

Mavo Diner Mobile Application

Development Requirement / Specification

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Version 1.0.15

Brief

This document specifies the requirement for Mavo Diner Mobile app. The preliminary design of the app is complete and it is reflected in the mock up website described below.

There are three components need to be completed in order to complete this application.

1. Web service
2. iOS App
3. Android App

The database for this application is built using SQL Server. It is designed to support the requirement below. Each web service function will need to use a stored procedure built within the database. Inline SQL is not permitted. All stored procedure created will have the following naming convention:

- sp_device_
Data returned base on a select or transaction SQL procedure.
- su_device_
SQL procedure that updates the data in the database.
- sd_device_
SQL procedure that deletes the data in the database.

iOS app needs to be available and compatible with iPhone and iPad (enlarged version of iPhone) and made available with the iOS version 8.x and above.

Android app needs to be available and compatible with android mobile phone and tablet (enlarged version of mobile phone) and made available with Kitkat 4.4 and above.

All database stored procedure, parameters and expected results listed under “Data Procedure” in the sections below are to be defined by app developer during implementation. Except the listed stored procedure names should stay the same.

Mock up website

Original mock up website is available at http://mavo.simpex.com.au/diner.html#/mavo_diner_list. It was built to get the feel and look of the Mavo Diner app. Requirement has changed recently. Please refer to updated spec written below for detailed specification.

The mock up website's style is hard coded to work in mobile mode or mobile dimension. For optimum visual effects, resize your browser or start in mobile mode before loading the website.

Critical Dates and Milestones NEW

The following dates are the milestones for this project. The app needs to be live in production by 14/10/2016.

Prototype release (feel and look)	??/??/????	App user interface design with static / fixed layout
First release (alpha version)	??/??/????	First release with all functionalities completed
Second release (beta version)	??/??/????	Second release with any refinements, bugs and issues reported from the first release
App go live	14/10/2016	App go into production
Future releases (patches)	??/??/????	New releases for any bugs and issues fixed reported by all users.

System Scalability NEW

Take scalability into account when designing the system. Initially launch of this app is in Geelong with population of 180 thousand. When the app is live for Australia, we need to scale up to 23.13 billion.

Microsoft Azure services will be used for Mavo apps' web service and database.

Mavo App Start up NEW

When the app is loaded for the first time, prompt user to register. The prompt has two options, “register” and “skip”.

Check app registration on fortnightly basis. If registration information is not found, show the above prompt.

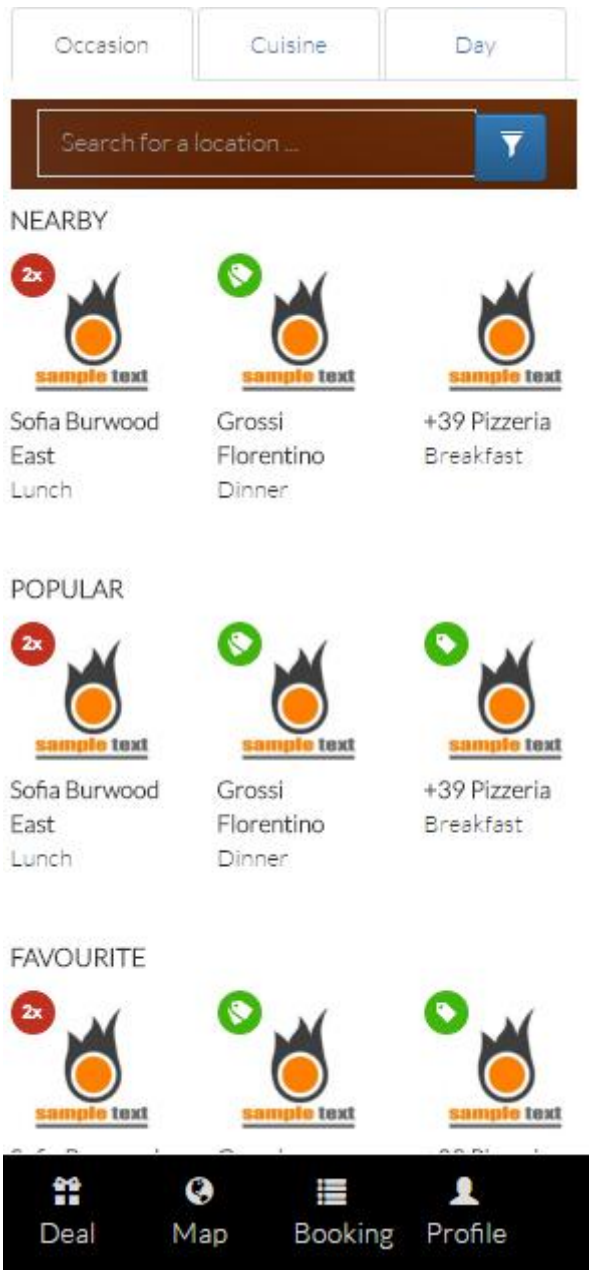
Refresh the following list of data from server

1. List of categories (i.e. Girls night out, Boys night out, Couple’s night etc)
2. List of cuisines (i.e. Australian, Italian, Chinese etc)
3. List of service type (i.e. Fine Dining, Street Food, Tapas etc)
4. List of meals (i.e. Breakfast, lunch dinner etc)

Mavo Diner Main Screen

This screen contains 3 tabs: Occasion, Cuisine and Day.

