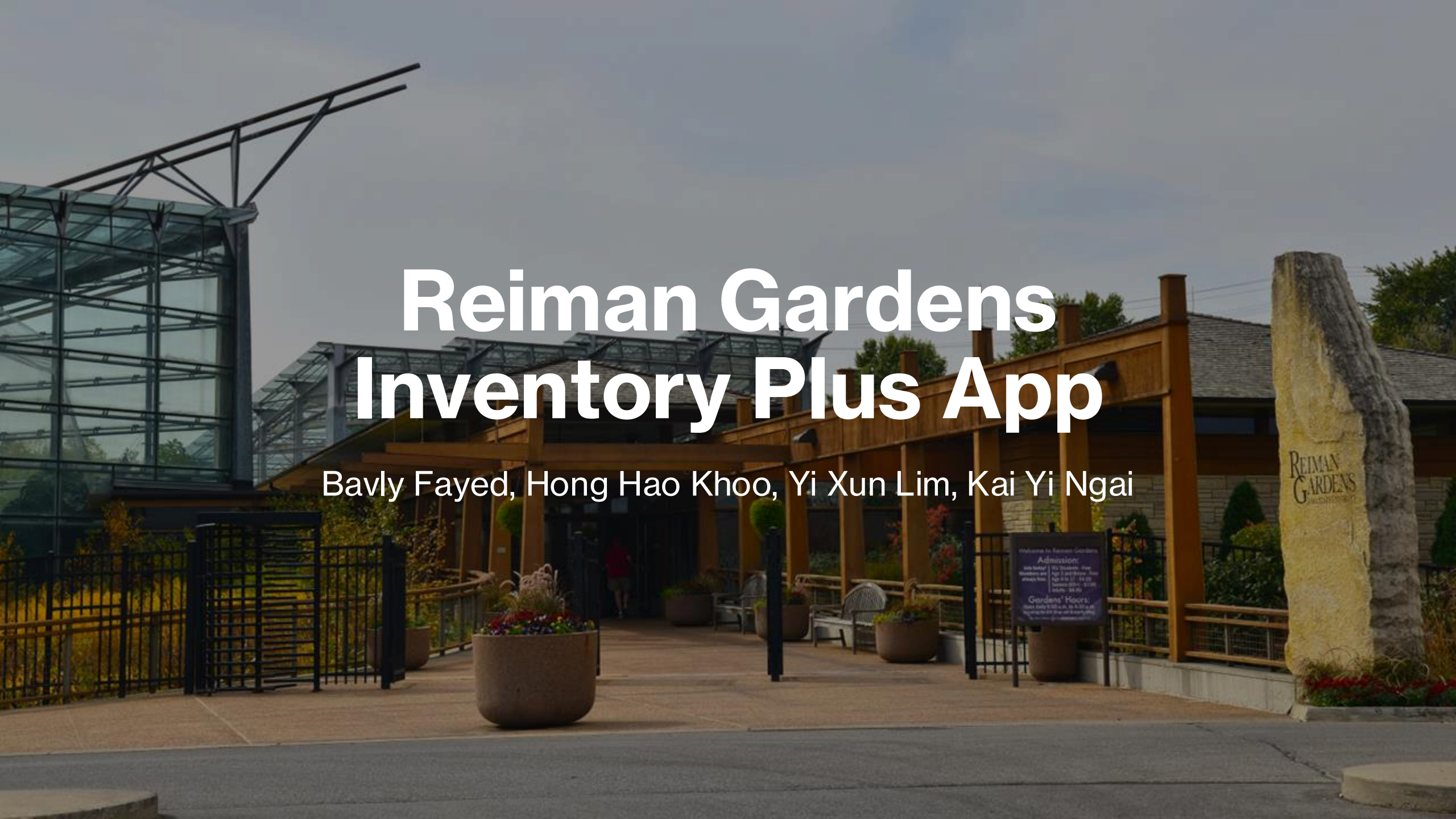
