Requirements Document

Project Name: Kiwifeeds

Team Name: Kiwitato

# Business Requirements

## Introduction

Kiwitato would like to create an online rating system for restaurants around New Zealand. We are doing this because Zomato has discontinued their service in New Zealand, and it has left a gap in the market for a simple food rating site. Though google does provide online ratings for restaurants these are not well laid out for viewing what the restaurants offer and what people think of the different food items available, we would like to make a site that fills this gap.

## Statement of Problem or Need

The problem is that there are not any simple sites dedicated to viewing or rating eateries and their food. People would like to be able to see restaurants, the selection of food they provide and what other people think of their experience at these restaurants. On the other hand, for eateries there are few straightforward ways of sharing with diners what they have to offer.

According to tech crunch only 40% of independent restaurants have online menus and more shockingly, around 95% do not have mobile sites (Lardinois, 2012). Though this based on an old study, the trend still continues today with smaller eateries having much less digital presence and because “using digital menu boards can increase yearly store sales per unit by $16,000”(Pesto,2021), this can be a big loss to both the eateries due to loss of sales and dinners due to missing out on potentially great food they didn’t know about.

## Business Requirements

### List of stakeholders

Identify the main stakeholders

* Client (Eatery Owners)
* Developers (including project manager)
* Site Users (*Foodies*)

### Client

Alyssa will act as contact person with stakeholders

### List of business requirements

While the client has the overall say on the project, it's also important to take note that the other stakeholders also include users (restaurant patrons). To ensure that all parties’ needs are addressed, the specifications per group has been grouped as to provide the best response possible to everyone’s need

Restaurant Patrons:

* Ability to create personal account.
* Restaurant Menu with details, price (search function too for faster searches and ability to filter dishes by a specific category and to select between the dine-in and take away option)
* A comments section with stars to allow customer review and upload files such as pictures/videos.
* Notification bell about new dishes, restaurant branch and promotional discounts
* Add to cart page to view purchased items and is fully customisable.

Restaurant Owner

* A back-end system where the owner can upload/update contents such as restaurant locations, menu photos and view customer feedback at Realtime.
* Sign in page for the owner’s management profile
* A comment section where the owner can reply to patrons in real-time
* Ability to have insights on transactions so owner will have better understanding of the customer base.

### Quality requirements

The non-functional requirements are:

* Site can load in three seconds.
* Login is fully secured with authorisations.
* Ability to handle large number of users at peak times.
* Website is localized to adapt to language and needs.
* Easy to navigate and use by clients and users alike.

# Business Solution

## Options considered

* Website with a focus on diner’s rating and diner uploaded content, images and menus uploaded by diners and little influence from the restaurant.
* Website which can function as a uniform way to make a webpage for restaurants and allows restaurants to upload their own content to templates, with users being able to browse and review.

## Recommended Solution

### Solution statement

When eating out, diners want to be sure they are only going to eateries which will give them an enjoyable experience and they want to make sure they order the best dishes their pick has to offer. 77% of diners view a restaurant’s website before they dine out (Kelso, 2019) and 70% have been dissuaded from an option due to their website (Kelso, 2019). Poor readability, food photography, and a difficult to navigate website turns diners off from a potentially fantastic location and costs restaurants potential customers.

Building and maintaining a website is an expensive endeavour, and not all eateries can afford this in their budget. For those that can, their websites may still have issues with downtime, poor design, and legibility. Their websites would also not have the authenticity of user ratings monitored by a third party.

KiwiFeeds is a website to help restaurants put their best foot forward, even if they do not have a great website. Our website would allow diners to browse eateries both high-end with chic websites, and small hole-in-the wall mum and dad stores who still use analogue tills. By providing a consistent, clear, and easy to navigate format to our site users will be able to easily navigate the offerings of any website and restaurant owners will easily be able to upload menus and images without having to worry about design and format. By allowing users to review restaurants, potential diners will also have the security of peer reviewing to help them decide where to eat and restaurants can have the legitimacy of a review attached to their page to help attract diners.

The key benefit to using our website is for restaurant owners to have a great looking, well-functioning, and easy to manage web presence without the hassle of the set up and maintenance required if they were to run their own website. Set up is quick and can be done in a fraction of the time it would take to develop a new site using our easy backend interface. Restaurants will become part of a larger database, so the restaurant will have access to KiwiFeeds’ userbase and come up when they search KiwiFeeds’ database. Reviews will allow quality eateries to shine and provide valuable feedback to underperforming establishments.