Occasion Tab



The Occasion tab contains a filter bar and 3 sections.

Search Filter

Tap on the filter bar to view the filter information.

Important: The filter information must be stored and accessible globally. There are multiple views requires the filter information.

Search for a location ...

RESTAURANT OFFER

None selected

CUISINE

None selected

SERVICE TYPE

None selected

DATE FROM

17/08/2016

DATE TO

17/08/2016

MEAL

None selected

Clear Go for it

The filter information include

1. Restaurant Offer - List of category (i.e. Girls night out, Boys night out, Couple's night etc)
2. Cuisine - List of cuisine (i.e. Australian, Italian, Chinese etc)
3. Service type – List of service category (i.e. Fine Dining, Street Food, Tapas etc)
4. Date From
 - a. Find offers that starts on or later than this date
 - b. Cannot be set to a date before today
 - c. The default date is set to today
5. Date To
 - a. Find offers that ends on or earlier than this date
 - b. The default date is set to today
6. Meal - List of meals (i.e. Dinner, Lunch, Breakfast etc)

Deal Sections and Restaurant List

Currently, there are 3 sections available in the Occasion tab. They are Nearby, Popular and Favourite. Each section has 3 restaurants listed.

The section headers and the restaurants are loaded dynamically by the stored procedure in the server database. The logic on the information returned on this screen requires to be fine-tuned occasionally, and the refinement will be carried out manually in the stored procedures.

For the first release, the default logics are the following:

1. Near by
Base on the filter information, find 3 closest restaurants with deal (within 10km) with a deal to my current location.
1. Popular
Base on the filter information, find 3 restaurants with deal with the best Mavo rating that is closest (within 10km) to my current location.
2. Favourite
Base on the filter information, find 3 of my favourite restaurant that are closest (within 10km) to my current location.

Here is the logic for a valid offer / deal

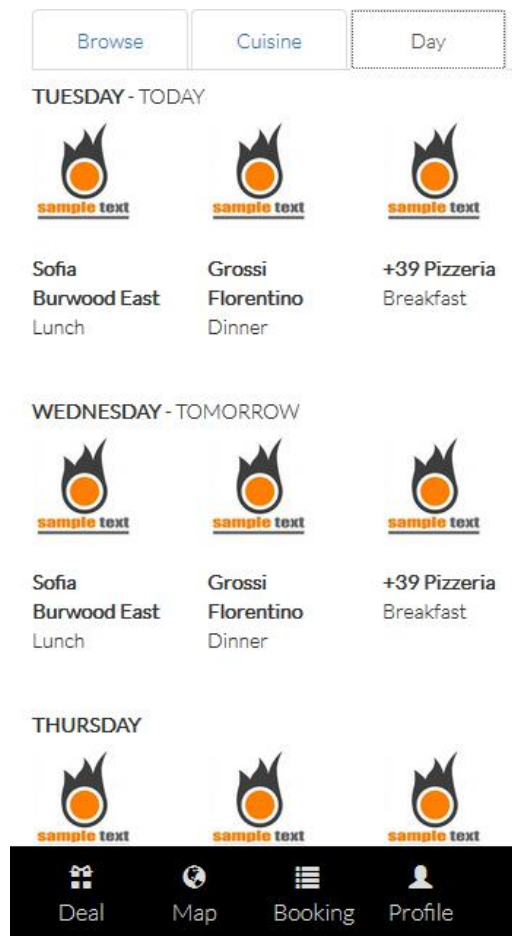
1. Offer date is today or in the future
2. If the offer date is today, the offer meal will be in the future.
i.e. If it is 2pm right now, Breakfast and Lunch deals for today are no longer valid.
3. If an offer has seat limitation, the number of accepted bookings must not exceed the max number of booking
4. Offer is not cancelled

Cuisine Tab



Cuisine tab loads a list of available cuisines. When user taps on a cuisine, it goes to the Occasion tab. The filter bar is populated with the cuisine chosen.

Day Tab



Day tab shows deals for lunch, dinner and breakfast from today for the next 7 days.

The section header and the restaurants are loaded from the server database dynamically. This is built in the same way as the Occasional tab.

For the first release, the default logics are the following:

- Load each day as the section header
- Load 3 deals for each restaurants for each day
- The 3 deals are: breakfast, lunch and dinner
- Do not show a meal that is already passed

i.e. If I load this tab at 2pm, I only want to see dinner for today

Data Procedure:

Procedure Name	Parameters	Expected results
sp_device_search	All filter variables (i.e. cuisine, deal, service type, etc) Tab name (i.e. Occasion, Cuisine, Day) Device Current Lat & Lng	N number of tables returned. Table 1 contains a list of section headers (i.e. popular, nearby, Tuesday - Today etc) Table 2+ contains the restaurants and deal related information that matches each row in Table 1

i.e. Table 1

Near by
Popular
Favourite

Table 2 – corresponds to “Nearby” section

Sofia Burwood East	Lunch	...
Grossi Fiorentino	Dinner	...
+39 Pizzeria	Breakfast	...

