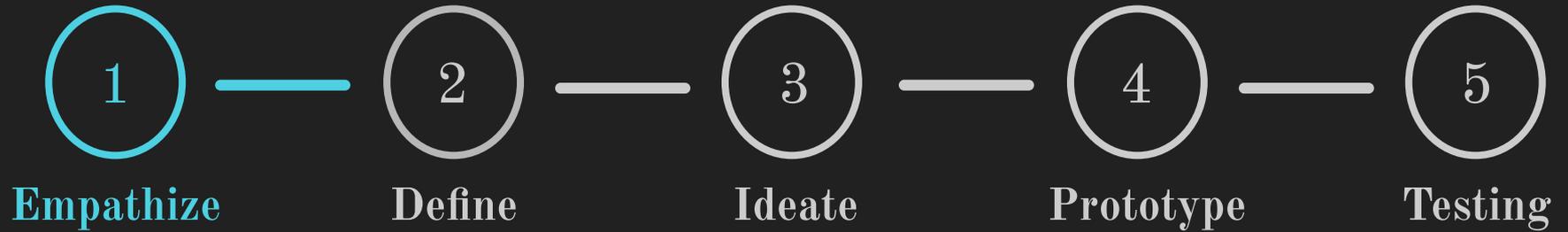


Drone Delivery Service

Android App Customer UI

Group 12-United Ottawa

Empathize



Empathize - Initial Client Meeting

- Simple, user friendly and modern
- 3 essential features: [list of restaurants](#), [shopping cart](#), and [map](#)
- Also liked the idea of a [star rating survey](#) and [FAQ page](#)



We translated this information into a list of interpreted needs...

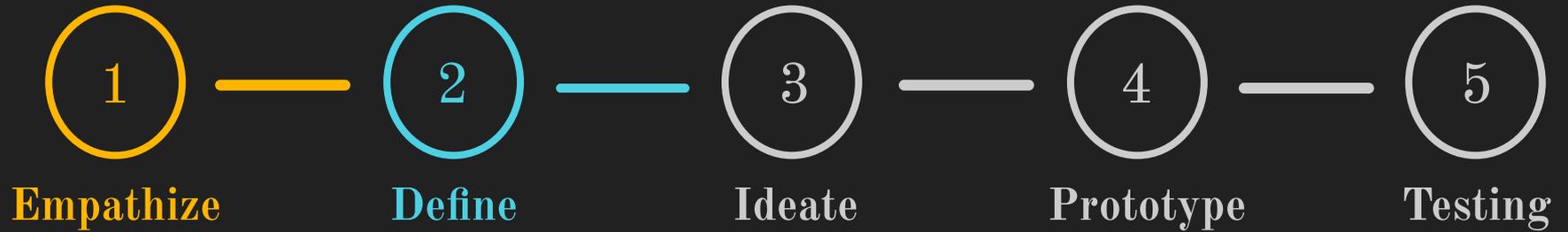
Empathize - Benchmarking

Food delivery service	UberEats	SkipTheDishes	DoorDash
Company	Uber Technologies, Inc.	SkipTheDishes Restaurant Services Inc.	DoorDash Inc.
App Size	~230 MB	~70 MB	~95 MB
GPS-Tracking	Gurafu and Flux	-	Galton (built on OSRM and concaveman)
Coding Language	Python, Node.js, Go, and Java	Java	Kotlin and Java
Average Star Rating (iOS)	4.6/5	4.6/5	4.6/5

Empathize - Needs Identification

Priority Rank	Need
1	List of restaurants and menu items
1	Map showing location updates
1	Shopping Cart
2	Login and Create your Profile
3	Star-Rating and Customer review
4	Food Categorized by Cuisine
5	Function to “favourite” restaurants, and make recommendations
6	A button to confirm the food has been delivered
7	Frequently asked questions
8	Option to report a food/delivery issue
9	Alert function if there is an issue with delivery
10	Accessibility features
11	Offer app in another language

Define



Define - Problem Statement

Jamz drone delivery service requires an **user-friendly app** that will allow customers in **rural areas** to easily order food through an online interface. It should allow the customer to **customize their profile, view a variety of restaurants, select the food options they want, and track their order in real-time with ease.**



Define - Design Criteria

Priority Rank	Need	Design Criteria
1	List of restaurants and menu items	-Include API for restaurant listing within a specific radius. -Efficient -Screen size
1	Map showing location updates	-Include API for location tracking (Using Google Maps for Android or Core Location Framework for iOS). -Screen size
1	Shopping Cart	-Function to allow users to select items for purchase -User friendly -Screen size
2	Login and Create your Profile	-Offer login via email, Google, Facebook, etc. -Latencies
3	Star-Rating and Customer review	-Connects customer to the business and delivery service -Screen size