Unlike Google, KiwiFeeds gives each restaurant their own page with their menu and photos of the food listed in an easy to navigate format. While google is one of the most popular ways of finding and reviewing restaurants currently, they have no inbuilt way of listing the menu in an uncomplicated way for customers to browse rather than rely on links to external websites or poorly photographed photos of the menu. Users must hunt for menu photos, and it is easy to miss, and unappetizing photos taken by users rather than professional food photos done by the establishment may appear first on the listing. KiwiFeeds offers a more tailored experience highlighting the establishment’s menu not only plain reviews and user-uploaded content.

### Main Features

Restaurant Page

Cleanly designed webpage showcasing the restaurant, including user reviews and optionally:

* Food photography
* Interior photography
* Menu items
* Blurb

*Restaurant Owner Back End*

Easy-to-use back end where restaurant owners can upload all the details to their page. No code, things are all automatically formatted for them.

Review Functionality

Users can review restaurants on the site and rate them out of 5 stars.

User Page

Overview of all a user’s reviews

Potentially a favourite or saved restaurant.

Search Page

Users can search the area for restaurants based on their parameters such as cuisine, price, rating, or location.

### Unique value proposition / Justification

The key aspect which makes our site unique is how we function as a uniform standard for restaurant websites. By allowing smaller businesses the ability for a professional website without very much effort or tech knowledge we can help standardize the way people browse menus and restaurants. This makes our site like a restaurant Wikipedia, rather than just a review site. While we offer reviews, we are also trying to create a new standard on how people access menus and information about their favourite new restaurants.

I recommend this option because it seeks to revolutionize the space by building on what works and making it better.

# Solution Requirements

## Context Diagram

A diagram of a customer service

Description automatically generated

## User Roles

1. **Customer/User:**
   1. Responsibilities:
      1. Browsing and searching for restaurants.
      2. Viewing restaurant menus, ratings, and reviews.
      3. Placing orders for food.
      4. Managing their user profile, including adding payment methods and delivery addresses.
      5. Rating and reviewing restaurants.
      6. Adding and removing favorite restaurants.

* 1. Permission
     1. Access to browse restaurants and menus.
     2. Access to order and pay for food.
     3. Access to user profile management.

1. **Restaurant Owner/Partner:**
   1. Responsibilities:
      1. Listing their restaurant on the app.
      2. Managing their restaurant's menu items, prices, and descriptions.
      3. Receiving and processing incoming orders.
      4. Tracking order statuses.
      5. Responding to customer reviews.

* 1. Permissions:
     1. Access to create and edit restaurant listings.
     2. Access to manage menu items and prices.
     3. Access to view and full fill incoming orders.
     4. Access to respond to customer reviews.
     5. Limited access to user data for order full fillment.

1. **Administrator/Support:**
   1. Responsibilities:
      1. Administering the platform.
      2. Handling customer support inquiries and issues.
      3. Managing restaurant listings, including adding, editing, and removing restaurants.
      4. Monitoring and addressing any fraudulent or inappropriate behaviour.

* 1. Permissions:
     1. Full access to manage all aspects of the platform.
     2. Access to user data for support and administration purposes.
     3. Access to restaurant listings for moderation.