Table 3 – corresponds to “Popular” section

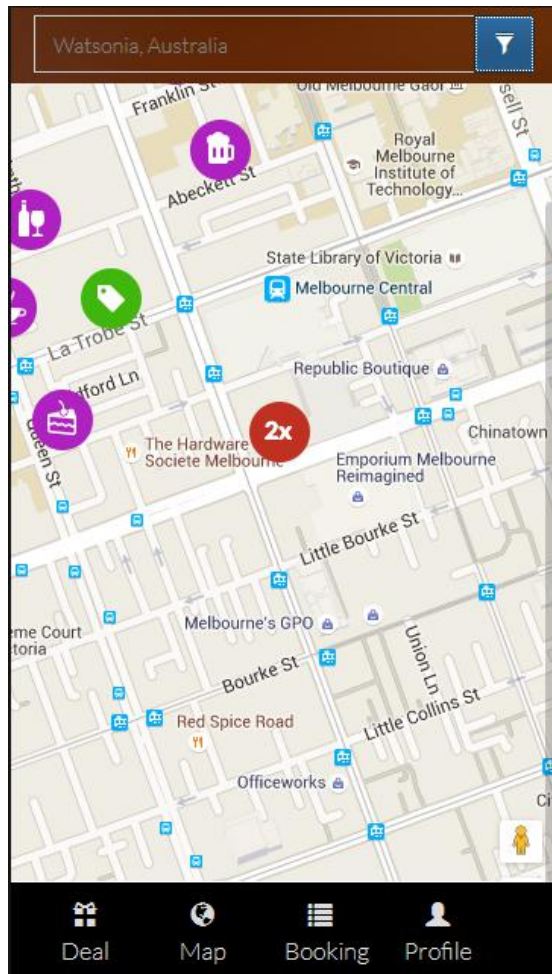
Sofia Burwood East	Lunch	...
Grossi Fiorentino	Dinner	...
+39 Pizzeria	Breakfast	...

Table 4 – corresponds to “Favourite” section

Sofia Burwood East	Lunch	...
Grossi Fiorentino	Dinner	...
+39 Pizzeria	Breakfast	...

Map View

Map view shows all restaurants near my current location by default.



The filter bar shown at the top of the screen is the same as the filter bar in Occasion tab in Mavo Diner Main Screen. If the filter is applied in the Occasion tab, the same filter values apply here.

The map view uses device's current location. If device's location service is turned off, prompt user to turn it on. If no location is provided for the search, default the search to a configuration location (via an admin portal). Use the town centre of Geelong, Victoria for the first release.

Mark user's current location on map as a blue dot (same as in mobile map app)

The icon displayed on the map for each restaurant / deal is from the "IconURL" field in the "DealCategory" table in the database.

User can move and pinch (zoom in and out of) the map. When the boundary of the map view is updated, refresh the list of restaurants / deals that are available in the map area.

Recommendation: cache the list of icons on device for better performance. If an icon (icon URL) is not found locally, download it from the icon URL

When filter is updated, refresh the search result from server database.

Data Rules: Same as Diner Main Screen

Restaurant Deal Details Screen

When tap on a deal or restaurant in Diner Main Screen or Map View to get access to the Restaurant Deal Details screen.

The layout of this screen is an ongoing discussion. The following layout is used for the first release. It might be altered for second release.

