

MICHIGAN STATE

U N I V E R S I T Y

Alpha Presentation

Remote Energy Distribution Payment Platform

The Capstone Experience

Team Caxy Interactive

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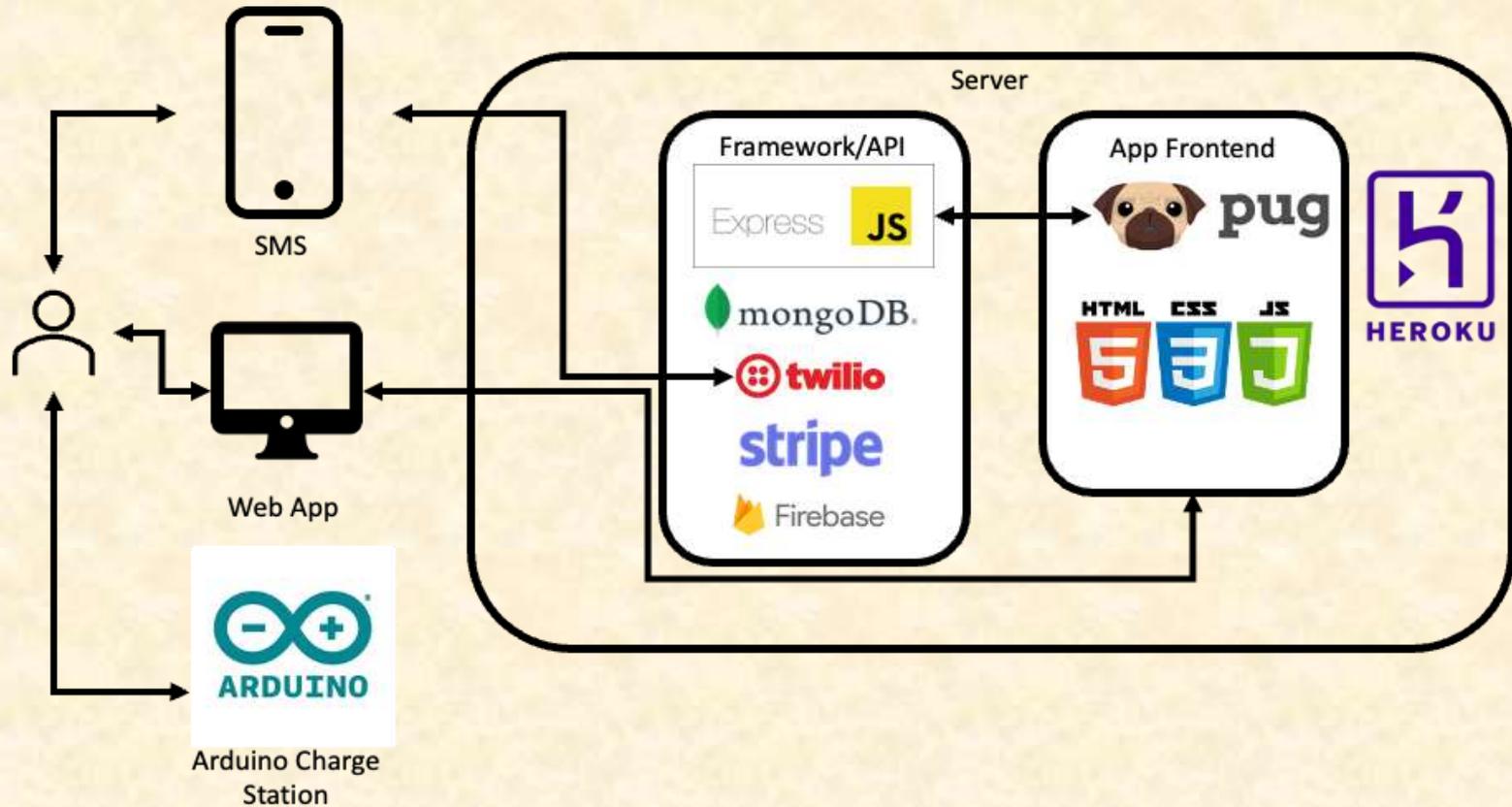
*From Students...
...to Professionals*