Define - Design Criteria

Priority Rank	Need	Design Criteria
4	Food Categorized by Cuisine	-User friendly -Efficient -Screen size
5	Function to “favourite” restaurants, and make recommendations	-Personalizable -User friendly -Screen size
6	A button to confirm the food has been delivered	-Connects customer to the business and delivery service
7	Frequently asked questions	-User friendly
8	Option to report a food/delivery issue	-Connects customer to the business and delivery service
9	Alert function if there is an issue with delivery	-Connects customer to the business and delivery service
10	Accessibility features	-User friendly -Accessible
11	Offer app in another language	-User friendly -Accessible

Define - Target Specifications

	Design Specifications	Relation	Value	Units	Verification Methods
Functional Requirements					
1	Include API for restaurant listing within a specific radius.	<	10	km	Test
2	Include API for location tracking.	=	yes	N/A	Test
3	Function to allow users to select items for purchase.	=	yes	N/A	Test
4	Offer login via email, Google, Facebook, etc.	=	yes	N/A	Analysis
5	Connects customers to the business and delivery service.	=	yes	N/A	Test
6	Able to plug into the backend framework.	=	yes	N/A	Test

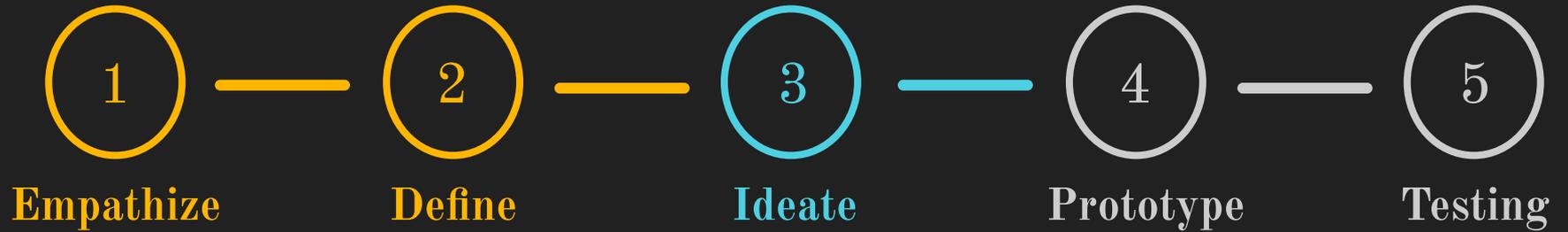
Define - Target Specifications

	Design Specifications	Relation	Value	Units	Verification Methods
Non-Functional Requirements					
1	Aesthetic	=	yes	N/A	Test
2	User friendly	=	yes	N/A	Test
3	Efficient	=	yes	N/A	Test
4	Personalizable	=	yes	N/A	Test
5	Accessible	=	yes	N/A	Test
6	Buildable	=	yes	N/A	Analysis

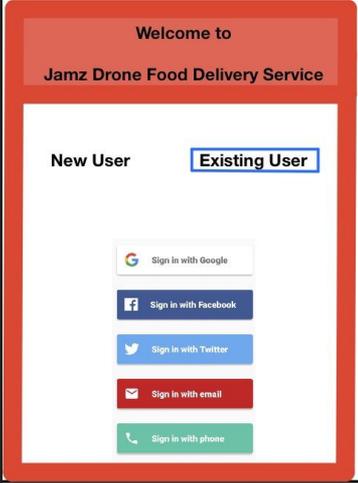
Define - Target Specifications

	Design Specifications	Relation	Value	Units	Verification Methods
Constraints					
1	Cost	<	100	\$	Estimate, final check
2	App Size	<	100	MB	Analysis
3	Screen size	<	3	Inches	Test
4	Latencies	<	10	Seconds	Test

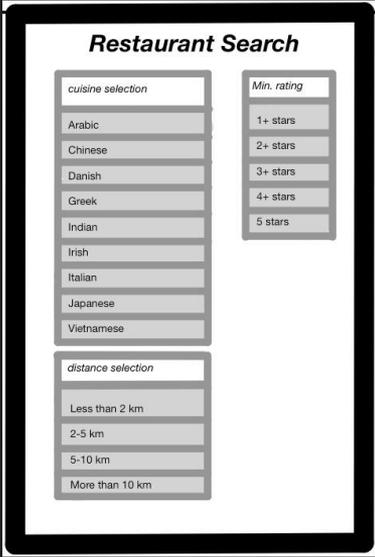
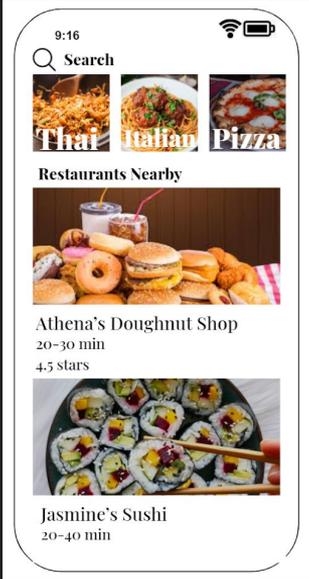
Ideate