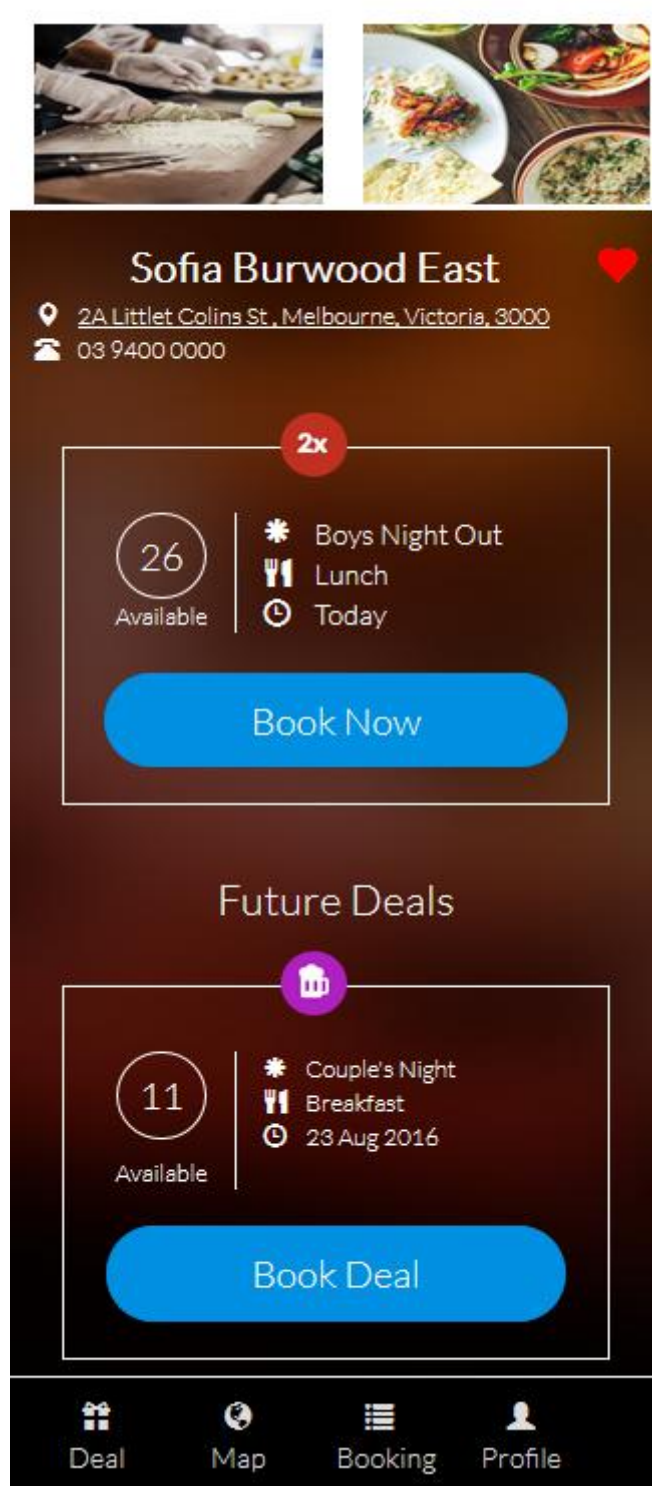


Image Carousel

The top of this screen is an image carousel. It shows a list of images uploaded by Restaurants from RestaurantPhoto data table. By default 2 images are shown at once. User can swipe the image carousel to scroll and view the remaining images.

User can tap on an image and shows the image carousel in full screen. Display one image per scroll. User can pinch the image to zoom in and out.

Critical Information

Show restaurant name, address and phone number.

- When user tap on the address, prompt the user to go to mobile native map or Google map for direction from current location to restaurant address
- When user tap on phone number, prompt user to call the phone number

If the restaurant is marked as Favourite, the red heart appears beside the restaurant name.

Tap on the heart again to remove the restaurant from user's list of favourite restaurants. The heart will change from red to white.

Deal List

Show a list of relevant deals. These deals are the result is base on the global filter. The logic as the following:

- Deal belongs to the current restaurant
- Deal is valid (i.e. must be in the future)
- Deal must match the restaurant offer (i.e. Boys night out, Girls night out), if selected in the filter.
- Order deals by date and time
- For the first release, show the earliest deals available

Show list of future deals. The logic as the following:

- Deals belong to the restaurant.
- Deals that are valid
- Order deals by date and time
- Exclude the deal shown in the relevant deal section

- If there are more than 1 deal available, show the top deal and make the button “See More Deals” visible. When clicked, show remaining available deals.

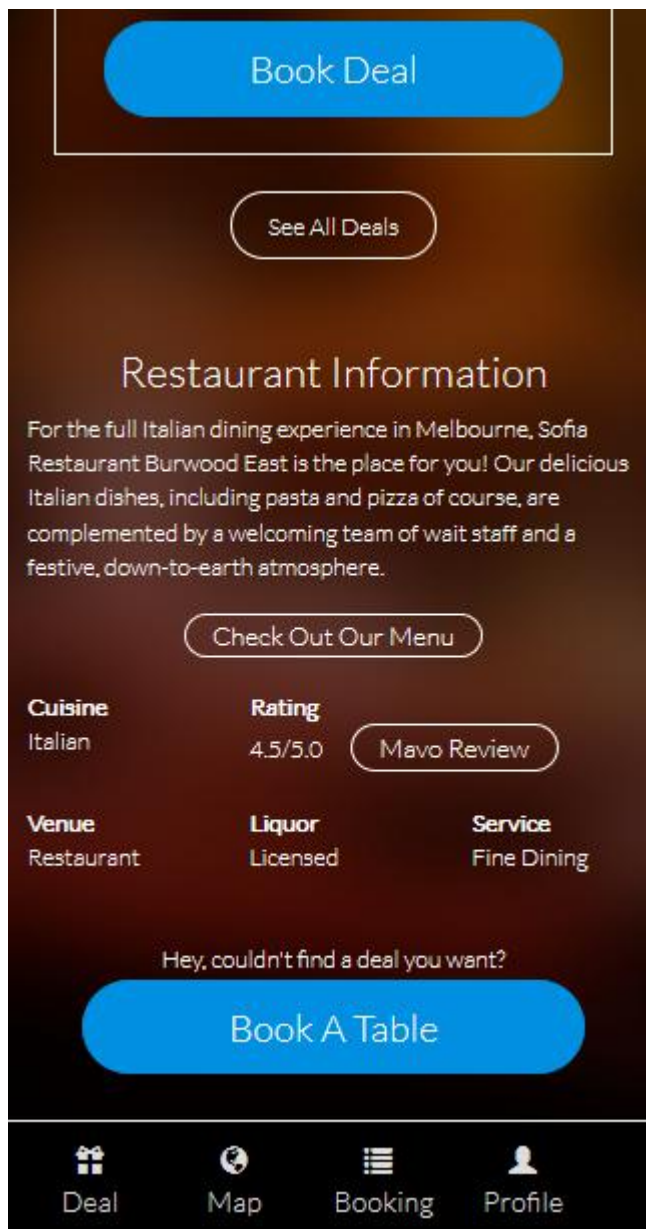
If no deals available, see the following scenario

- Both relevant and future deals are not available
 - Hide both relevant deals and future deal section. Replace with message “No deals available at this moment. You can book a table below”
- If relevant deals are not available only
 - Hide relevant deals section, replace it with the message “Deal isn’t available now, check out future deals below”
- If future deals not available only
 - Remove the future deals section

Restaurant General Information

After the list of available offers / deals, show the remaining restaurant general information.