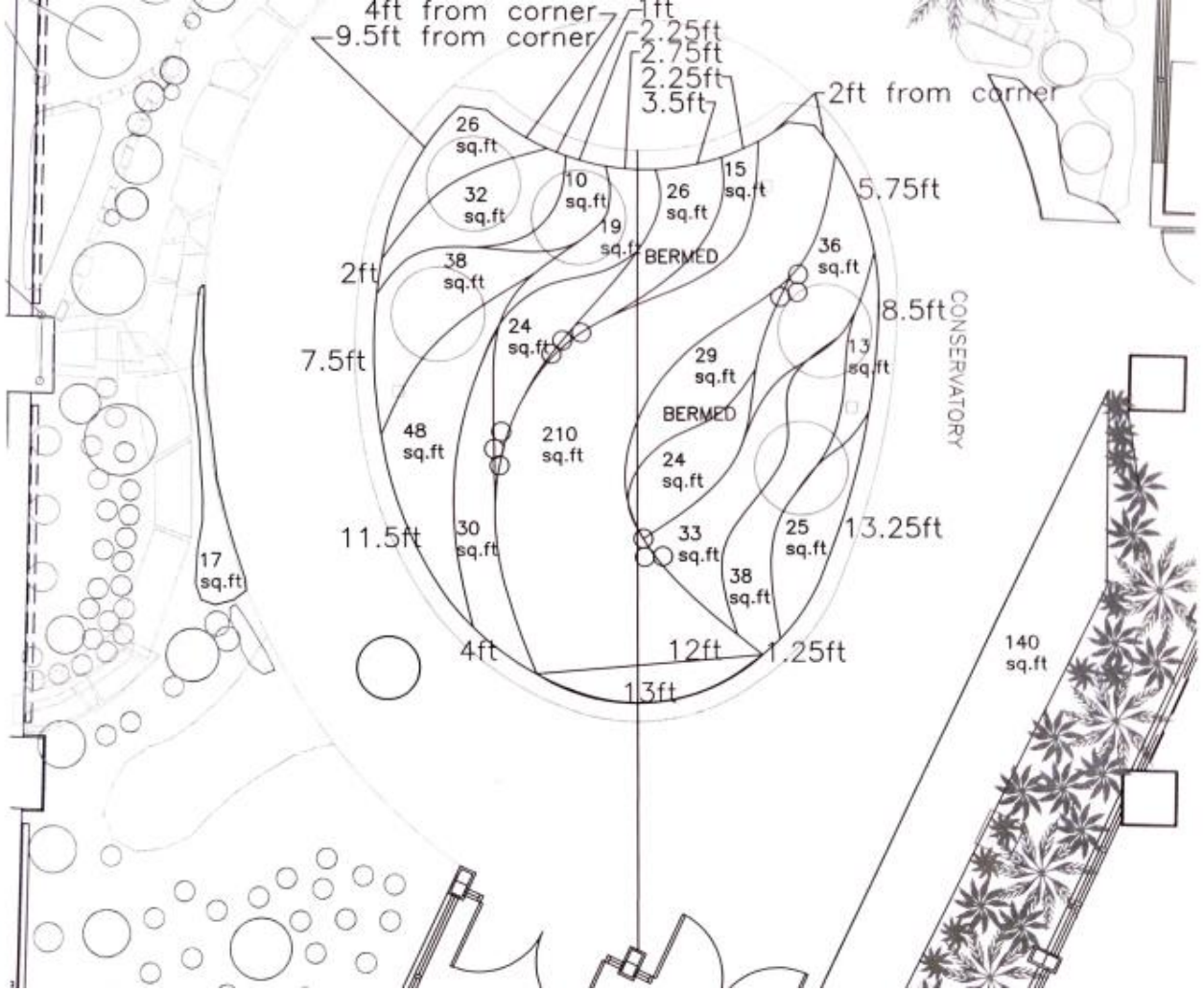
