Iteration Plan for Sprint 4

Iteration Plan				**Planned / Estimate**			**Actual**		
Milestone	Assign	Dep	Activity	Start	End	Effort	Start	End	Effort
Iteration 4						50			
1	Jim	3	R42 - Optional business image should be stored on the dashboard side on registration	Mar.14	Mar.15	3			
2	Jim	1	R42 - Business image should be rendered in the Place's activity for each business	Mar.14	Mar.15	3			
3	Jim		R42 - Create and polish up the business profile page	Mar.18	Mar.21	4			
4	Justin		R36 - Integrate heatmap with actual data	Mar.14	Mar.21	4			
5	Justin		R37 - Heatmap data should be able to be animated and filtered based on a time interval	Mar.21	Mar.28	6			
6	Jessica		R33 - Investigate and fix why the Android app is crashing on resume.	Mar.20	Mar.22	3			
7	Jessica		R45 - User should be given	Mar.18	Mar.20	3			

			the option to disable Bluetooth tracking.						
8	Jessica		R37 - Logout button should be synced to logout, and the menu should be on all activities.	Mar.20	Mar.22	2			
9	Thomas		R15 - Display time interval data in a meaningful fashion on the business dashboard	Mar.15	Mar.17	3			
10	Thomas		R44 - Modify the data collected by the service to match how it is displayed on parse database	Mar.18	Mar.23	7			
11	David		R27 - Utilizing the API that communicates with the Parse backend, create a JSON that calculates the average time a customer is in a store	Mar.21	Mar.24	4			
12	David		R27 - Display the average time in a meaningful way on the dashboard	Mar.22	Mar.25	4			
13	Jessica		R37 - Add a splash screen before login with the Scout logo.	March.20	Mar.22	2			

14	David		R28 - Display number of points per customer in the dashboard	Mar.22	Mar.24	3			

Updated Iteration for Sprint 3

B - blocked

N/A - no longer needed

N/D - not done / partially done

Iteration Plan				**Planned / Estimate**			**Actual**		
Milestone	Assign	Dep	Activity	Start	End	Effort	Start	End	Effort
Iteration 3						62			46
1	Jessica		R24 - Beacon Service should implement the observer pattern to notify listeners when a customer has communicated with the beacon, every X seconds.	Mar.2	Mar.7	3	March. 10	March. 11	3
2	Jessica	1	R24 - Users should be rewarded each time he/she visits a specific scout associated store	Mar.8	Mar.12	4	March. 10	March. 11	4
3	David		R12 - Render the number of new customers for a specific business into a user understandable chart/graph	Mar.12	Mar.12	6	March 12	March 12	5

4	Jim		R42 - Optional business image should be stored on the dashboard side on registration	Mar.11	Mar.12	2	N/D	N/D	N/D
5	Jessica	4	R42 - Business image should be rendered in the Place's activity for each business	Mar.10	Mar.10	2	B	B	B
6	Jessica		R41 - UI for places and rewards should be more aesthetically pleasing	Mar.2	Mar.12	5	March. 10	March. 12	5
7	Jim		R23 - Rework the trilateration algorithm such that meaningful user positions are collected instead of random data.	Mar.4	Mar.5	6	March. 12	March. 12	4
8	Jim		R40 - Display a meaningful message whenever user fails to login due to active session with another device	Mar. 3	Mar.3	2	March. 11	March. 12	1
9	Thomas		R35 - Determine a proper JSON representation of the customer data based on Parse.	Mar.2	Mar.5	4	Mar.10	Mar.12	3
10	Thomas	9	R35 - Create an API to generate the JSON.	Mar.2	Mar.5	3	Mar.10	Mar.12	6
11	Jim		R15 - Use BLE to collect the time the user spent in the	Mar.12	Mar.13	4	March. 10	March. 11	2

			store and record this in parse						
12	Thomas		R15 - Display time interval data in a meaningful fashion on the business dashboard	Mar.2	Mar.5	6	Mar.12	N/D	1
13	Justin	10	R35 - Create the heatmap visualization based on the JSON data.	Mar. 5	Mar 10	15	Mar. 5	Mar 10	15

Updated Release Plan & Requirements Updates

Please view → Requirement Document

Release Plan:

Story ID	**User Story**	**Priority**	**Story Points**	**Sprint**
1	As a customer, I'd like to sign in and interface with a business using a smartphone application	High	5	1
2	As a customer, I'd like to register for the Scout rewards program using the Scout application on my smartphone	Medium	3	1
4	As a customer, I'd like to be able to view the number of points I have on my smartphone	Medium	3	1
7	As a business owner, I'd like to be able to install BLE sensors to interact with customer smartphones	High	8	1
11	As a business owner, I'd like to be able to add, remove, or edit the list of available rewards for my business	Medium	3	1
12	As a business owner, I'd like to use an online dashboard to view the number of new customers at my store	Medium	3	2

15	As a business owner, I'd like to know how long specific customers have stayed in my business, and how many points such customers have	High	8	3
18	As a customer, I want the mobile app to be responsive, more specifically, the screen to screen transition shall occur in less than one second	Low	5	5
19	As a business owner, I want the web dashboard screen to screen transition to respond in less than one second	Low	5	5
22	As a business owner, I'd like to be able to know a customer's approximate location within a certain radius of the beacon	High	8	3
23	As a business owner, I'd like to trilaterate the users' approximate location within the store over time using the readings from the customers' smartphone	High	13	3
24	As a customer, I'd like to be rewarded points for every day I visit a business	Medium	3	3
26	As a business owner, I want the app to run in the background to collect spatio-temporal data	High	8	2
27	As a business owner, I want the average time a customer was in the store to be visible on my dashboard	Medium	2	4
28	As a business owner, I want the total number of points I have given customers to be visible on my dashboard	Medium	2	4
29	As a customer, I would like to be able to sign in to the mobile application	High	2	1
30	As a customer, I want to be able to redeem my points for rewards defined by the business owner via a scannable QR code	Medium	3	2
31	As a business owner, I want to be able to sign in onto an online dashboard	High	5	1
33	As a customer, I want a minimum amount of defects in the mobile app	Low	5	5
34	As a business owner, I want a minimum amount of defects in the web dashboard	Low	5	5

35	As a business owner, I'd like to be able to visually see a heat map of my store, as delineated by the beacons, on the web dashboard	High	21	3
36	As a business owner, I'd like to be able to see the movement of the customers on my dashboard within the heat map	High	8	4
37	As a customer, I'd like a polished, navigable and interactive smartphone user interface	Low	5	5
38	As a business owner, I'd like a polished, navigable and interactive online dashboard user interface	Low	5	5
39	As a business owner, I want to allow users to accumulate 1 point for every 5 consecutive minutes they are in my store	Medium	8	3
40	As a business owner, I would like the ability to prevent users from logging into the same account on multiple smartphones at the same time	Medium	3	2
41	As a customer, I would like the Android UI to be aesthetically pleasing.	Medium	5	3
42	As a business owner, I would like to store an image of my business, and have it show in the Android app.	Medium	4	3
43	As a business owner, I'd like to be able to choose a time interval in which to display the heatmap of my store.	Medium	11	4
44	As a business owner, I would like the service to be collecting user movement and duration data.	High	10	4
45	As a customer, I would like to disable Bluetooth tracking	High	3	4

Release Story Map:

Sprint	**Smartphone App**	**Dashboard**	**BLE Beacon**
1	R1 - As a customer, I'd like to sign in with the business with a smartphone application		

	R2 - As a customer, I'd like to register for the Scout rewards program using my smartphone application		
			R7 - As a business owner, I'd like to be able to install BLE sensors to interact with customer smartphones
		R31 - As a business owner, I want to be able to sign in into an online dashboard	
	R29 - As a customer, I would like to be able to sign in to the mobile application		
		R11 - As a business owner, I'd like to be able to add, remove, or edit the list of available rewards for my business	
	R4 - As a customer. I'd like to be able to view the number of points I have on my smartphone		
2	R26 - As a business owner, I want the app to run in the background to collect the data		
			R38 - As a business owner, I'd like a polished, navigable and interactive online dashboard user interface
	R40 - As a business owner, I would like the ability to prevent users from logging into the same account on multiple phones at the same time		

