

# CRM-Product Suit

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## Abstract

In-Touch is an end to end customer relation management solution for retailers enabling them to be constantly be in touch with their customers – understand their purchase patterns, their preferences and run targeted loyalty based campaigns for driving more customer visits, increasing wallet share and driving more walk-ins to the stores. In-Touch has two packages to provide full feature support for any retail chain. First, client-side solution to fetch the data automatically from the POS (Point of Sale) of our customer organization and then store it locally and communicate with our server for campaigns and other support to their customers. Second, server-side which is developed in PHP provides the user friendly support for analytics team to give the analysis of selling to our customer organization and give suggestions to improve business selling and also configure our client-side package installed in our client organization from this application.

## Introduction and Motivation

In-Touch web based services provides features like mobile/card based registration, smooth customer cashier experience, auto pick of data from point of sale, flexible and powerful loyalty platform, analytics driven campaigns which are used for targeted campaigns based on customer's profile, past purchase pattern and frequency of purchase, etc. Some Other features used for dynamic instant vouchering, closed loop referral program which is used for multi level marketing. Following are tasks that has been accomplished by me for server-side using PHP, React and MySQL as part of those mentioned features, during my internship:

- Facebook Coupon for Outbound Campaign
- Added Offer Name tag in the message creation flow.
- Description of List Explanation when user list is created using loyalty filters.
- Endpoint creation to query all shards in the sharded DB and fetch data from all shards.
- Published private node modules to npmjs.org (Arya-dbconnect)
- Customisation of unsubscribe tag in the email creatives.
- New project for capturing behavioral events.

## Scope Statement

With so many ways to reach your consumer today, it's difficult to know the best way to communicate with them. Build effective campaigns and improve your marketing RoI easily with the Campaign Manager, a personalized customer engagement solution. Get everything you need, from an intuitive content designer to dynamic consumer segmentation for targeted, personalised marketing through multiple channels.

## Programming Contribution

**Facebook Coupon for Outbound Campaign:** - This feature was given to me in the first sprint. There are certain conditions based on which we need to create new advertising Adset using API provided by facebook and some other conditions where we just had to upload targatable customer list to facebook. This feature was developed using PHP and Mysql.

**Added Offer Name tag in the message creation flow:** - Created new offer name tag in the assets pool where all the SMS and email and other channels' templates are created and used in the message creation flow in various campaigns. It also includes the validation of the tag and the resolution of the tag with the correct value when the campaign is rolled out to the customers. Tag was developed using React and MongoDB and validation was done using the modules developed in PHP.

**List Explanation for customer list created using loyalty filters:** - This feature includes getting the proper list explanation as to how exactly this user list has been generated using the filters provided by the Loyalty program. This was developed using PHP and BackboneJs.

**Published private node modules to npmjs.org:** - In this module, I had created the subroutine which is useful in querying and fetching results from across all shards when using sharded DB. I also learned to publish package to the npmjs global repository. This was developed using NodeJs.

**Capturing Behavioral Events:** - This is the new project that is given to me and it includes creating the new custom events that can be targeted by injecting in any third-party application via webhook ingestion. Custom events includes both standard events like App Uninstall and the custom events like cart checkout and targetting customer realtime. This is being developed using React-16.

**Bug Fixing:** - There were several bug fixing related activities that were assigned to me which helped me in better understanding of the existing products of the company.

## Tools and Technologies

- **Tools**
  - Visual Studio Code
  - Sublime Text
  - PhpMyAdmin
  - Regex Checker
  - Rock Mongo
  - Jenkins
- **Technologies**
  - PHP
  - MySQL
  - BackboneJs

- React-16
- MongoDB
- Git

## Testing Strategies

- **Unit Testing for campaign controller:** - The key to understanding unit testing is to define what we mean by “**unit**”. A unit is simply a chunk of functionality that performs a specific action where you can test the outcome. A unit test, then, is a sanity check to make sure that the chunk of functionality does what it’s supposed to. Once you’ve written up your set of tests, whenever you make a change to your code, all you have to do is run the set of tests and watch everything pass. That way, you can be reassured that you haven’t inadvertently broken another part of your application.

In Our Existing application, PHP SimpleTest is already implemented. Because of code restructuring some test cases are not passed successfully. So, I checked each test case and solved those test cases by adding some missing parameters or resolve some other errors and make it run successfully.

## Lessons Learnt

- I learnt React-16 with some of the advanced libraries like React-router-4, redux-saga, etc.
- How to work in the integrated environment where cross-team function on same modules.
- How to work in effectively professional environment.
- Understanding existing codebase and picking things from then to work upon.
- Publishing the node package to npmjs global repository.
- Creating the robust and simplest possible api for the libraries to be used by other products in the organisation.
- Also learnt gitflow and pushing tags to the github.
- Deployment of the code in various environments using jenkins.
- Soft skills that are required to maintain collaborative environment in the large organisation.

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