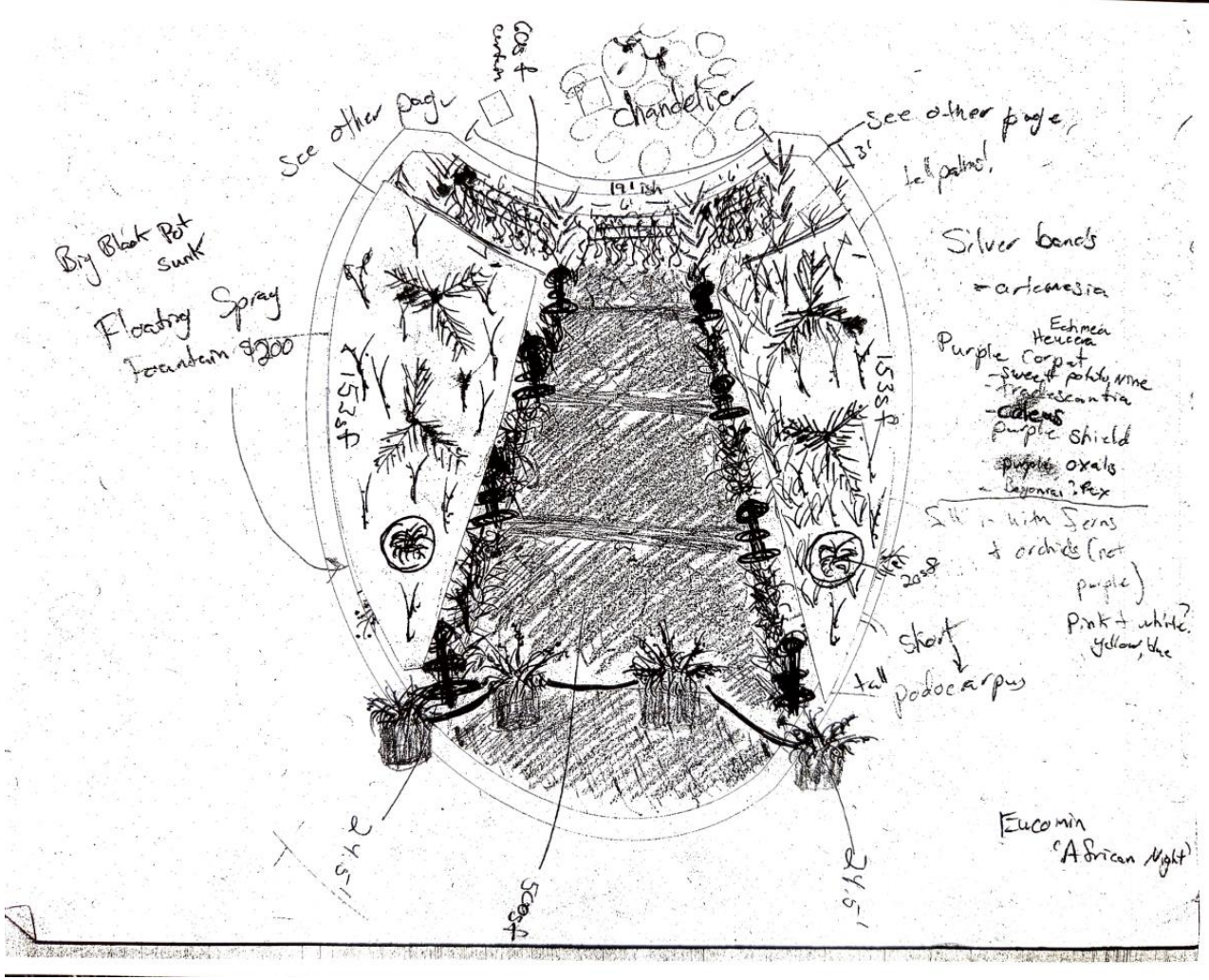