	R30 - As a customer, I want to be able to redeem my points for rewards defined by the business owner via a scannable QR code		
		R12 - As a business owner, I'd like to use an online dashboard to view the number of new customers at my store	
3		R35 - As a business owner, I'd like to be able to visually see a heat map of my store on the web dashboard	
		R15 - As a business owner, I'd like to know how long customers have stayed in my business, and how many points such customers have	
			R23 - As a business owner, I'd like to utilize the hardware's ability to trilaterate the user's approximate movement within the store
	R24 - As a customer, I'd like to be rewarded points for visiting a business and on a daily basis.		
			R22 - As a business owner, I'd like to be able to know a customer's approximate location within a certain radius of the beacon
	R39 - As a business owner, I want to allow users to accumulate 1		

	point for every minute they are in my store		
	R41 - As a customer, I would like the Android UI to be aesthetically pleasing.		
4		R42 - As a business owner, I would like to store a image of my business, and have it show in the Android app.	
		R36 - As a business owner, I'd like to be able to see the movement of the customers on my dashboard within the heat map	
		R28 - As a business owner, I want to know the number of points I have given customers visible on my dashboard	
		R43 - As a business owner, I'd like to be able to choose a time interval in which to display the heatmap of my store.	
		R27 - As a business owner, I want the average time a customer was in the store to be visible on my dashboard	
	R45 - As a customer, I would like to disable Bluetooth tracking		

5		R34 - As a business owner, I want a minimum amount of defects in the web dashboard	
	R33 - As a customer, I want the minimum amount of defects in the mobile app		
	R18 - As a customer, I want the mobile app's screen to screen transition to respond in less than one second		
		R19 - As a business owner, I want the web dashboard screen to screen transition to respond in less than one second	
	R37 - As a customer, I'd like a polished, navigable and interactive smartphone user interface		
		R38 - As a business owner, I'd like a polished, navigable and interactive online dashboard user interface	

Meeting Minutes

Mar. 06, 2015 Dev Meeting

- TA notes that we should write acceptance tests for the next sprint in our current sprint
    - Going for a TDD approach
- Using our current Parse tables will be difficult to build data visualizations, thus a new way to store data is needed.

Mar. 13, 2015 Client Meeting

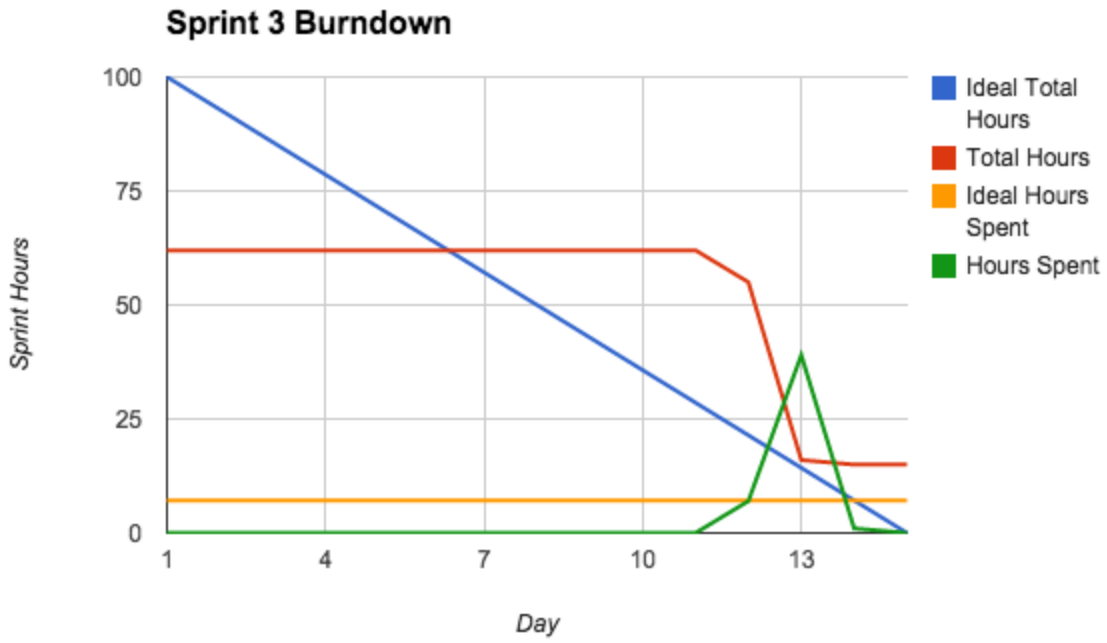
- Demoed heatmap, dashboard charts, and the updated beacon data. (*Client unavailable)

Release burndown chart/data

Release Burndown						
Project	Scout		**Last Updated**		2/12/2015	
Sprint	1	2	3	4	5	6
Sprint Start	1/31/2015	2/14/2015	2/28/2015	3/14/2015	3/28/2015	--
Sprint End	2/13/2015	2/27/2015	3/13/2015	3/27/2015	4/10/2015	--
Ideal Backlog Size	182	145.6	109.2	72.8	36.4	0
Total Backlog Size	182	153	113	67		0
Ideal Velocity	36.4	36.4	36.4	36.4	36.4	36.4
Estimated Velocity	29	54	60	47		0
Actual Velocity	29	40	46			0

