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| SMP |
| Super Points  Test Plan |
| SuperPoints |
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# Document Version

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# Introduction

## Purpose

To propose a Testing Solution for the Super Points project.

## Team contact information

SMP

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## Description

Super Points is an app that rewards shoppers based on frequency and duration of visits to their favourite businesses. Shopper are awarded tiers for each business they visit based on frequency and duration of visits. Businesses can create promotions for their various tiers of shoppers. These promotions will appear in the shopper’s app and will pop up as a push notification when users pass by the business on the street. Business will have the ability to view some statistics on their shoppers: frequency and duration of visits, clicks on their promotions, and tier distribution.

Super Points will allow businesses to reward their most valuable shopper with promotions and deals. As well, make finding the best deals at shopper’s favourite stores easy by reminding shoppers of all the promotions that business have as they walk by.

# Test Plan

## Overview

Testing that will need to be done include all UI element additions. This will be in the form of regression testing of all elements of the application as all units will be changed graphically. This entails making sure no links are broken and all widgets were functioning as before, checking that data changes as expected as an action happens.

For example, map markers will have a title and address that should pop up and have different information. There aspects should introduce no major errors.

All business statistics will need to be tested against hand-calculations and their edge cases tested. If there is a range of values for instance as in our “average number of visits/day of the last week”, creating rows of visits that are outside the past 7 days and within the past 7 days. There will be checks to ensure the database and reports generated agree with hand calculations of the statistics displayed on the report.

The administrator addition will undergo the same testing we did for other similar components such as consumer users, and business users, actions will be taken and corresponding changes in the database should register. Cross-overs should not occur, an administrator should not see the user component, a business should not see the administrators components, etc. Bluetooth beacon regions and Key Performance Indictor (KPI) Reports should act accordingly, as in the regions should be unique and register stores correctly, and KPI reports should correspond to monthly reports shipped to users based on business analytics.

Unit and integration testing will occur during the weekly sprints post implementation, these will be thorough but not rigorous. A bulk period of testing will occur at the end to ensure cases that developers did not simply think of did not get tested; other developers can fill out the suite of test cases that a user would encounter.

The machine learning aspect we plan to incorporate will be tested to see if the algorithm for generating new promotions is acting correctly in terms of mathematics in relation to tags and their correlation to visits.

## Deliverables

No specific deliverables will be created from the testing process. App functionality can only be delivered to the client if the specific functionality has passed all testing.

## Resources

Additional rows will need to be generated in every table that is relevant to any additional components we are introducing as a part of the second phase of SuperPoints.

This will include things like visits related to testing new business statistics, new rows for administrator users. All of this data will be generated by ourselves as our client has no actual data to provide, this data will be generated on a realistic basis. As in, data will be as close to real world data as we can imagine.

## Approach

Use cases will be generated as we walk through the application, doing our best to imagine what a user would expect from a UI, intuitive in other words. If the application returns the expected results after being run it will be considered a pass on the test.

# Test Cases

* Database testing:
  + Based on the requested data, does the database return the expected data?
* Administrator Testing:
  + Do all the activities connect correctly, are the generated KPI’s the same as the ones reported by the business analytics
  + Is the email sent to the correct address?
  + Are the registered regions acting as expected (same as our test region for the demo)?
* General Business Statistics testing:
  + Testing that values are expected as compared to hand calculations
  + Testing of edge cases in terms of dates
  + Confirmation of reports matching database as well as
* UI testing:
  + Regression testing of all activity connectivity
  + Regression testing of all widgets
  + New UI elements should create expected reactions from the database (for tier progress bars for users)