Project Proposal

Referred

Team Members:

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Abstract

The idea of the application is to provide user discounts on the bills when they visit the restaurant based on the referral system. The more you promote a restaurant the more discount you get. The promotion would be like sharing the code with your friends and relatives and when they visit the restaurant you and the person you referred to, both get some discount. In this way, the restaurant gets more customers and the user gets their discounts.

Introduction

Looking at the increasing trends of dining out and also the increase in the amount of money spent by the restaurants in advertising, we decided to make an application that is helpful for both the restaurant and the customers. The application will have two types of users, the customers and the restaurants.

The user would be able to see the list of the restaurants of a specific region. The user would be having the option to refer the restaurant to the other users using the unique code. When the referred user who receives the code from a friend, goes to the restaurant, he/she will get a discount based on the restaurants. The discount will be applied to the entire bill. In addition to that, the referee would get some points which could be redeemed when he/she visits the restaurant.

Hence this application will benefit both the restaurant and the customer, as it would decrease the advertisement cost for the restaurant and also decrease the cost of dining out for the customer . There will be different signup and register process for both the customers and the restaurant. Also, the restaurant would be able to figure out how many customers came in via the app.

Users

The application will have two types of users. The first type will be the customer whose role will be to refer a restaurant to his/her family members or friends with the goal of achieving discounts from the restaurant. The second type of users will the restaurant's management whose role will be to upload and update the restaurant's data and also validate the coupon when the customer arrives.

Purpose and Benefits

The purpose of the application is to attract more and more customers to the restaurants by offering them a discount.

Both the intended users of this application will be benefited from it. Customers who use the application will get a discount when his/her referral goes to the restaurant. The number of referrals an application user does the more discount he/she will get. Restaurants will experience an increase in the profits as the customer traffic will increase due to the discounts offered. The restaurants would also be able to keep the history of the number of customers arrived as a result of the discount, this will help the restaurant to come up with new promotional offers. The customers would get a list of all the restaurants nearby that are offering discounts, so the application will also help in searching for the restaurant.

Mode, Medium and Environment:

This application is expected to be used primarily by a customer who is looking to get some offer while dining at a restaurant and also by the restaurant staff who wants to increase the customer traffic. We are making an assumption that the customer who generates a referral code, has already been to that restaurant and liked the food, and he wants to recommend it to his friends and family. The second assumption that we are making is that while generating referral code, the user is connected to the Internet as the application is connected to a backend database and will require an internet connection to successfully generate coupons. Coupons would be generated in the form of barcodes.

The application will be using various device sensors and connectivity permissions. The application will use the device's camera to take photos and also to scan the barcode. The application will also require access to a GPS connection to navigate the user to the restaurant using Google Maps. The application will require access to the Internet as it will use a real-time Firebase database. This application will also use local device storage to store the data of the restaurants for offline use.

Based on our assumption that the user will either be a customer or a restaurant management person, the User Interface of the application will change according to it. For example, the customer will be able to look at all the restaurants and generate a coupon for it but the restaurant management person would only be able to look at the data from their restaurant. Another example of a different user interface for different types of users would be that the restaurant management user will be able to validate a coupon whereas a customer cannot.

Functionality:

Minimum Functionality

For the minimum functionality, first, we would be connecting the application to the backend firebase database and display some data from the database on the phone. Secondly, we will implement the login and registration for the customers and restaurants. Apart from that, the restaurant's list would be populated. This will allow the customers and restaurant staff to log-in and register through the application and view a list of restaurants.

Expected

For the expected functionality we will focus on generating random referral codes in the form of barcodes for each individual customers so that it can be used by the user in the restaurant. Secondly, we will focus on generating a point system which would allocate points for each user based on the number of referrals they make. The earned points by the customer can be redeemed in the restaurant in the form of discount. Also, the expected functionality would allow the restaurant to update its existing data like the description and the images, along with validating the codes by scanning the barcode.