- Restaurant Description
- Menu (Link to Zomato or Image)
- Cuisine
- Rating
- User Review
- Venue
- Liquor
- Service Category



“Book Now” and “Book Deal” buttons both books the user with the associated deal. “Book A Table” is a booking without any deal.

User can tap on “Mavo Review” button to see the list of reviews

User can tap on the “Check out our menu” button to see menu. Either show an uploaded photo or open a Zomato Menu URL in an in-app web browser.

Data Procedure:

Procedure Name	Parameters	Expected results
sp_device_restaurant	Restaurant Id, All filter variables (i.e. cuisine, deal, service type, etc) Tab name (i.e. Occasion, Cuisine, Day) Device Current Lat & Lng	All Restaurant data All available offers / deals (include dates) 3 tables returned Table 1: Restaurant Information Table 2: Relevant deal Table 3: All available offers

Make Booking

Sofia Burwood East

Meal: Lunch Deal: 20% OFF BILL

DINING DATE

07 Jul 2016

OF DINERS

TIME REQUESTED

Choose One

ANY SPECIAL REQUIREMENTS (OPTIONAL)

Enter any special dietary requirement if required.

BOOKING NAME

Enter booking name

Deal Map Booking Profile

Sofia Burwood East

DINING DATE

Enter a date time

MEAL

Lunch

OF DINERS

TIME REQUESTED

8:00 pm

ANY SPECIAL REQUIREMENTS (OPTIONAL)

Enter any special dietary requirement if required.

BOOKING NAME

Enter booking name

Deal Map Booking Profile

If user is booking a deal

- Show a list of possible dates for the deal in the dining date drop down list
- Show meal type and deal information below restaurant name

If user is making a general booking (without an offer / deal)

- Dining date is a text field that accepts a date that is today or any date in the future.
- Meal type drop down list is shown
- Meal type and deal information under restaurant name are hidden

The number of diners has to be equal or less than the maximum booking size specified in the offer / deal

The time requested timeslot is loaded based on meal type. Data is extracted from the database.

The default values are:

Lunch: 11:00am – 3:00pm

Dinner: 6:00pm – 10:00pm

Takeaway: 11:00am – 10:00pm

If user is logged registered or logged in via Facebook or previously clicked “remember my details for next time” during last booking, pre-populate known information.

“Remember my details for next time” is checked by default. If checked, save all listed details on the device on Submit Booking

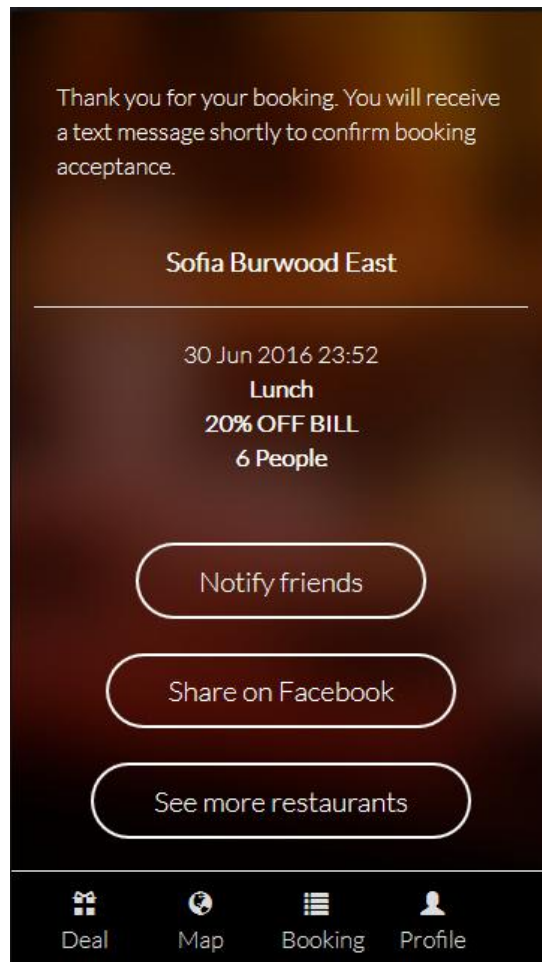
Tap on the “Submit Booking” button saves the booking in database with status of “Pending”

Data rules: Timeslots are loaded from the database (sp_option_mealtimeslot)

Data Procedure:

Procedure Name	Parameters	Expected results
sp_device_restaurant	Restaurant Id	All Restaurant data All available deals (include dates)
su_device_booking	All book fields, Device Id, User Profile Id (If available)	Return booking Id
sp_option_mealtimeslot	Restaurant Id, @TimeslotType (Dinner, Lunch, Breakfast, etc)	Return list of time slots

Booking Complete



Add event to calendar

Prompt user if wishes to add the booking to calendar when this screen is displayed. If user responds yes, add the following into their mobile calendar:

Title: [Restaurant Name] – Book via Mavo

Location: [Restaurant Address]

Date: [Booking Date]

Time: [Booking Time]

Alarm: 1 hour before event plus travel time

Booking details

This screen confirms the booking information in the booking screen.