Reiman Gardens Inventory Plus App

Bavly Fayed, Hong Hao Khoo, Yi Xun Lim, Kai Yi Ngai



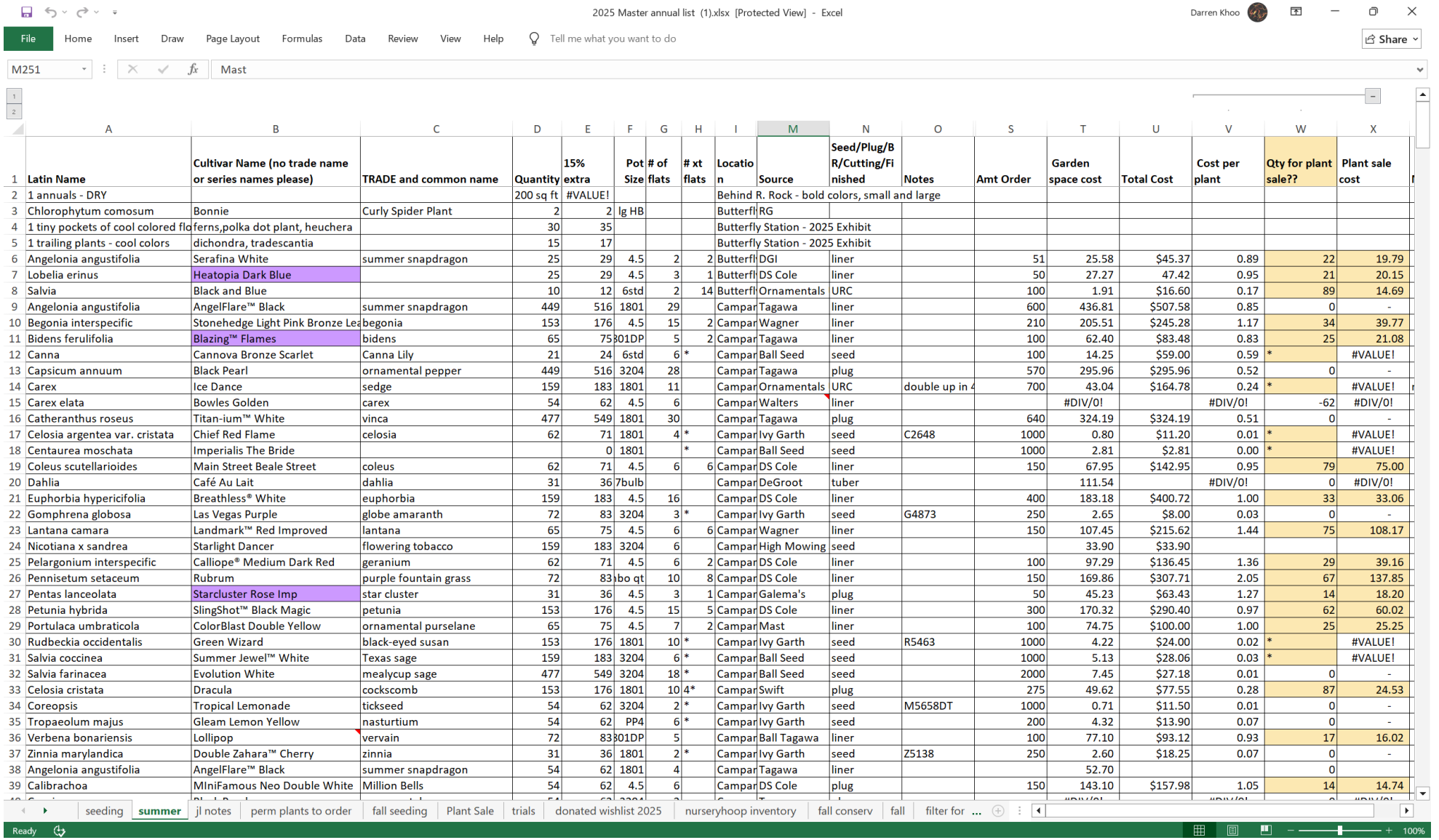


Reiman Gardens Conservatory

A project starts with the Designer



Current Data Format



2025 Master annual list (1).xlsx [Protected View] - Excel

Darren Khoo

File Home Insert Draw Page Layout Formulas Data Review View Help Tell me what you want to do Share