Bonus

For the bonus functionality, we would implement the history for the customers, this history will display how the user earned/spent their points. We will also implement a feature where the user will be able to search for the direction of a restaurant. We will also develop a feature which will allow the restaurant to keep track of the number of customers arrived.

High-level Organisation:

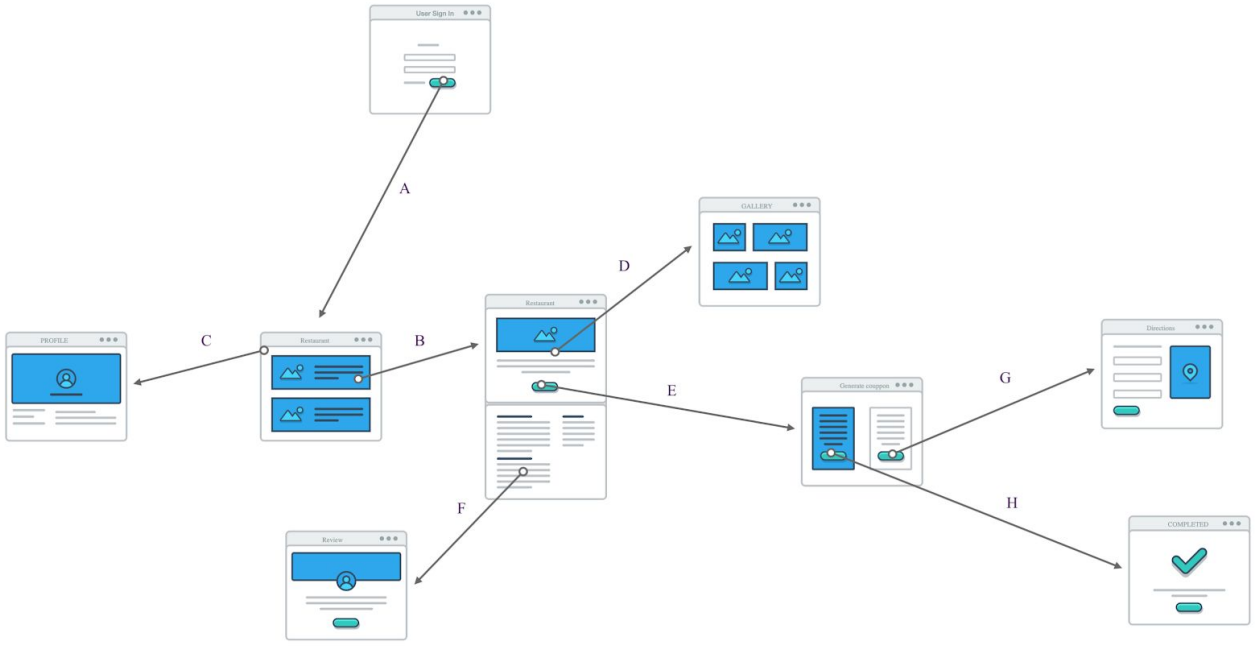

Fig 1. User Flow of Customer

The application will have two different flows based on the type of user. The Figure1 represents the flow for the customer user type. (A) When the user logs In to the application, the user is displayed with a list of Restaurants. (B) when the user clicks on a restaurant from the list of restaurants, he is taken to the detail screen which displays all the details regarding that restaurant. (C) On the home screen, the user can click on the toolbar icon which takes him to the My profile screen. (D) When the clicks on the image in the detail screen he is redirected to the gallery screen which shows all the images of that restaurant. (E) When the user clicks on the button in the detail screen he is displayed with two options, either to generate a coupon or to get directions to the restaurant. (G) When the user clicks on the navigate button, he is redirected to the Map Activity. (H) When the user clicks on the generate coupon button, a coupon would be generated in the form of a barcode. The user can share this barcode by entering the email address.