The information shown is:

- Restaurant name
- Booking date
- Meal type
- Deal type
- Number of diners

Notify dining party

The “Notified friends” button brings up native mobile phone contact list for user to select which users to send the booking information.

If technically achievable for both iOS and Android to start the mobile phone messaging app with the selected user’s detail in the recipient list and the following message pre-populated

Hi, I just made a booking for [meal type] at [restaurant name] on [booking date] [booking time] from the Mavo app. Checkout the address below, don’t be late.

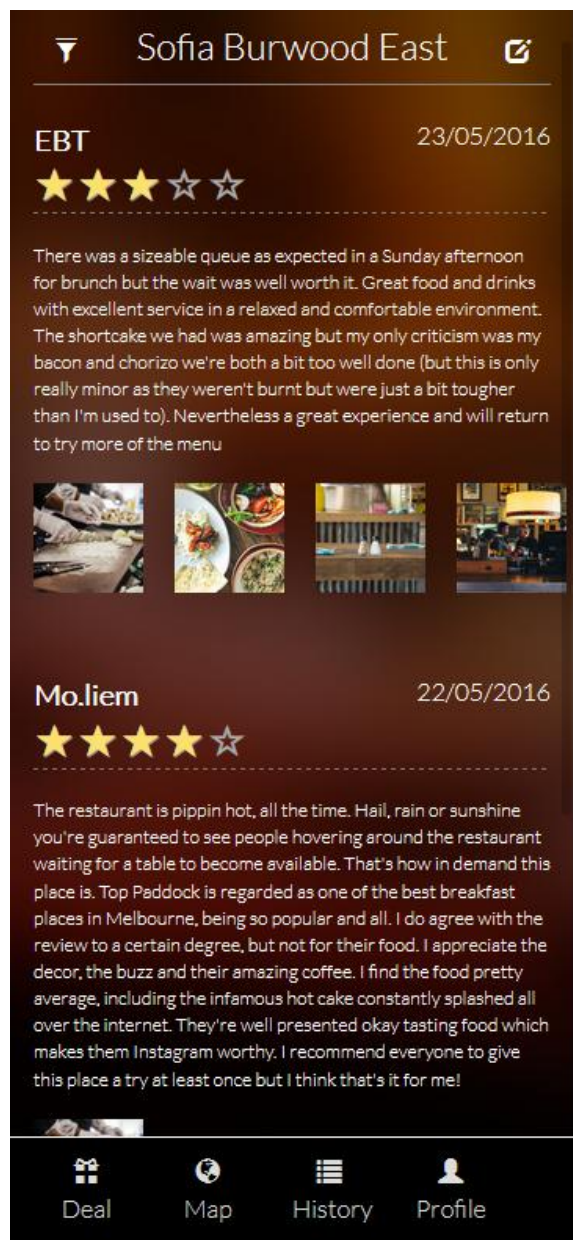
[restaurant address], [restaurant suburb], [restaurant postcode]

Alternatively, save the list of selected contact in our database on server.

The “Share on Facebook” button checks if user is already logged into Facebook. If yes, start a Facebook share with the following pre-populated message.

I just booked a [meal type] [deal type] deal with [restaurant name] from awesome Mavo App. Check it out <http://mavo.com.au>

Mavo Review



Mavo review shows a list of reviews ordered by date. Most recent is shown first. Only the reviews within the last N weeks (configurable) are available to be displayed.

Tap on the button on the top right corner to add a new review. User can only review a restaurant 2 hours after they've attended their booking. If no booking has been made, the app prompts "Review isn't available because you have not yet attend a booking at this restaurant."

A notification will be sent to a user when the review feature is available. User can tap on the notification and go straight into the Write Review screen.

Data rule: Review status must be “Approved” before it can be displayed.

Data Procedure:

Procedure Name	Parameters	Expected results
sp_device_review	Restaurant Id, Device Id, User Profile Id (if available)	All approved restaurant reviews

Write Review

The screenshot shows a mobile app interface for writing a review. At the top, the restaurant name 'Sofia Burwood East' is displayed, followed by the date '01 Jul 2016'. Below this is a rating section with five stars; the first star is partially filled, indicating a 1.5-star rating. A text input field for the review is shown with the label 'Your Review' and a character count '0 / 250'. Below the text field are two buttons: 'Upload Photo' and 'Submit Review'. At the bottom of the screen is a navigation bar with four icons and labels: 'Deal', 'Map', 'Booking', and 'Profile'.

User can rate the restaurant experience out of 3 helmets (Not using stars as shown in the screenshot). The rating is an increment of 0.5. There are 6 possible ratings.

User can write a review in 140 characters.

User can upload photo

The review message is checked against a list of restricted words in the backend database. If there are any matching words, the review is rejected.

Data rules: New review's "review status" is set to "Pending".