Iteration Burndown chart/data

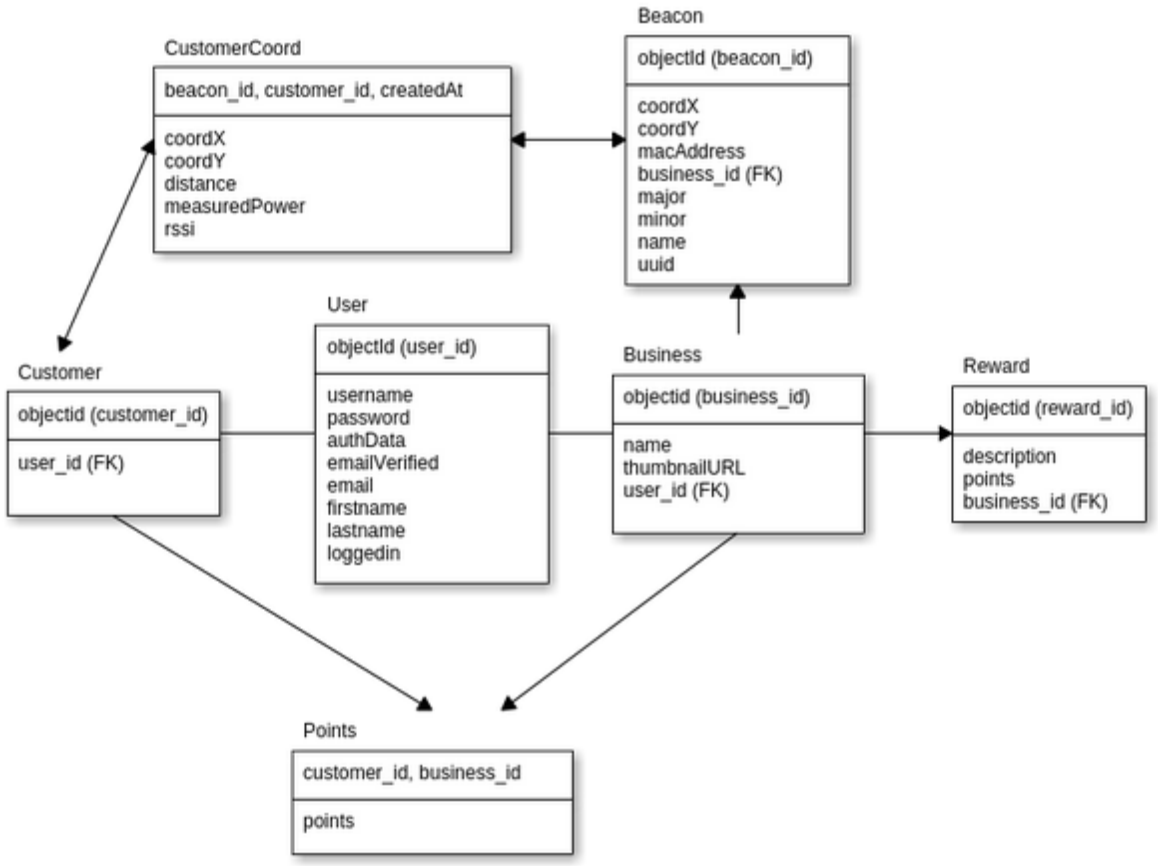
Sprint Burndown															
Sprint		Total Hours				Time Period									
3		62				From		2/28/2015			To		3/13/2015		
Date	2/28/2015	3/1/2015	3/2/2015	3/3/2015	3/4/2015	3/5/2015	3/6/2015	3/7/2015	3/8/2015	3/9/2015	3/10/2015	3/11/2015	3/12/2015	3/13/2015	3/14/2015
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ideal Total Hours	100	92.857143	85.714286	78.571429	71.428572	64.285715	57.142858	50.000001	42.857144	35.714287	28.57143	21.428573	14.285716	7.142859	0
Total Hours	62	62	62	62	62	62	62	62	62	62	62	55	16	15	15
Ideal Hours Spent	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14	7.14
Hours Spent	0	0	0	0	0	0	0	0	0	0	0	7	39	1	0