Ideate - Log-in Page

Idea	A	B	C
Image			

Ideate - Restaurant List

Idea	A	B	C
Image	 <p>Restaurant Search</p> <p><i>cuisine selection</i></p> <ul style="list-style-type: none">ArabicChineseDanishGreekIndianIrishItalianJapaneseVietnamese <p><i>Min. rating</i></p> <ul style="list-style-type: none">1+ stars2+ stars3+ stars4+ stars5 stars <p><i>distance selection</i></p> <ul style="list-style-type: none">Less than 2 km2-5 km5-10 kmMore than 10 km	 <p>9:16</p> <p>Search</p> <p>Thai Italian Pizza</p> <p>Restaurants Nearby</p> <p>Athena's Doughnut Shop 20-30 min 4.5 stars</p> <p>Jasmine's Sushi 20-40 min</p>	 <p>9:16</p> <p>Search</p> <p>Thai Italian Pizza Sushi Fast Food Mexican Pub Food Vegan Spanish Middle Eastern</p>

Ideate - Menu Design

Idea	A	B	C
Image	 <p>9:16</p> <p>Back Search</p> <p>Jasmine's Pizza Shop</p> <ul style="list-style-type: none">AppetizersPizzaSandwichesBeveragesDessertsRestaurant Reviews <p>View Cart</p>	 <p>9:16</p> <p>Back Search</p> <p>Jasmine's Pizza Shop</p> <ul style="list-style-type: none">Classic Cheese Pizza Your favourite dough with mix of four cheeses. \$15 Contains Gluten and DairyPepperoni Pizza Classic cheese pizza with real pepperoni. \$15 Contains Gluten and DairyVeggie Pizza Classic cheese with an assortment of veggies. \$15 Contains Gluten and DairySeven Cheese Pizza EXTRA EXTRA Cheesy. <p>View Cart</p>	 <p>9:16</p> <p>Back Search</p> <p>Pizza Sandwiches Salads Beverages</p> <p>Jasmine's Pizza Shop</p> <ul style="list-style-type: none">Classic Cheese Pizza Your favourite dough with mix of four cheeses. \$15 Contains Gluten and DairyPepperoni Pizza Classic cheese pizza with real pepperoni. \$15 Contains Gluten and DairyVeggie Pizza Classic cheese with an assortment of veggies. \$15 Contains Gluten and DairySeven Cheese Pizza <p>View Cart</p>

Ideate - Item Order Page

Idea	A	B	C
Image	 <p>9:16</p> <p>Jasmine's Salad Bar</p>  <p>Lemon Chicken Wrap Combo - \$15.99</p> <p>Side Item (required): Garden Salad <input type="checkbox"/> Medium French Fries <input checked="" type="checkbox"/> Medium Sweet Potato Fries <input type="checkbox"/></p> <p>Drink (required): Bottled water <input type="checkbox"/> Orange juice <input checked="" type="checkbox"/> Milk <input type="checkbox"/></p> <p>Important Instructions: -No tomatoes</p> <p>Add to cart</p>	 <p>9:16</p> <p>Jasmine's Salad Bar</p> <p>Lemon Chicken Wrap Combo</p> <p>Side Item (required): Garden Salad <input type="checkbox"/> Medium French Fries <input checked="" type="checkbox"/> Medium Sweet Potato Fries <input type="checkbox"/></p> <p>Drink (required): Bottled water <input type="checkbox"/> Orange juice <input checked="" type="checkbox"/> Milk <input type="checkbox"/></p> <p>Important Instructions: -No Tomatoes</p> <p>Add to cart</p>	 <p>9:16</p> <p>Jasmine's Salad Bar</p>  <p>Lemon Chicken Wrap Combo - \$15.99</p> <p>Side Item: Garden Salad <input type="checkbox"/> Medium French Fries <input type="checkbox"/> Medium Sweet Potato Fries <input type="checkbox"/></p> <p>Drinks: Bottled water <input type="checkbox"/> Orange juice <input type="checkbox"/> Milk <input type="checkbox"/></p> <p>Side Item and Drink + Important Instructions(Fill in): Medium Sweet Potato fries Orange juice No tomatoes</p> <p>Add to cart</p>