M251 Mast

	A	B	C	D	E	F	G	H	I	M	N	O	S	T	U	V	W	X
1	Latin Name	Cultivar Name (no trade name or series names please)	TRADE and common name	Quantity	15% extra	Pot Size	# of flats	# xt flats	Location	Source	Seed/Plug/BR/Cutting/Finished	Notes	Amt Order	Garden space cost	Total Cost	Cost per plant	Qty for plant sale??	Plant sale cost
2	1 annuals - DRY			200 sq ft	#VALUE!				Behind R. Rock - bold colors, small and large									
3	Chlorophytum comosum	Bonnie	Curly Spider Plant	2	2	lg HB			Butterfl	RG								
4	1 tiny pockets of cool colored flo	ferns,polka dot plant, heuchera		30	35				Butterfly Station - 2025 Exhibit									
5	1 trailing plants - cool colors	dichondra, tradescantia		15	17				Butterfly Station - 2025 Exhibit									
6	Angelonia angustifolia	Serafina White	summer snapdragon	25	29	4.5	2	2	Butterfl	DGI	liner		51	25.58	$45.37	0.89	22	19.79
7	Lobelia erinus	Heatopia Dark Blue		25	29	4.5	3	1	Butterfl	DS Cole	liner		50	27.27	47.42	0.95	21	20.15
8	Salvia	Black and Blue		10	12	6std	2	14	Butterfl	Ornamentals	URC		100	1.91	$16.60	0.17	89	14.69
9	Angelonia angustifolia	AngelFlare™ Black	summer snapdragon	449	516	1801	29		Campar	Tagawa	liner		600	436.81	$507.58	0.85	0	-
10	Begonia interspecific	Stonehedge Light Pink Bronze Lea	begonia	153	176	4.5	15	2	Campar	Wagner	liner		210	205.51	$245.28	1.17	34	39.77
11	Bidens ferulifolia	Blazing™ Flames	bidens	65	75	801DP	5	2	Campar	Tagawa	liner		100	62.40	$83.48	0.83	25	21.08
12	Canna	Cannova Bronze Scarlet	Canna Lily	21	24	6std	6	*	Campar	Ball Seed	seed		100	14.25	$59.00	0.59	*	#VALUE!
13	Capsicum annuum	Black Pearl	ornamental pepper	449	516	3204	28		Campar	Tagawa	plug		570	295.96	$295.96	0.52	0	-
14	Carex	Ice Dance	sedge	159	183	1801	11		Campar	Ornamentals	URC	double up in 4	700	43.04	$164.78	0.24	*	#VALUE!
15	Carex elata	Bowles Golden	carex	54	62	4.5	6		Campar	Walters	liner			#DIV/0!		#DIV/0!	-62	#DIV/0!
16	Catheranthus roseus	Titan-ium™ White	vinca	477	549	1801	30		Campar	Tagawa	plug		640	324.19	$324.19	0.51	0	-
17	Celosia argentea var. cristata	Chief Red Flame	celosia	62	71	1801	4	*	Campar	Ivy Garth	seed	C2648	1000	0.80	$11.20	0.01	*	#VALUE!
18	Centaurea moschata	Imperialis The Bride			0	1801		*	Campar	Ball Seed	seed		1000	2.81	$2.81	0.00	*	#VALUE!
19	Coleus scutellarioides	Main Street Beale Street	coleus	62	71	4.5	6	6	Campar	DS Cole	liner		150	67.95	$142.95	0.95	79	75.00
20	Dahlia	Café Au Lait	dahlia	31	36	7bulb			Campar	DeGroot	tuber			111.54		#DIV/0!	0	#DIV/0!
21	Euphorbia hypericifolia	Breathless® White	euphorbia	159	183	4.5	16		Campar	DS Cole	liner		400	183.18	$400.72	1.00	33	33.06
22	Gomphrena globosa	Las Vegas Purple	globe amaranth	72	83	3204	3	*	Campar	Ivy Garth	seed	G4873	250	2.65	$8.00	0.03	0	-
23	Lantana camara	Landmark™ Red Improved	lantana	65	75	4.5	6	6	Campar	Wagner	liner		150	107.45	$215.62	1.44	75	108.17
24	Nicotiana x sandrea	Starlight Dancer	flowering tobacco	159	183	3204	6		Campar	High Mowing	seed			33.90	$33.90			
25	Pelargonium interspecific	Calliope® Medium Dark Red	geranium	62	71	4.5	6	2	Campar	DS Cole	liner		100	97.29	$136.45	1.36	29	39.16
26	Pennisetum setaceum	Rubrum	purple fountain grass	72	83	bo qt	10	8	Campar	DS Cole	liner		150	169.86	$307.71	2.05	67	137.85
27	Pentas lanceolata	Starcluster Rose Imp	star cluster	31	36	4.5	3	1	Campar	Galema's	plug		50	45.23	$63.43	1.27	14	18.20
28	Petunia hybrida	SlingShot™ Black Magic	petunia	153	176	4.5	15	5	Campar	DS Cole	liner		300	170.32	$290.40	0.97	62	60.02
29	Portulaca umbraticola	ColorBlast Double Yellow	ornamental purselane	65	75	4.5	7	2	Campar	Mast	liner		100	74.75	$100.00	1.00	25	25.25
30	Rudbeckia occidentalis	Green Wizard	black-eyed susan	153	176	1801	10	*	Campar	Ivy Garth	seed	R5463	1000	4.22	$24.00	0.02	*	#VALUE!
31	Salvia coccinea	Summer Jewel™ White	Texas sage	159	183	3204	6	*	Campar	Ball Seed	seed		1000	5.13	$28.06	0.03	*	#VALUE!
32	Salvia farinacea	Evolution White	mealycup sage	477	549	3204	18	*	Campar	Ball Seed	seed		2000	7.45	$27.18	0.01	0	-
33	Celosia cristata	Dracula	cockscomb	153	176	1801	10	4*	Campar	Swift	plug		275	49.62	$77.55	0.28	87	24.53
34	Coreopsis	Tropical Lemonade	tickseed	54	62	3204	2	*	Campar	Ivy Garth	seed	M5658DT	1000	0.71	$11.50	0.01	0	-
35	Tropaeolum majus	Gleam Lemon Yellow	nasturtium	54	62	PP4	6	*	Campar	Ivy Garth	seed		200	4.32	$13.90	0.07	0	-
36	Verbena bonariensis	Lollipop	vervain	72	83	801DP	5		Campar	Ball Tagawa	liner		100	77.10	$93.12	0.93	17	16.02
37	Zinnia marylandica	Double Zahara™ Cherry	zinnia	31	36	1801	2	*	Campar	Ivy Garth	seed	Z5138	250	2.60	$18.25	0.07	0	-
38	Angelonia angustifolia	AngelFlare™ Black	summer snapdragon	54	62	1801	4		Campar	Tagawa	liner			52.70			0	
39	Calibrachoa	MIniFamous Neo Double White	Million Bells	54	62	4.5	6		Campar	DS Cole	plug		150	143.10	$157.98	1.05	14	14.74