Architecture

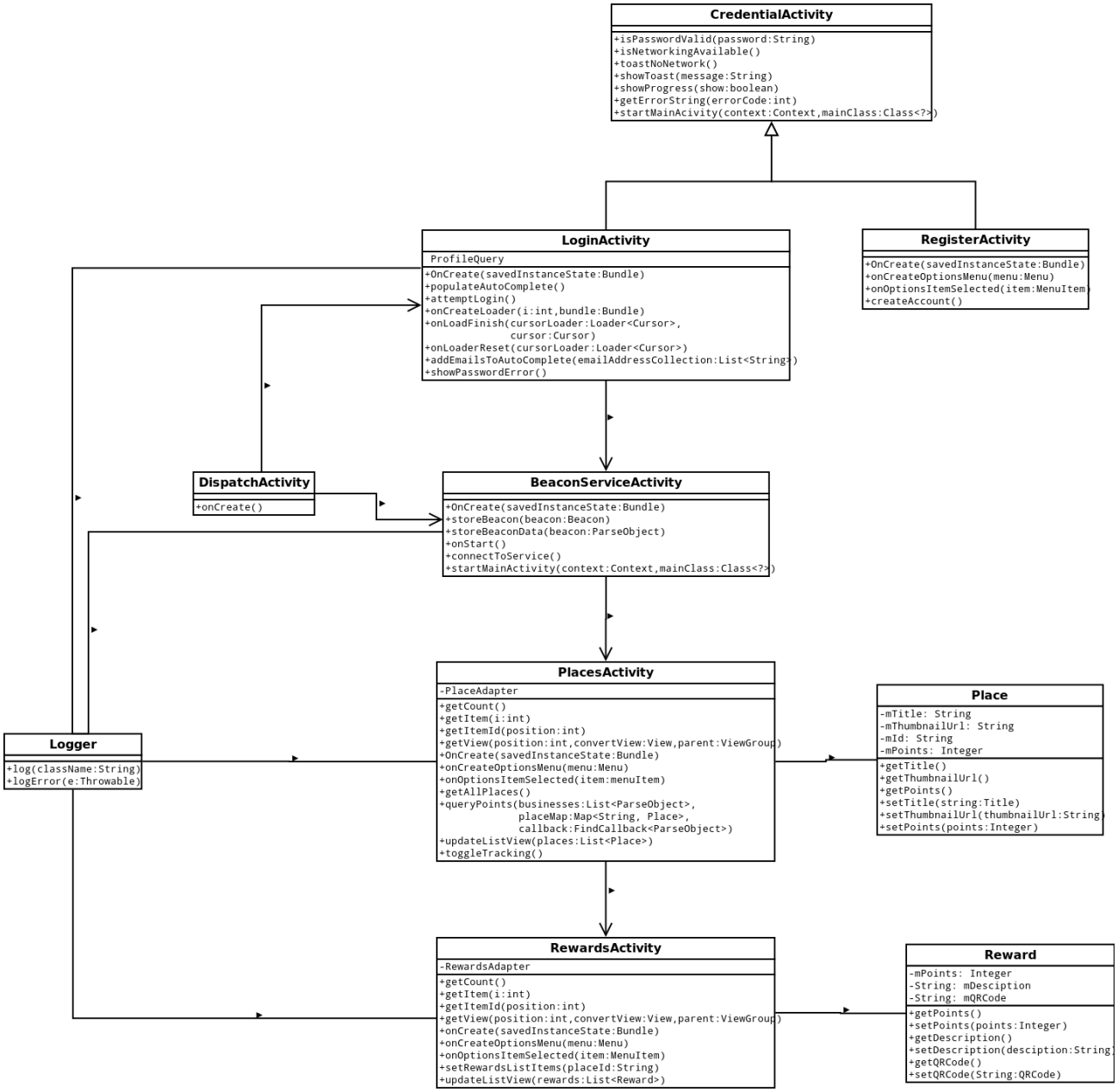
ER Diagram

Hi Res Link:
https://raw.githubusercontent.com/jessicayuen/scout/master/docs/v2-er-diagram.png



Mobile App UML Diagram

Hi Res Link:
https://raw.githubusercontent.com/jessicayuen/401-Scout/master/docs/v2-uml-mobile.png



Acceptance tests

Sprint 3

Heatmap Acceptance Testing

Story ID	R35
Description	Create the heatmap visualization based on the JSON data.
Set Up	Login with valid credentials (R31) and enter the heatmap page from the dashboard by clicking heatmap.
Instructions	1. Login in on the home login screen 2. Navigate to the heatmap page
Expected Results	The page will display a floorplan for the business and customer data rendered on a heatmap (if available)

Trilateration Acceptance Testing

Story ID	R23
Description	As a business owner, I'd like to trilaterate the users' approximate location within the store over time using the readings from the customers' smartphone
Set Up	Open the Scout Application on an Android mobile device. The Android device will require Wifi connectivity.
Instructions	1. Log into the application 2. move around the bluetooth beacons 3. check the coordinates on the parse website
Expected Results	Coordinates provided give a rough estimate of the user coordinate.

