

Let's meet...

KUYA JAKE

CSPC Freshman



SARINA?

The logo for SARINA is displayed in white on a dark blue background. The letters 'S', 'A', 'R', 'I', 'N', and 'A' are in a bold, sans-serif font. The letter 'A' is stylized with a series of horizontal lines to its left, suggesting a building or a staircase. The letter 'I' is a simple vertical bar. The letter 'N' is followed by a stylized road with a dashed line, leading into a question mark '?'.

**SMART AUGMENTED REALITY INTERACTIVE
NAVIGATION APPLICATION**



SARI NA is a mobile application built using the Flet framework. It helps new students navigate the CSPC campus using an AR-assisted guidance system paired with an interactive map and navigation feature.

FEATURES



Direction finder from current location to desired destination



Real-time AR overlay with directional arrows and distance indicators

ROLES



Student

Students can use the app to quickly find classrooms, offices, and campus facilities.



Visitor

Visitors can easily locate buildings and key campus areas without prior knowledge of the school.



Admin

Admins manage the app's building database, update map information, and oversee navigation accuracy.

USER VS ADMIN

CAPABILITY	VISITOR	CSPCEAN	ADMIN
User Authentication	✓	✓	✓
View Home Page	✓	✓	✗
Search Campus Locations	✓	✓	✗
AR Navigation	✓	✓	✗
Change Password	✓	✓	✓
View Profile	✓	✓	✓
Admin Dashboard	✗	✗	✓
User Management	✗	✗	✓
View Analytics & Reports	✗	✗	✓
Update User Roles	✗	✗	✓

TECHNOLOGY USED



CORE DEVELOPMENT



**openroute
service**

MAPPING AND IMAGE
PROCESSING



DATABASE
MANAGEMENT

SECURITY FEATURES

FEATURE	DESCRIPTION
User Authentication	Secure login/logout with email/password validation, session clearing
Password Hashing	Using bcrypt for password hashing on signup, verification, reset/change
Protection Against Credential Stuffing	5-minute lockout after failed attempts
Role-Based Access Control (RBAC	Admin, CSPCean, Visitor roles with UI and server-side enforcement
User Management (Admin)	List, delete, create users with roles
Profile Management	View and change password with rules
Data Layer	Supabase PostgreSQL database
Secure Configuration	Secrets in .env file, not hard-coded, .env.example provided
Two-Factor Authentication	Email OTP support
User Activity Monitoring	Tracking last login and failed attempts
Reporting & Analytics	Charts for usage and role distribution (admin dashboard)
Secure Password Reset	Signed time-bound token email flow (forgot password and settings)

FUTURE ENHANCEMENTS

SHORT-TERM	LONG-TERM
Real-time GPS integration for accurate user positioning	Port to native Android with ARCore support
Device camera feed integration for true AR experience	iOS version with ARKit integration
Voice navigation with text-to-speech directions	3D campus map with indoor navigation
Map-based view with building pins and route visualization	Real-time crowd density and building occupancy
Session timeout after inactivity	Multi-campus support (expansion to other universities)
Comprehensive logging and audit trail for admin actions	AI-powered chatbot for campus information
Profile picture upload and display	Integration with class schedules for auto-navigation
	Social features (share locations, meet up with friends)
	Accessibility features (screen reader support, high contrast mode)

USER INTERFACE

USER SELECTION



SIGNUP / LOGIN

SARI NA

SARI NA?

Sign Up

Login

Create an Account

Full Name

Enter your full name

Email Address

Enter your email address

Password

Enter your password

☐ Remember Me

Sign Up

SARI NA

SARI NA?

Sign Up

Login

Welcome Back!