seeding | summer | jl notes | perm plants to order | fall seeding | Plant Sale | trials | donated wishlist 2025 | nurseryhoop inventory | fall conserv | fall | filter for ...

Ready 100%

Problem Being Addressed

- Data format, organization, and modifiability
- Separation of user responsibilities and permissions
- Formatted statistics report of data
- Manual data input being too time consuming
- Project states
- Platform restriction to computer only

Project Goals

01

Improve communication of project states between employees

02

Reduce time taken to input and manage data

03

Allow employees to work from anywhere (e.g. Greenhouse, Outdoor Nursery)

Proposed approach & solution

What the system is?

- Internal tools for Reiman Garden staff and students
- Tracks plant orders and inventory across years.
- Replaces spreadsheets (One shared set of records)

Workflows

- Designer (Fill up the ordering for plants)
- Production (Refer to the order form and order)
- Student (View inventory for plants)
- Admin (Manages accounts and oversees everything)



How access is controlled



- Admin approves accounts and assigns roles.
- Sessions, so access can be revoked immediately.

Tools

- Angular
- Spring Boot
- SQL Server

Microsoft
SQL Server 2025

Team Progress



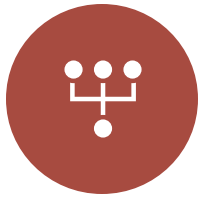
Requirements Defined – Identified core inventory, ordering, and staff workflow requirements.



Database Established – Created the initial SQL Server database and data structure.



Application Structure Set Up – Angular frontend and Spring Boot backend are running and communicating.



Development Divided – Team members are developing separate features in parallel.



Integration Started – Individual features are beginning to connect with the shared backend and database.

Current Prototype

Login & Signup
Allows users to create accounts and securely access the application.

Admin Panel
Provides administrative tools for managing users and application access.

Dashboard
Displays an overview of important information, including projects, plant inventory, pending orders, and incoming shipments.

Inventory Grid
Displays plant inventory in a centralized, database-backed grid for viewing and managing inventory data.

Challenges and Solutions

- Challenge: Integrating multiple technologies

----> Solution: Establish a clear connection between Angular, Spring Boot, and SQL Server through REST APIs.

- Challenge: Replacing a complex Excel based workflow

----> Solution: Designed an editable grid interface that keeps the flexibility staff are familiar with while improving organization and accessibility.

- Challenge: Supporting different staff responsibilities

----> Solution: Designed the system around user roles, permissions, and approval workflows so each user can access the functions relevant to their job.

