

Commonalities and Variabilities

When prioritizing the features and modules used in each application, we created the following document at the suggestion of Dr. Ringholz. It defines all uses for the modules we created to show the reusability of each component.

Module	Behavior	Type (UI, Backend, etc)	Tech/Language	Application(s)
Weather	Retrieves up to ten days of weather data on location described by zip code and displays the data	UI and Backend	Android	Refrigerator, HVAC, Dishwasher, Oven, Microwave, Washer, Dryer, more
Statistics Graphing	Creates bar graphs to display energy usage, water usage, or other statistics associated with appliances	UI	Java / Android	Washer, Dryer, Dishwasher, Oven, Microwave, Refrigerator, HVAC, more
Maintenance Guide	Reviews instructions on appliance maintenance	UI and Backend	Android	HVAC, Washer, Dryer, Fridge, Oven, Microwave, Dishwasher, more
Preference/State	Saves/Recalls variable state	Backend	Android - Shared Preferences	HVAC, Washer, Dryer, Fridge, Oven, Microwave, Dishwasher, more
Database	Stores query-able data	Backend	SQLite / Java	Washer, Dryer, Dishwasher, Oven, Microwave, Refrigerator, HVAC, more
Auto-complete Search	Searches database	UI and Backend	Android	Washer, Dryer, Dishwasher, Oven, Microwave, Refrigerator, HVAC, more
Timer	Shows a countdown timer	UI	Android - CountdownTimer	Washer, Dryer, Dishwasher, Oven, Microwave, Refrigerator, more

Wash Progress	Shows progress of wash cycle	UI	Android	Washer, Dryer, Dishwasher, Oven, Microwave, more
Scheduling	Set times and events, scheduling, trigger events	UI, Frontend, Backend	Java / Android	Dishwasher, Oven, Refrigerator, HVAC, more
Dial Selector	Selects from a list of options, use center as a button	UI	Java	Washer, Dryer, Oven, Dishwasher
Stain Guide	Reviews instructions on removing stains from a variety of fabrics	UI and Backend	Android	Washer