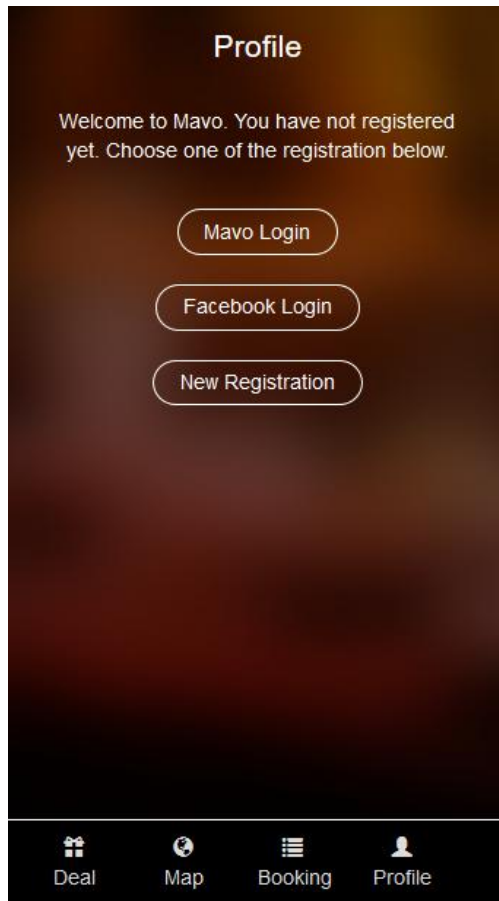
Data Procedure:

Procedure Name	Parameters	Expected results
su_device_review	Restaurant Id	If review is accepted, review Id is expected. If the

	Rating, Review Text, Photos	review is rejected (i.e. the use of inappropriate language), a rejected message is returned.
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User profile

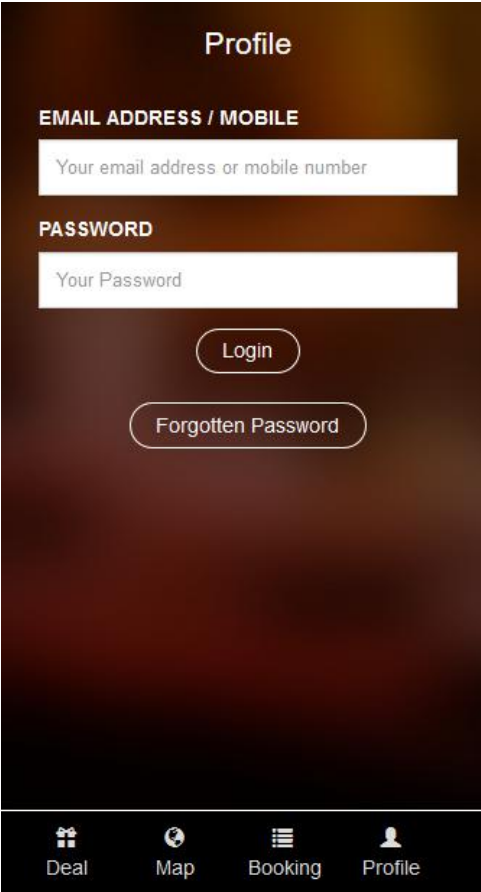
Profile screen has three method of registering a user.



1. Mavo login

User was previously created. User can login via email address / mobile and password.

User can tap on “Forgotten Password” to receive an email with a new temporary password.



The screenshot shows a mobile app interface for login. At the top, the word "Profile" is centered. Below it, there are two input fields: the first is labeled "EMAIL ADDRESS / MOBILE" and contains the placeholder text "Your email address or mobile number"; the second is labeled "PASSWORD" and contains the placeholder text "Your Password". Below these fields are two buttons: "Login" and "Forgotten Password". At the bottom of the screen is a navigation bar with four icons and labels: "Deal", "Map", "Booking", and "Profile". The "Profile" icon and label are highlighted, indicating the current screen.

2. Facebook login

App integrates with Facebook account setup on mobile device. Retrieve user's full name and email address.

3. User can register by entering the following information

- Name
- Email Address
- Mobile Number (optional)
- Password
- Confirm password

The image shows a mobile application interface for user registration. The background is a dark gradient. At the top, the word "Profile" is centered in white. Below it, there are five input fields, each with a label in white uppercase letters: "NAME", "EMAIL ADDRESS", "MOBILE", "PASSWORD", and "CONFIRM PASSWORD". Each field contains a light gray placeholder text: "Your Name", "Your email address", "Your Mobile Number", "Your Password", and "Your Password" respectively. Below the last two fields is a white rounded rectangular button with the word "Register" in black. At the bottom of the screen is a dark navigation bar with four white icons and labels: a gift icon for "Deal", a globe icon for "Map", a list icon for "Booking", and a person icon for "Profile".