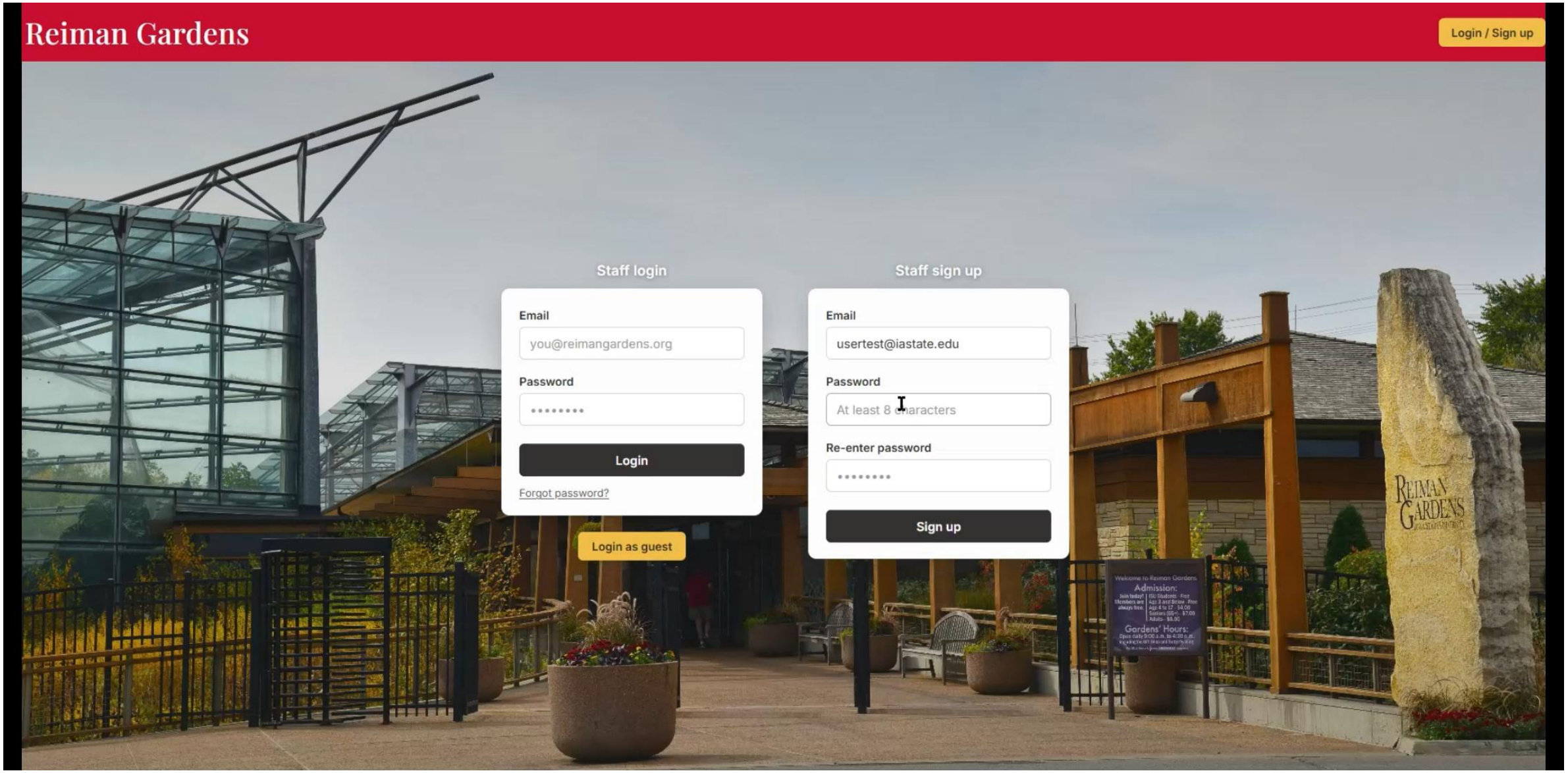
- Challenge: Keeping the application flexible for future needs

----> Solution: Used a modular architecture so new reports, fields, workflows, and features can be added without rebuilding the system.

Remaining Work/Future plan

- Connect the editable inventory grid directly to the Spring Boot API and SQL Server database.
- Complete Create, Update, and Delete functionality for inventory and project records.
- Implement user authentication, roles, permissions, and request approval workflows.
- Add Excel import/export for existing Reiman Gardens data.
- Complete additional features including production notes, planting lists, search/filtering, and reporting.

Demo Video


Reiman Gardens
Login / Sign up
Staff login
Email
you@reimangardens.org
Password
Login
Forgot password?
Login as guest
Staff sign up
Email
usertest@iastate.edu
Password
At least 8 characters
Re-enter password
Sign up
Admission:
Gardens' Hours:
REIMAN GARDENS

Thank you!

Any Questions?