Ideate - Shopping Cart

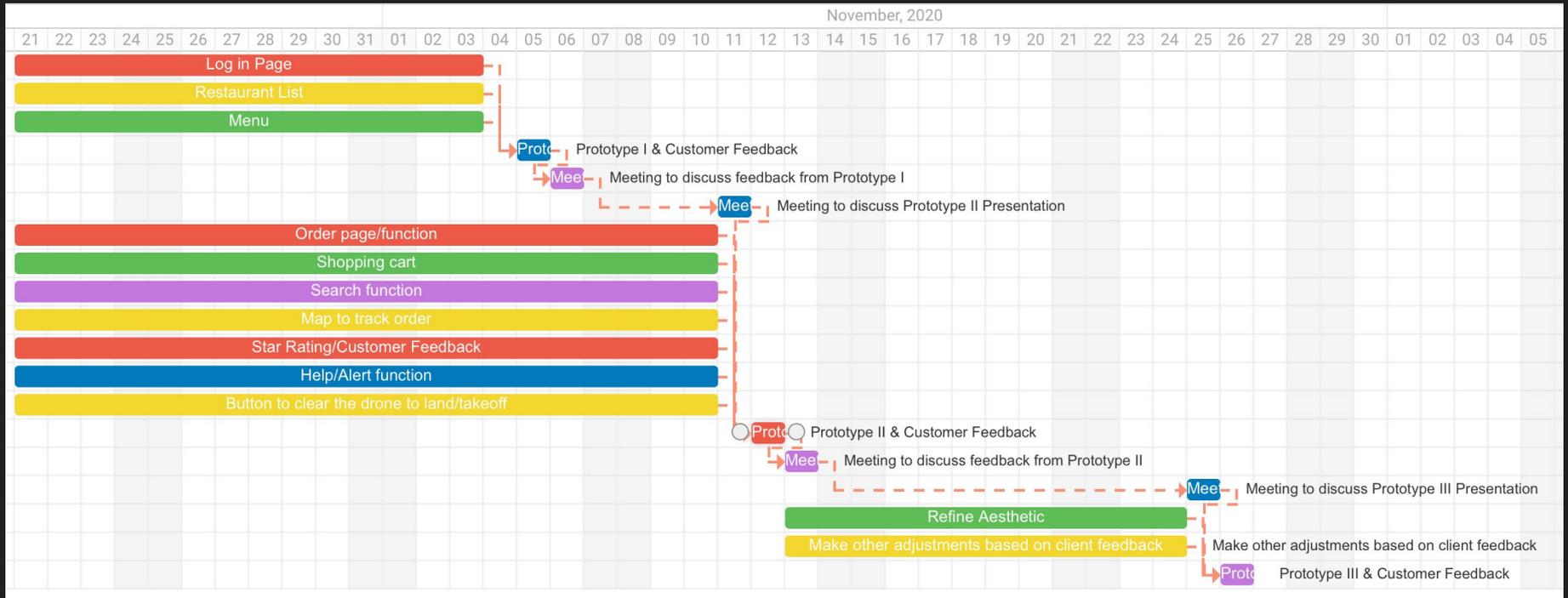
Idea	A	B	C																																								
Image	<p data-bbox="531 464 637 480">Your order</p>  <table data-bbox="569 573 743 715"><tr><td>Big Mac</td><td>\$5.69</td></tr><tr><td>No onions</td><td></td></tr><tr><td>Extra cheese</td><td>+ \$0.50</td></tr><tr><td>Tax</td><td>+ \$0.80</td></tr><tr><td>Delivery fee</td><td>+ \$1.00</td></tr><tr><td>Total</td><td>\$7.99</td></tr></table> <p data-bbox="521 879 627 911">Place Order</p>	Big Mac	\$5.69	No onions		Extra cheese	+ \$0.50	Tax	+ \$0.80	Delivery fee	+ \$1.00	Total	\$7.99	<p data-bbox="946 485 1130 502">Please Confirm Your Order</p>  <table data-bbox="1014 589 1188 748"><tr><td>From McDonald's</td><td></td></tr><tr><td>Big Mac</td><td>^</td></tr><tr><td>Extra lettuce</td><td></td></tr><tr><td>Extra cheese</td><td></td></tr><tr><td>No mayo</td><td></td></tr><tr><td>No mustard</td><td></td></tr><tr><td>Taxes and delivery</td><td>\$1.80</td></tr><tr><td>Total</td><td>\$7.99</td></tr></table> <p data-bbox="985 879 1110 911">Confirm Order</p>	From McDonald's		Big Mac	^	Extra lettuce		Extra cheese		No mayo		No mustard		Taxes and delivery	\$1.80	Total	\$7.99	<p data-bbox="1429 480 1593 496">Selected Order</p>  <table data-bbox="1468 595 1671 758"><tr><td>1 Big Mac Combo</td><td>\$5.99</td></tr><tr><td>No onions</td><td></td></tr><tr><td>2 Reg M&M McFlurry</td><td>\$6.78</td></tr><tr><td>Delivery fee</td><td>\$1.50</td></tr><tr><td>Tax</td><td>\$1.66</td></tr><tr><td>Total</td><td>\$15.93</td></tr></table> <p data-bbox="1333 737 1439 769">Delivery time: 20-30 minutes</p> <p data-bbox="1458 879 1564 911">Place</p>	1 Big Mac Combo	\$5.99	No onions		2 Reg M&M McFlurry	\$6.78	Delivery fee	\$1.50	Tax	\$1.66	Total	\$15.93
Big Mac	\$5.69																																										
No onions																																											
Extra cheese	+ \$0.50																																										
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Delivery fee	\$1.50																																										
Tax	\$1.66																																										
Total	\$15.93																																										

