQ	[OPEN]

[Hint: Share the code with your pilgrims.]		

Notes: - "OPEN" sets `current_group_id` and navigates to S4 (`/umrah/chat`). - Ties to: Workflows W2 (group creation) and partly W4 (chat navigation).

S3 - Pilgrim Join Group (`/umrah/join`)

[< Back]	Join Group

Enter the code from your guide:	

Group Code: [A B C 1 2 3]	

[JOIN GROUP]	

If you do not have a code, please ask your guide.	

[Error message area (e.g. "Code not found")]	

Notes: - After successful join → set `current_group_id` → go to S4. - Ties to: Workflow W3.

S4 - Group Chat (`/umrah/chat`)

```
+-----+
| [- Back] [ Group Name ]          (Code: ABC123)* |
+-----+
|
| [System]: You joined "My Umrah Group"           |
|
| [Guide] (10:01)                                |
| [ANNOUNCEMENT] Meet at Gate 79 at 10:15pm.    |
+-----+
| [Pilgrim 1] (10:03)                            |
| Salaam, I am lost.                           |
|
| [Pilgrim 1] (10:03)                            |
| [Thumbnail of uploaded image]                  |
|
| [Guide] (10:04)                                |
| Walk straight until you see the large green sign. |
|
| ... (scrollable message history) ...          |
|
+-----+
| [ Type your message here..... ]               |
+-----+
| [ ATTACH PHOTO ] [ SEND ] [ ANNOUNCE ]**      |
+-----+
```

* Show group code only to the guide.

** Show `ANNOUNCE` only if role = guide.

Notes: - Messages are displayed in a vertical scroll region. - Announcements are visually highlighted (e.g., border/shade). - Ties to: W4 (text chat), W5 (image messages), W6 (announcements).

S5 - Optional Profile / Settings (Future)

Not required for v0.1, but reserved for later.

```
+-----+
| [- Back]          Profile           |
+-----+
```

+-----+	
Name: [_____]	
Phone: [_____]	
Role: GUIDE / PILGRIM (read-only after set)	
[SAVE CHANGES]	
+-----+	

This can be added when we want users to manage phone numbers or other info.

6. RapidAPI Integration

(SMS)

Purpose

Send SMS to group members when a guide posts an announcement.

Steps

1. After announcement insert → fetch group members with phone numbers
 2. Send SMS via RapidAPI (non-blocking)
 3. Log failures but don't block response
-

7. Workflows → Unit Tasks

Workflow W1: Role & Auth

- T1.1 – Add fields to `users`
- T1.2 – Role update endpoint
- T1.3 – Role UI

Workflow W2: Group Creation

- T2.1 – Create `groups` table
- T2.2 – `/groups` API
- T2.3 – `/umrah/guide` page

Workflow W3: Join Group

- T3.1 - `/groups/join` API
- T3.2 - `/umrah/join` page

Workflow W4: Text Chat

- T4.1 – Create `messages` table
- T4.2 – `/groups/current` API
- T4.3 – Text message API
- T4.4 – Chat UI
- T4.5 – Polling

Workflow W5: Image Messages

- T5.1 – Storage setup (S3)
- T5.2 – Image upload endpoint
- T5.3 – Display images in chat

Workflow W6: Announcements + SMS

- T6.1 – Announcement endpoint
 - T6.2 – Guide role enforcement
 - T6.3 – RapidAPI integration
 - T6.4 – Highlight announcement UI
-

8. Sprint Plan (3 Days)

Day 1 – Backend Foundations

- Migrations
- Group + join APIs
- Auth checks

Day 2 – Frontend + Text Chat

- Role page
- Guide dashboard
- Join page
- Chat UI + text messages

Day 3 – Images + SMS + Testing

- Image upload

- Announcements
 - SMS
 - Mobile testing
-

9. TL;DR for Developer

- Build `/umrah/role`, `/umrah/guide`, `/umrah/join`, `/umrah/chat`
- Add `groups` + `messages` tables
- APIs for: create group, join, get messages, send text, send image, send announcement
- Polling every 3–5 seconds
- RapidAPI SMS only for announcements
- Entire MVP should take 1–3 days