Email Address

Enter your email address

Password

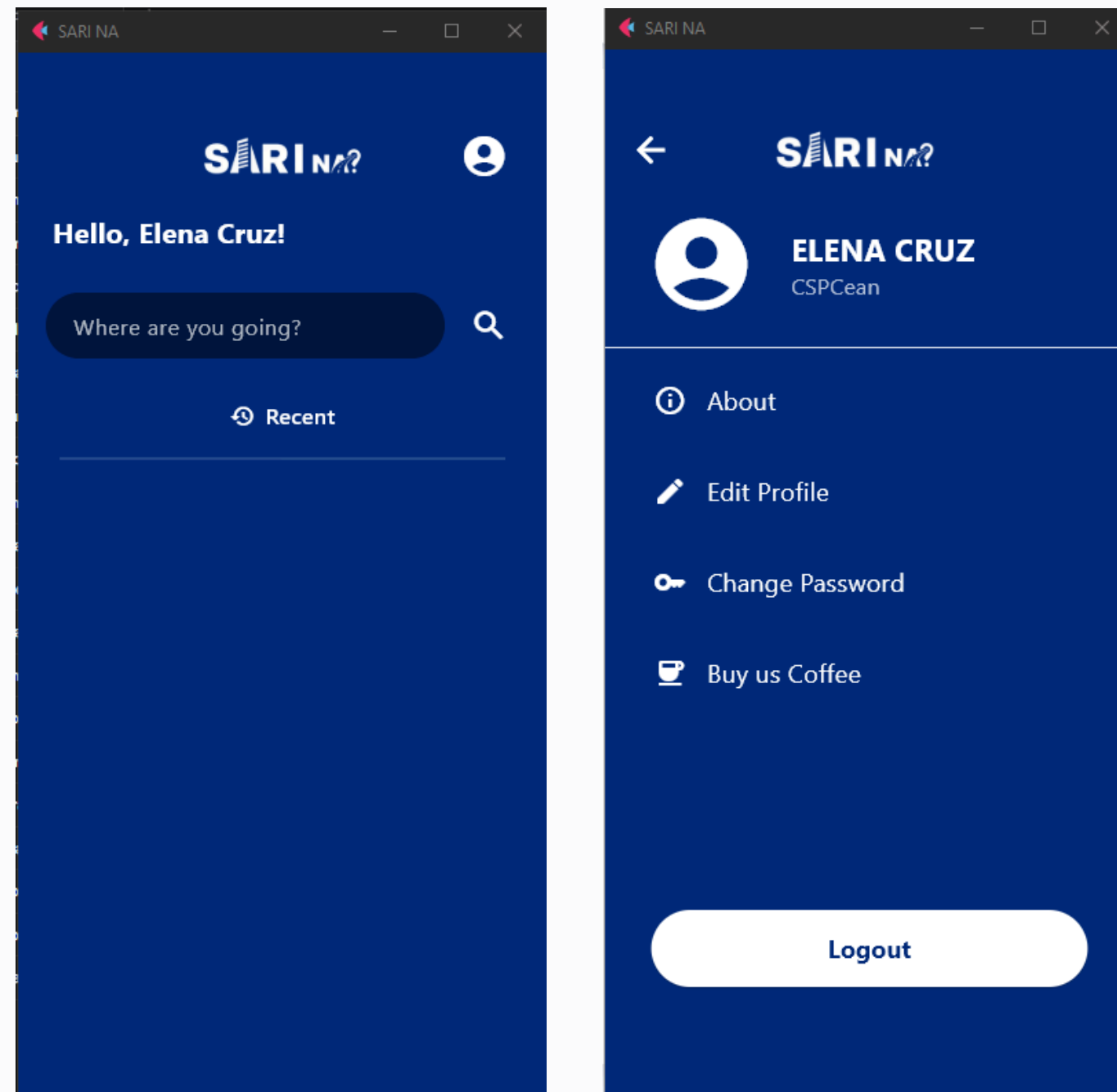