Profile

NAME

Your Name

EMAIL ADDRESS

Your email address

MOBILE

Your Mobile Number

PASSWORD

Your Password

CONFIRM PASSWORD

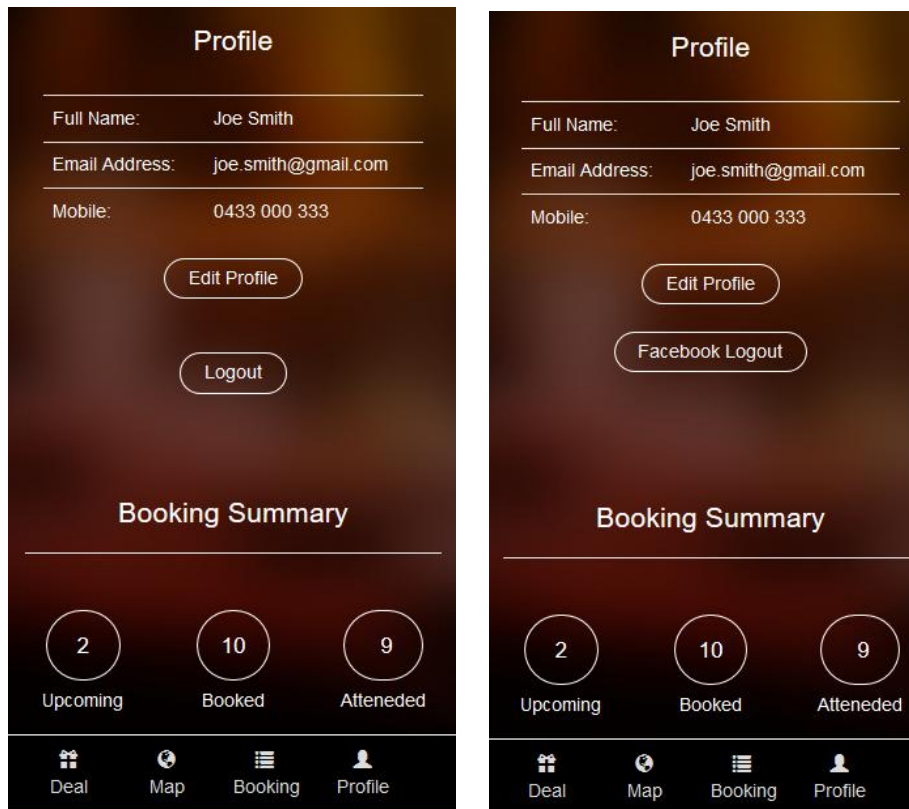
Your Password

Register

Deal Map Booking Profile

After user logged in, user can:

1. Tap on “Edit Profile” to modify and update all fields
 - a. For Facebook login, user can only edit mobile number
2. Tap on “Logout” to logout the system



Booking Summary shows 3 figures: upcoming, booked and attended.

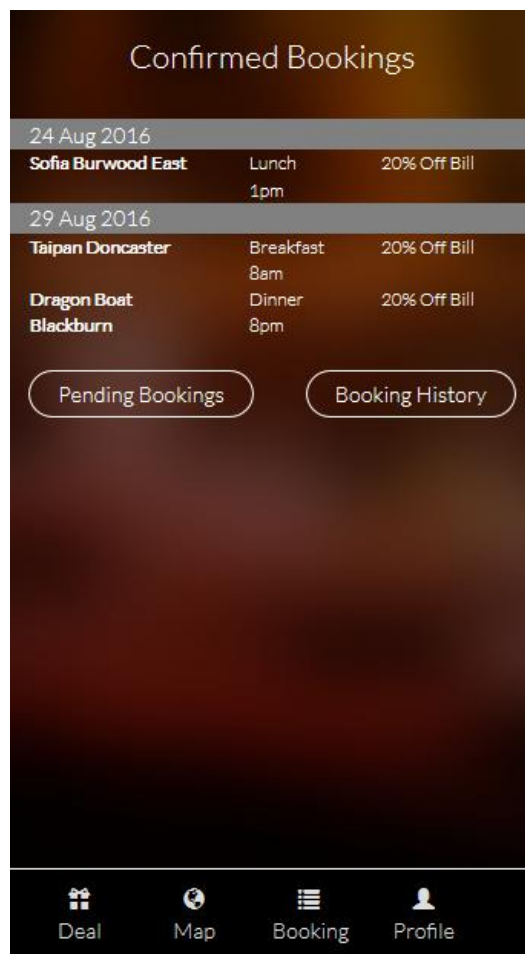
- Upcoming: Number of future bookings (to be attended)
- Booked: Number of bookings made
- Attended: Number bookings attended

User tap on any figure goes to the History tab

Data Procedure:

Procedure Name	Parameters	Expected results
sp_device_profile	Device Id, User Profile Id (if available)	All information relates to the current device
su_device_profile	All user related fields on screen Device Id, User Profile Id (if available)	Return user profile id

Booking



Show a list of bookings

Tap on the "Booking history" button to view a list of historical bookings made in the past

Tap on the "Pending Bookings" button to view a list of bookings that is still pending, restaurant have not yet accepted or declined the booking.

Tap on the restaurant name takes user to the restaurant detail

Data Procedure:

Procedure Name	Parameters	Expected results
sp_device_bookinghistory	Device Id	All future bookings Last 20 historical bookings

Push notification

When restaurant actions a booking (accept, decline), a push notification is sent to the user. User can tap on the notification and view the booking in app. Prompt user whether to add to calendar or not.

User gets a notification to review the restaurant they booked (and attended) within 2 hours of the booking time. This point is covered in the Review section.

Send push notification to user when their favourite restaurant creates a new offer / deal. When tap on the notification, go to the restaurant detail (with all filter data cleared).