Ideate - Map

Idea	A	B	C
API	TomTom's NavApp and MapLibrary APIs: Maps SDK for Android	Google Maps: Maps SDK for Android	MapBox API: MapBox Navigation API and MapBox Geocoding API



Project Plan - Schedule



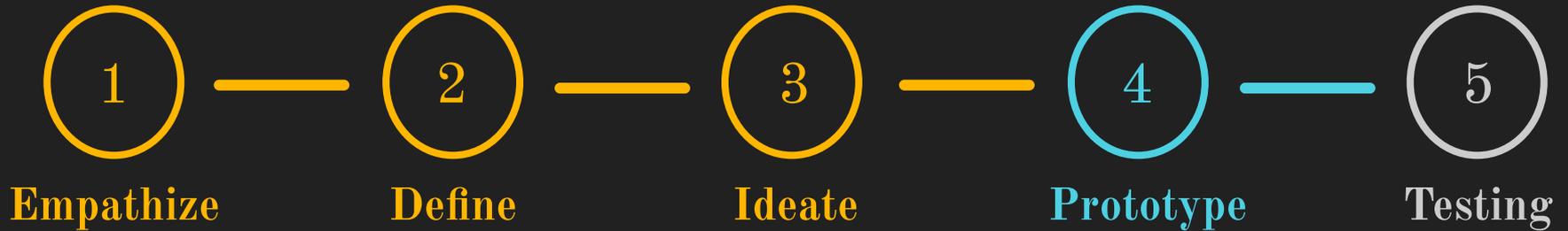
Project Plan - Cost



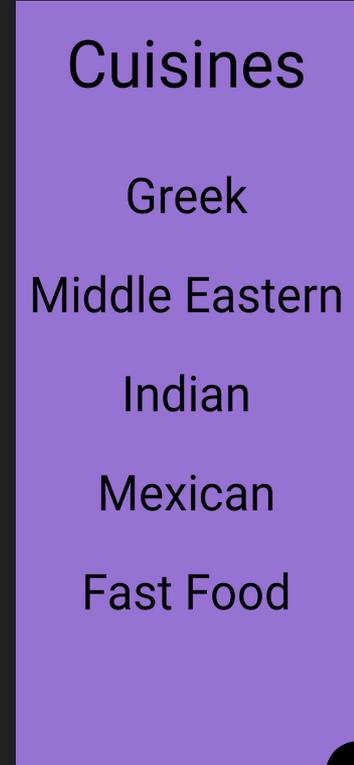
Item	Cost	Justification
Maps SDK for Android by MapBox	Free for up to \$25,000 monthly active users	Will allow us to create customizable maps for the user. Will be free for us, but will eventually be a cost that Jamz must account for as their app becomes popular.

Total: \$0

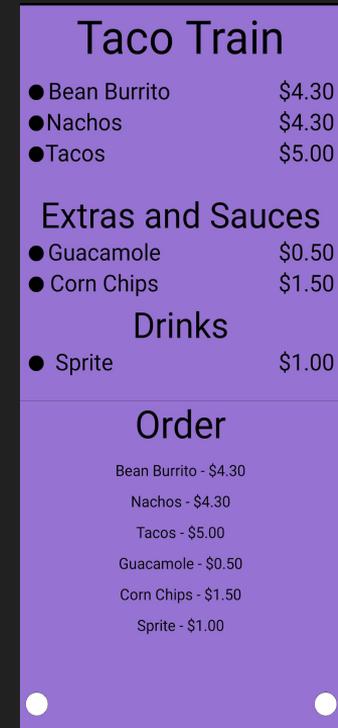
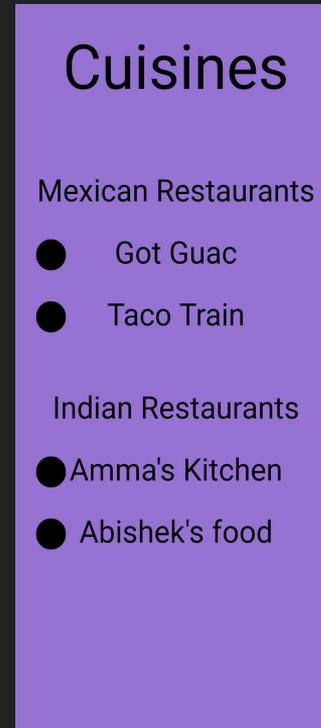
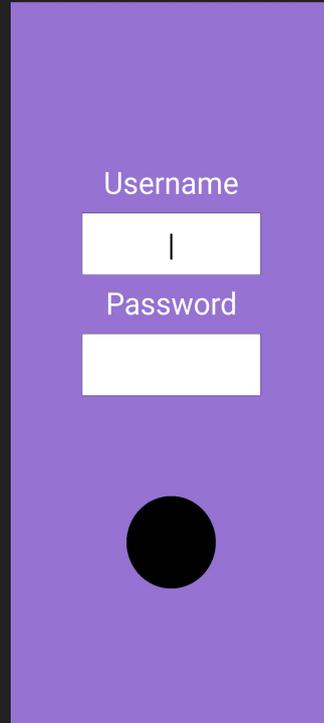
Prototype