Display User Login Error Toast

Story ID	R40
Description	As a business owner, I would like the ability to prevent users from logging into the same account on multiple smartphones at the same time
Set Up	Open the Scout Application on an Android mobile device. The Android device will require Wifi connectivity.
Instructions	1. Log into the android application 2. Log into the android application with same user and password in another device
Expected Results	User on the first device should be logged out and given a toast in the main screen.

Android UI Acceptance Testing

Story ID	R41
Description	As a customer, I would like the Android UI to be aesthetically pleasing.
Set Up	Open the Scout Application on an Android mobile device.
Instructions	1. Log into the application 2. View the Places Activity 3. Click on a business 4. View the Rewards Activity
Expected Results	Places Activity: The UI should list all businesses with a background image for each list item, and a transparent bar that displays the business name along with the points that the user has for.

	Rewards Activity: The UI should display the rewards activity with the business image, name, and points the current logged on user has on the top half. The list of rewards should be displayed below with an orange box around the points.

Sprint 4

Heatmap Acceptance Testing

Story ID	R35
Description	Heatmap data should be able to be filtered based on a time interval
Set Up	Login with valid credentials (R31) and enter the heatmap page from the dashboard by clicking heatmap.
Instructions	1. Login in on the home login screen 2. Navigate to the heatmap page 3. Change time interval using the scrollbar.
Expected Results	The page will display a heatmap and display only the data per some time interval

User Duration Analytics Acceptance Testing

Story ID	R15
Description	Render the duration of how long customers stay within the business
Set Up	Log into the application
Instructions	1. Login in on the home login screen 2. Be presented with a bar chart of how long users stay within the store
Expected Results	The page will display a bar chart of the user duration statistics

Dashboard Charts Acceptance Testing

Story ID	R12
Description	Render the number of new customers for a specific business into a user understandable chart/graph
Set Up	Log into the application
Instructions	● Observe the graph ● Hover over the points on the graphs
Expected Results	● The graph loads and looks good ● The points hover is responsive and gives extra details

User Profile Dashboard

Story ID	R42
Description	Optional business image should be stored on the dashboard side on registration
Set Up	Log into the web dashboard
Instructions	1. Navigate to the dashboard website 2. Log in 3. Press profile page
Expected Results	Profile page should be displayed instead a 404 error. Profile page should have a profile image and it should be editable Profile page should have information regarding the business and all fields should be editable

Android Logout Acceptance Testing

Story ID	R37
Description	A user should be able to logout of the Android app.
Set Up	Log in to the Android app with a valid user.
Instructions	1. Select ‘Logout’ in the business directory context menu.
Expected Results	The user should be logged out and no longer able to access the places activity.

Android Toggle Bluetooth Tracking Acceptance Testing

Story ID	R45
Description	A user should be able to toggle a menu button to disable and enable Bluetooth tracking.
Set Up	Log in to the Android app with a valid user.
Instructions	1. Select ‘Disable Bluetooth / Enable Bluetooth’ in the context menu.
Expected Results	If Disable Bluetooth is selected, points should no longer accumulate for the current user. If Enable Bluetooth is selected, points should re-accumulate every minute for the current user.

Android Splash Screen Acceptance Testing

Story ID	R37
Description	Splash screen before Android login.
Set Up	-
Instructions	1. Start the app.

Expected Results	A splash screen should be seen with the Scout logo that lasts for about 1 second before login.

Background Data Collection Acceptance Testing

Story ID	R44
Description	User data within the store will be collected in the background of the application
Set Up	Log in to the mobile app
Instructions	1. Bluetooth must be turned on 2. User must log into the mobile application
Expected Results	Data will be added to the Parse database tables. Related data analytics will also be updated.

Any management requests/feedback addressed

- Acceptance tests are only provided for this Sprint instead of all Sprints. Future acceptance tests for Sprint 4 are also added.