Enter your password

☐ Remember Me

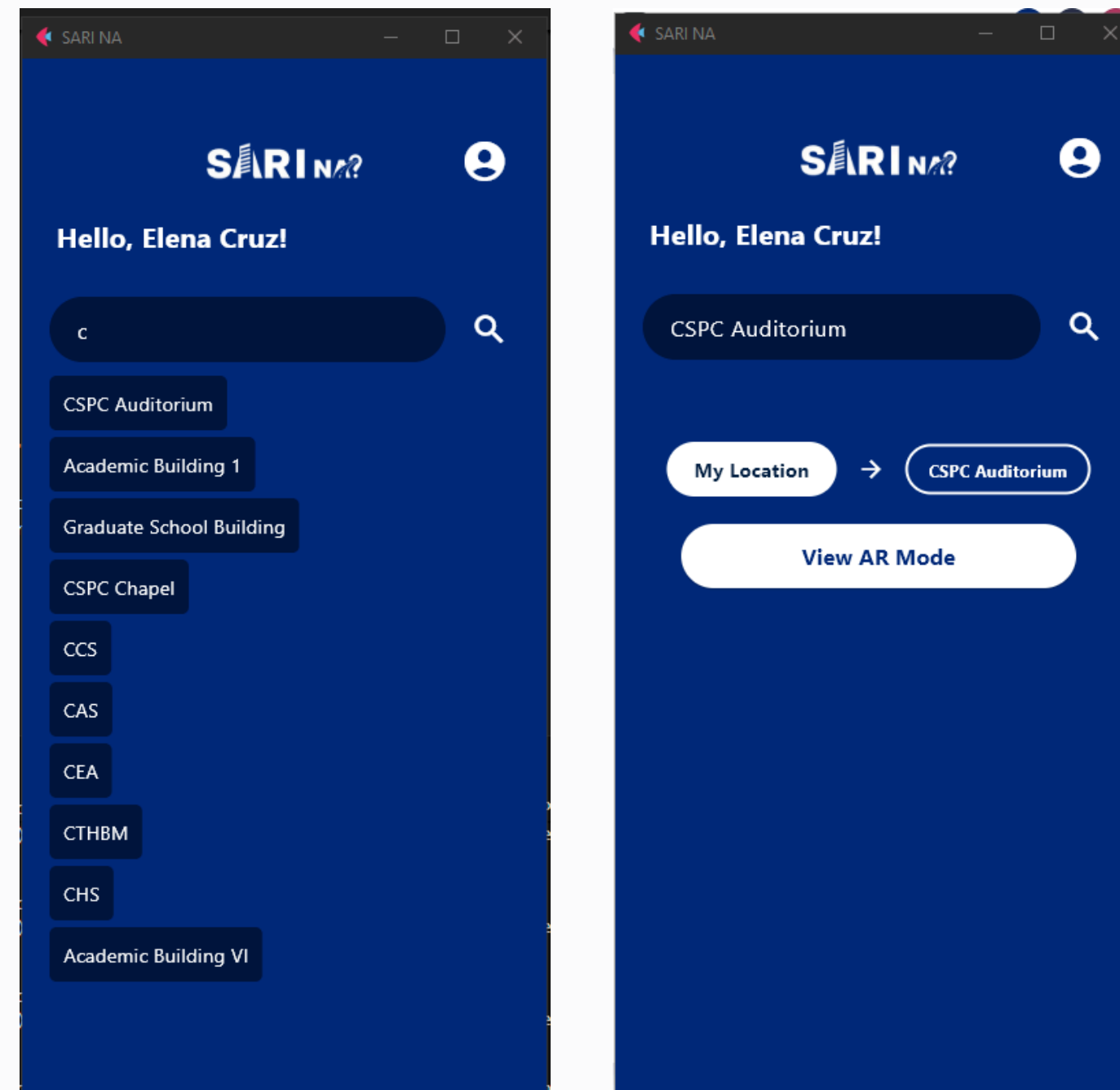
Forgot Password?