Prototype I and Customer Feedback



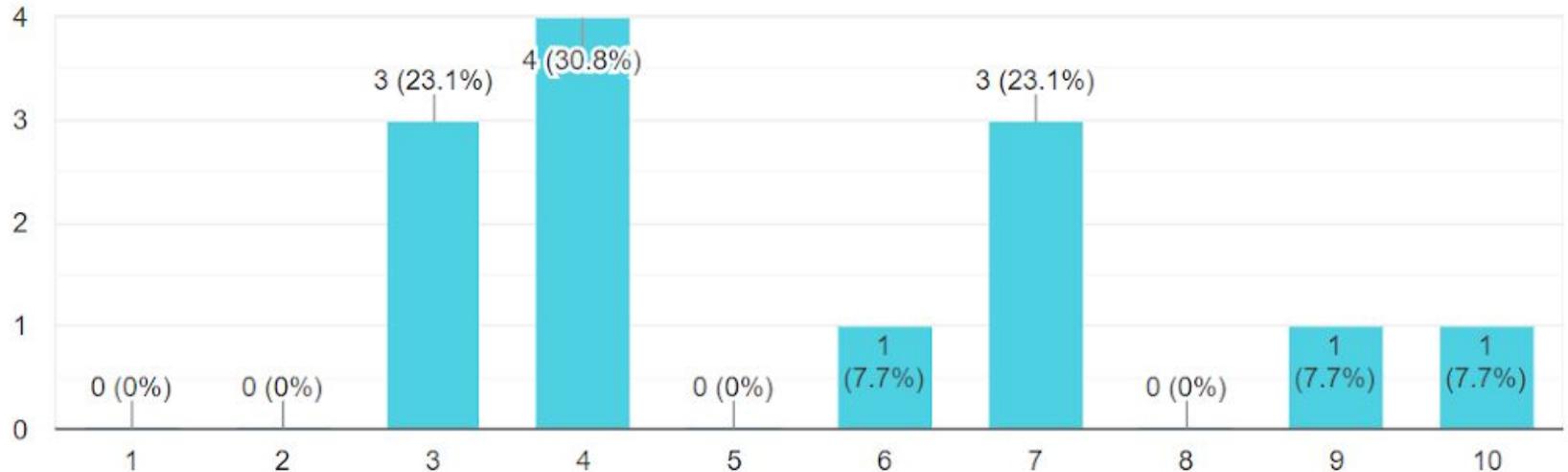
Prototype II



Prototype II - Customer Feedback

How would you rate the aesthetics of this app?