Project Overview

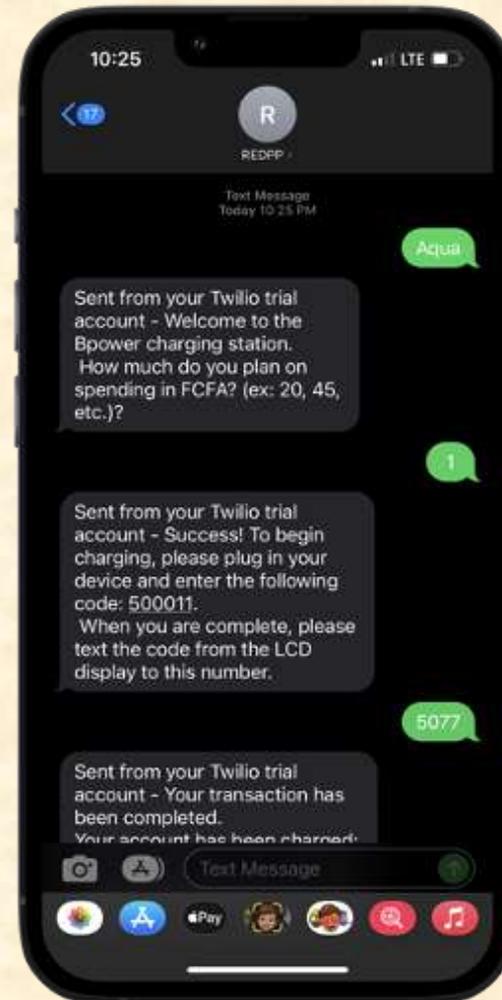
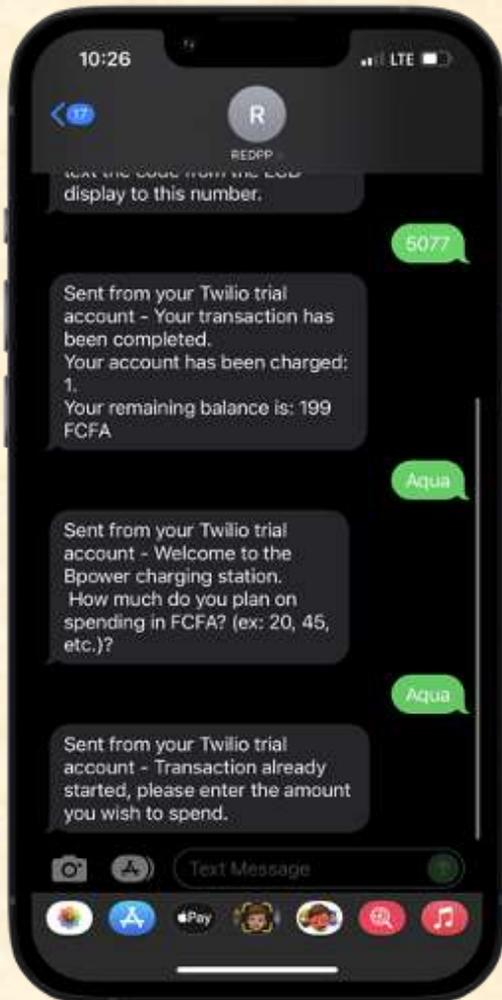
- The issue of grid electricity in Cameroon and other African nations.
 - 55% has access to the electrical grid.
 - Only 17% in rural areas.
- Off-grid energy exchange marketplace to allow for the access of reliable, off-grid electricity.
 - Phase 1 - Device Design and Prototype (Completed by FS21 ECE Capstone)
 - Phase 2 – SMS-based Payment System Design and Prototype