Login

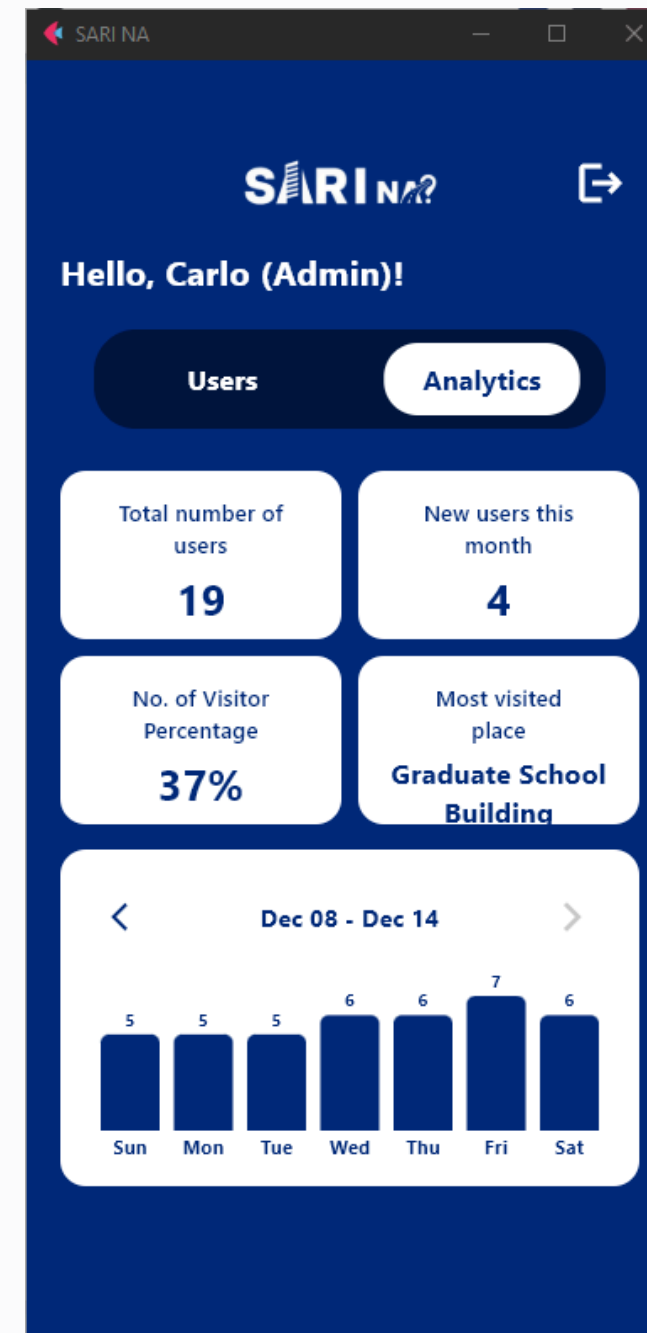
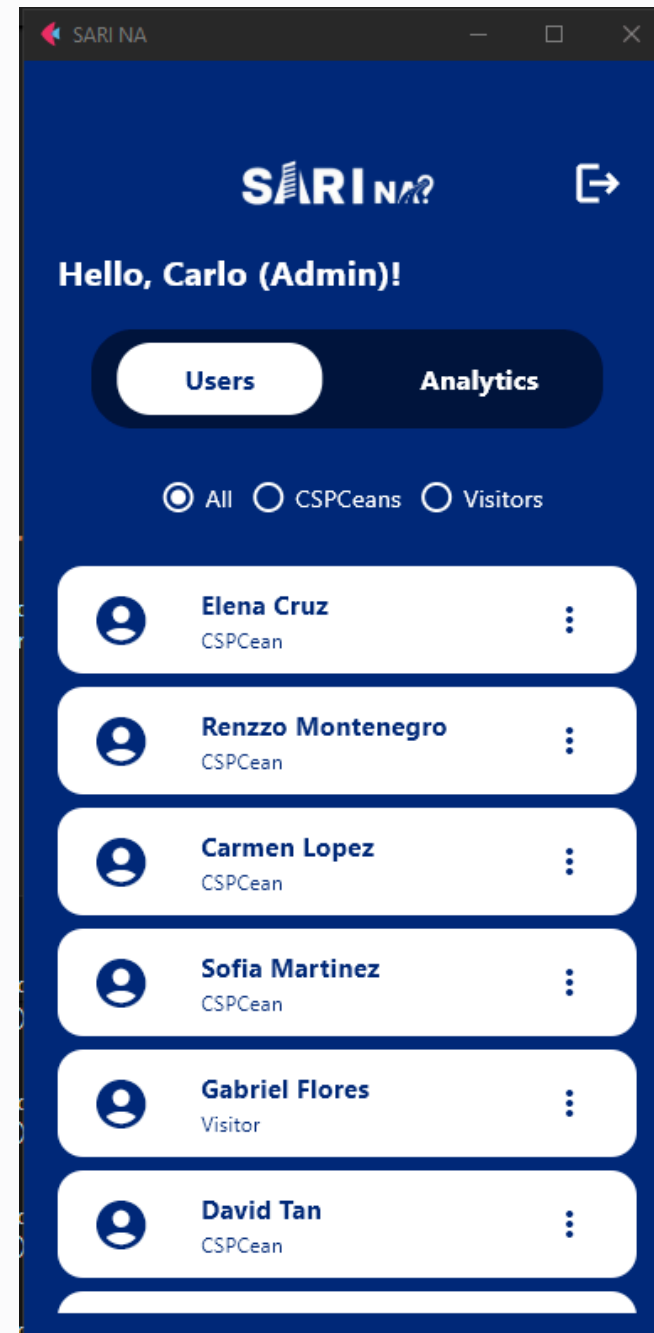
USER END



AR WAYFINDING



ADMIN END



DEMO TIME !!!