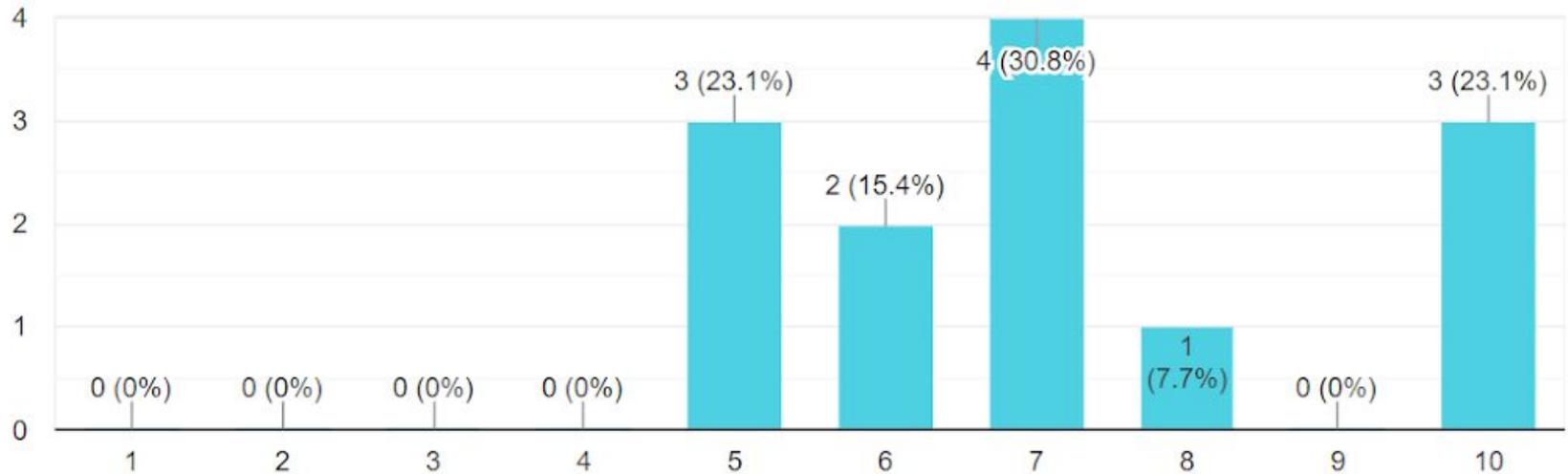
13 responses



Prototype II - Customer Feedback

How you would rate the functionality of this app?

13 responses



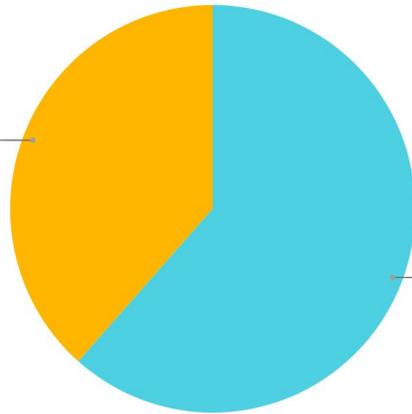
Prototype II - Customer Feedback

Do you like the colour scheme of the app?

13 responses

No vs. Yes

No
38.5%

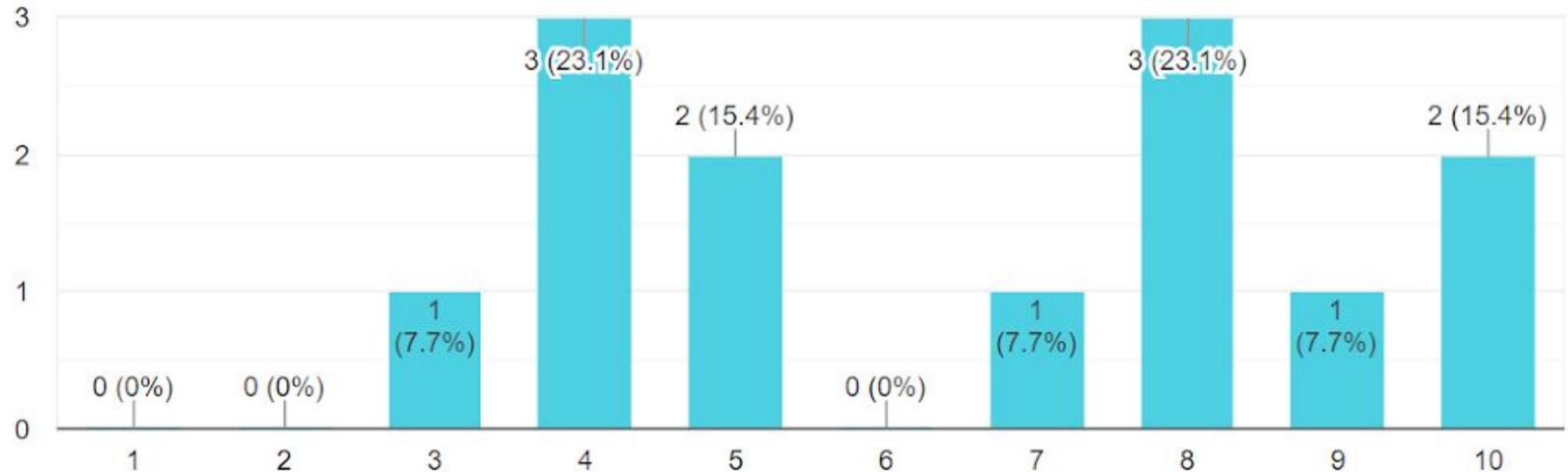


Yes
61.5%

Prototype II - Customer Feedback

How would you rate the layout of this app?