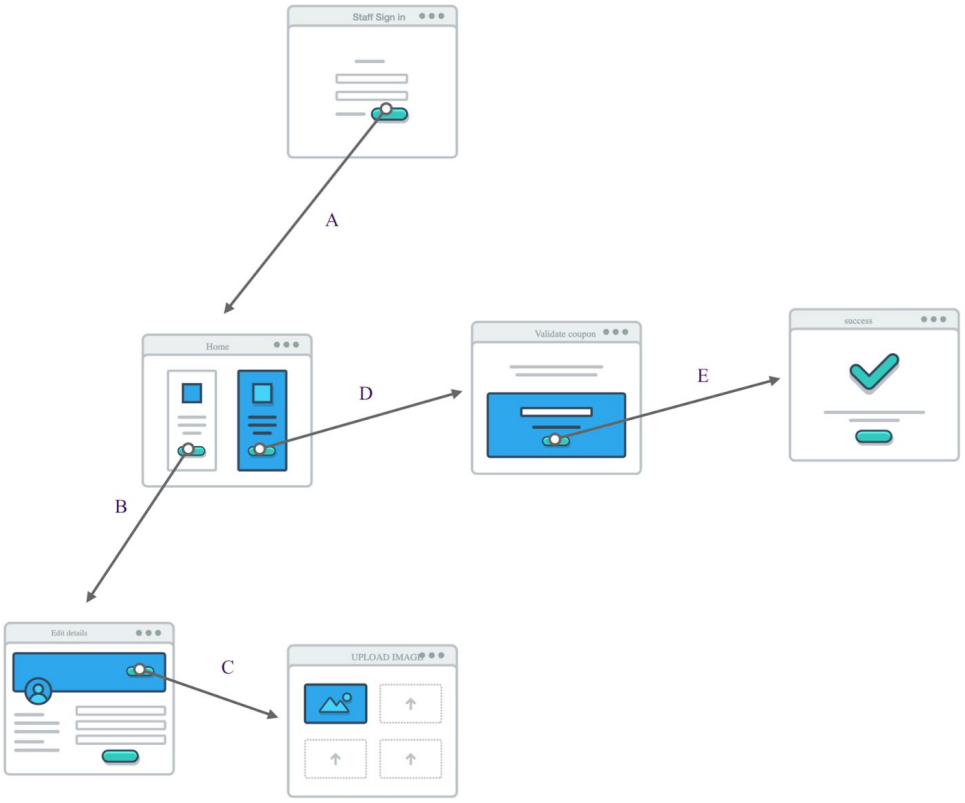

Fig 2. User flow of restaurant staff

The Figure2 shows the flow of the user who represents the restaurant. (A) When the user signs in to the application he is redirected to the home screen where the user is displayed with two options, either edit the restaurant data or validate the coupon code. (B) When the user clicks on the edit data button he is taken to the Edit Details screen where he can edit the description and all the details of the restaurant. (C) When clicks on the button to upload images he is taken to the gallery screen of the restaurant where he can upload all the images. (D) When the user clicks on the validate coupon button on the home screen he is taken to the validator coupon screen where the user can scan the barcode to validate the coupon.

Milestone and Timeline

Milestone 1

Week1

For the first week, we will make a basic application that will be connected to our backend Firebase database. This application will fetch data from the backend and display in the app.

Week2

For the second week, we will implement login and registration for the customers and the restaurant's staff. This will consist of differentiating users based on their data so that UI changes can be made.

Milestone 2

Week 3

For the third week, we will add code generation functionality where the user can generate referral code for a restaurant. Along with this, the ability of the restaurant to validate the codes will also be implemented.

Week 4

For the fourth week, we will implement a feature which would allow the restaurant's staff to update the details of the restaurant. We will also implement the ability to calculate points for the user based on the number of referrals.

Milestone 3

Week 5

For the fifth week, we will implement the ability for the user to check their history which would show them how and when they earned their points. We will also implement a feature which will show the navigation of the restaurant to the user.

Week 6

For the sixth week, we will implement a feature which would help the restaurant keep track of the number of customers they received. Finally, we will polish the user interface and run some test cases.

References:-

[1] "Create beautiful flow charts", *App.wireflow.co*, 2019. [Online]. Available: http://app.wireflow.co/.