System Architecture



SMS Chat

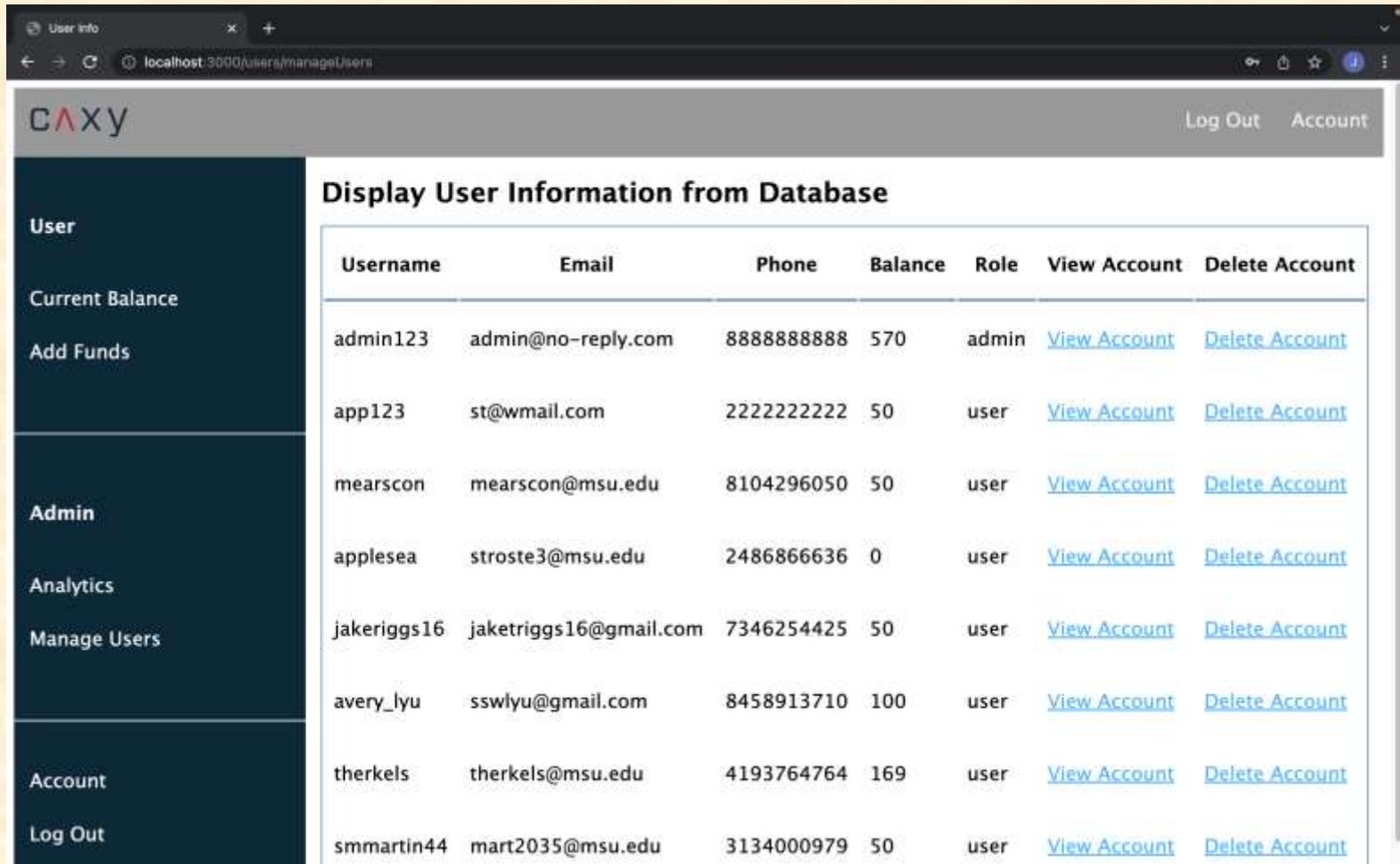


Account Balance

The screenshot shows a web browser window with the URL `localhost:3000/users/therkels/account`. The application header includes the logo "CAXY" and links for "Log Out" and "Account". A dark sidebar on the left contains navigation items: "User", "Current Balance", "Add Funds", "Admin", "Analytics", "Manage Users", "Account", and "Log Out". The main content area displays a welcome message for "therkels" with contact information: "Email: therkels@msu.edu" and "Phone: 4193764764". The "Current Balance" is prominently displayed as "169 FCFA" inside a rounded rectangle, with a "[funds+](#)" link below it. A "History" section contains a table with the following data:

Date	Charge Station	Amount (FCFA)	Energy (kWh)
02/15/22 23:31	aqua	30	100

User Information

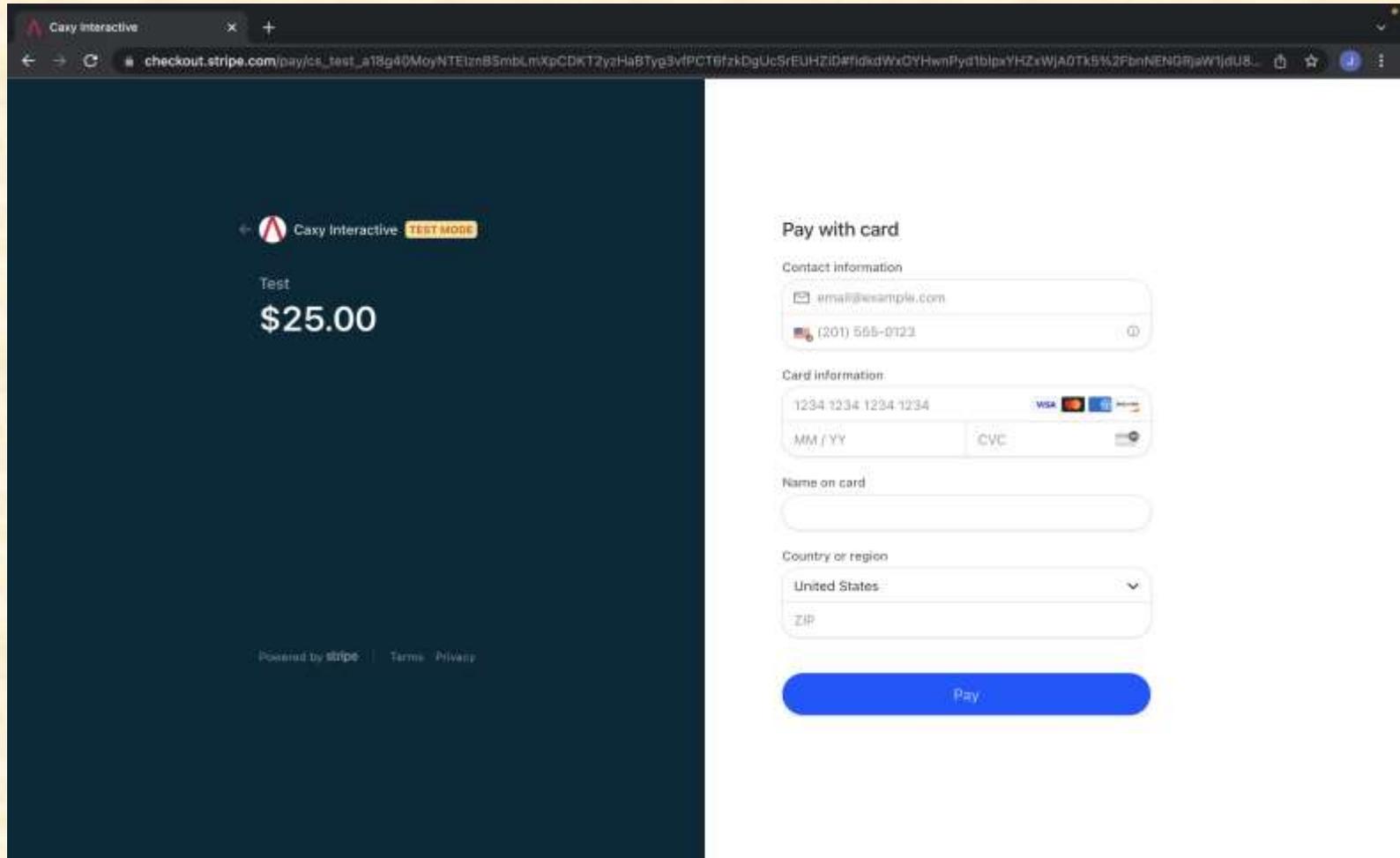


The screenshot shows a web browser window with the URL `localhost:3000/users/manageUsers`. The application header includes the logo "CAXY" and links for "Log Out" and "Account". A dark sidebar on the left contains navigation options: "User", "Current Balance", "Add Funds", "Admin", "Analytics", "Manage Users", "Account", and "Log Out". The main content area is titled "Display User Information from Database" and contains a table with the following data:

Username	Email	Phone	Balance	Role	View Account	Delete Account
admin123	admin@no-reply.com	8888888888	570	admin	View Account	Delete Account
app123	st@wmail.com	2222222222	50	user	View Account	Delete Account
mearscon	mearscon@msu.edu	8104296050	50	user	View Account	Delete Account
applesea	strost3@msu.edu	2486866636	0	user	View Account	Delete Account
jakeriggs16	jaketriggs16@gmail.com	7346254425	50	user	View Account	Delete Account
avery_lyu	sswlyu@gmail.com	8458913710	100	user	View Account	Delete Account
therkels	therkels@msu.edu	4193764764	169	user	View Account	Delete Account
smmartin44	mart2035@msu.edu	3134000979	50	user	View Account	Delete Account



Stripe Web Checkout



What's left to do?

- SMS handling
- Web application views
- Admin analytic/management controls
- Station/user communication protocol
- Generalize payments and currency translation



Questions?

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How does the SMS work?