13 responses

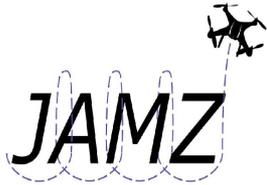


Prototype III

Final Design

Prototype III

Jamz Drone Delivery



Username

|

Password



Cuisines

Mexican Restaurants

Got Guac ●

Taco Train ●

Indian Restaurants

Amma's Kitchen ●

Abishek's food ●

Insert screen recording

Prototype III

Got Guac

- Chicken Quesadillas \$6.40
- Enchiladas \$5.30
- Taco \$5.00

Extras and Sauces

- Guacamole \$0.50
- Corn Chips \$1.50

Drinks

- Coca-Cola \$1.00

Order

Chicken Quesadillas - \$6.40
Enchiladas - \$5.30
Taco - \$5.00
Guacamole - \$0.50
Corn Chips - \$1.50
Coca-Cola - \$1.00

Payment Options

PayPal

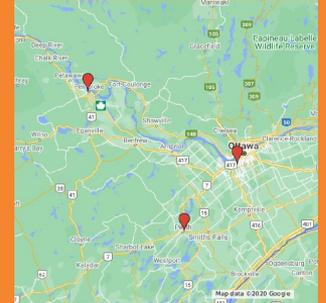
Email

Password

●
Pay

Additional Information

Estimated time of arrival:
17 Minutes



Hello, your food
has arrived

Please scan the
following code
to take your food



Once scanned press
the button to proceed



Please press the
button to retrieve
your food



Click the following button
once you have taken your
food to allow drone to
takeoff. Please be 5m
away from the drone



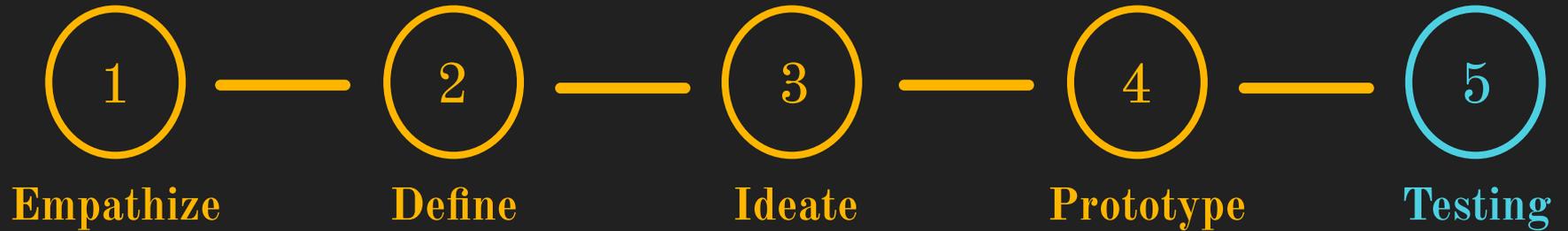
Thank you for using
Jamz Drone Delievery
Press the button to
head to the cuisine list



Prototype III - Customer Feedback

*Insert once we are done
collecting*

Testing



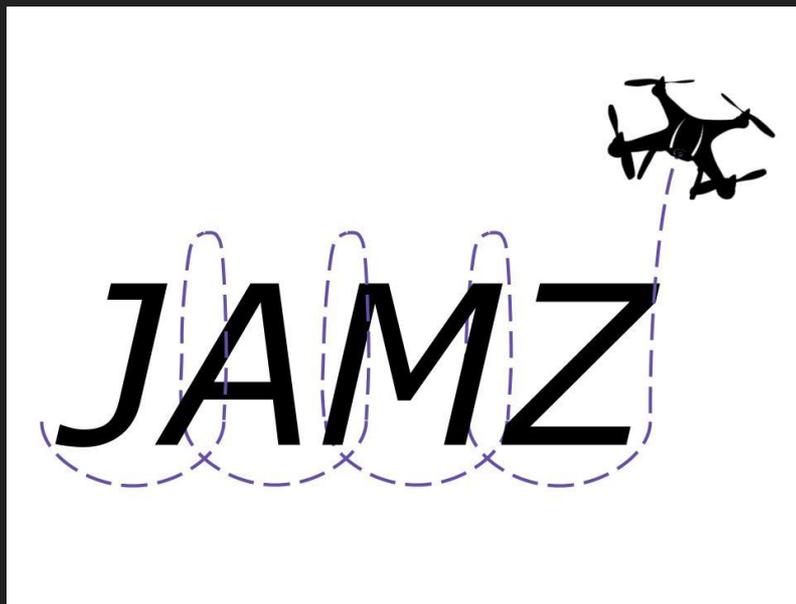
Testing

- Latency test
- Survey Based on Layout, Functionality and User Experience
- Survey Based on Aesthetics of App
- App Size
- User-Friendliness Survey
- Personalizability Aspects of App



Future

Insert after prototype III is complete



Questions?