## Business Domain Model

* **Entities:**
  + **User**
    - Attributes:
      * User ID (Primary Key)
      * First Name
      * Last Name
      * Email Address
      * Phone Number
      * Address
      * Payment Methods
  + **Restaurant**
    - Attributes:
      * Restaurant ID (Primary Key)
      * Name
      * Description
      * Location
      * Owner
    - Relationships:
      * One-to-Many with Menu Item (A restaurant can have many menu items)
  + **Menu Item**
    - Attributes:
      * Menu Item ID (Primary Key)
      * Name
      * Description
      * Price
    - Relationships:
      * Many-to-One with Restaurant (Many menu items belong to one restaurant)
  + **Order**
    - Attributes:
      * Order ID (Primary Key)
      * User (Foreign Key)
      * Restaurant (Foreign Key)
      * Order Date
      * Status (e.g., Processing, Delivered)
      * Total Amount
      * Delivery Address
      * Payment Method
    - Relationships:
      * Many-to-One with User (Many orders can belong to one user)
      * Many-to-One with Restaurant (Many orders can belong to one restaurant)
  + **Review**
    - Attributes:
      * Review ID (Primary Key)
      * User (Foreign Key)
      * Restaurant (Foreign Key)
      * Rating
      * Comment
    - Relationships:
      * Many-to-One with User (Many reviews can belong to one user)
      * Many-to-One with Restaurant (Many reviews can belong to one restaurant)
  + **Favorite Restaurant**
    - Attributes:
      * User (Foreign Key)
      * Restaurant (Foreign Key)
* **Business Rules and Logic:**
  + Users can register, log in, and manage their profiles, including adding payment methods and favorite restaurants.
  + Restaurants can list their menus, which consist of multiple menu items.
  + Users can place orders at restaurants, specifying delivery addresses and payment methods.
  + Users can rate and review restaurants they've ordered from.
  + Users can add and remove restaurants from their list of favorite restaurants.
  + Restaurants can manage their listings, including menus, reviews, and orders, through an admin dashboard.

## User Stories

**3.4.1 User Registration**

I want to be able to register as a new user with my:

* First Name
* Last Name
* Email Address
* Phone Number
* Address
* Payment Information
* Password

So that I can start writing reviews of eateries and restaurants.

**3.4.2 Login and account**

As a registered user, I want to be able to access my account and old reviews by logging in with my email and password.

I want to be able to modify my information, read my reviews, and track my activity on the site from my profile page.

**3.4.3 Restaurant Owner Registration**

I want to be able to register my restaurant and offer information about it, such as its name, address, and menu.

**3.4.4 Restaurant Details**

In order to assess a restaurant's quality, I as a user want to see the average rating based on other customer ratings as well as their menu and products.

**3.4.5 Leave a Review**

As a logged-in user, I want to write a review for a restaurant, including rating it and adding comments, to share my dining experience

**3.4.6 Place order**

As a logged-in user, I want to place an order from a restaurant.

**3.4.7 Add restaurant to favorite list**

As a logged-in user, I want to be able to add restaurants to my favorite list and browse it.

## Non Functional Requirements

### Security requirements

**3.5.1.1 Data Encryption**

The application should use https to encrypt data transmitted between the user's browser and the server in order to prevent interception of sensitive data, such as login credentials and user reviews.

**3.5.1.2 Authentication**

Use secure authentication methods, such as salting and password hashing, to prevent unauthorized access to user account information.

**3.5.1.3 Authorization**

Make sure that users can only access the information and features that are available to them based on their roles and permissions by enforcing proper authorization checks.

**3.5.1.4 Database Backup**

To ensure data recovery in the event of system failures or data breaches, the application's database should be backed up daily or weekly.

**3.5.1.4 Users Privacy**

Provide users with access to their personal data and the option to delete their accounts in order to comply with data protection laws.

### Other quality requirements

**3.5.2.1 Performance**

Establish performance benchmarks, such as response times for various operations (like restaurant searching or user profile loading), and make sure the application satisfies these benchmarks even during peak usage.

**3.5.2.2 Scalability**

Make sure the application can scale horizontally (by adding more servers) or vertically (by upgrading server resources) to handle an increasing number of users, restaurants, and reviews.

**3.5.2.3 Usability**

To make sure the user interface is simple and easy to use, conduct usability tests and user testing, and based on the results, make the necessary adjustments.

**3.5.2.4 Accessibility**

Make sure the web application complies with accessibility standards like the WCAG (web content accessibility guidelines) and is usable by people with disabilities.

**3.5.2.5 Maintenance**

To make the codebase maintainable by future developers and to promote collaboration within your development team, enforce coding standards and documentation best practices.

**3.5.2.6 Availability**

Make sure the application is highly available, reliable, and provides redundancy in case of server failures to reduce downtime.

**3.5.2.7 Testing**

Establish testing specifications, such as unit tests, integration tests, and user acceptance tests, to guarantee the accuracy and dependability of the application.

**3.5.2.8 Scalability**

Define the scalability of the application as the user base expands. Provisions for load balancing, database sharing, and caching techniques may be included in this.

# Scope

Indicate which requirements you plan to include in the first two iterations. Note that this may change as you advance through the project.

## Iteration 1

* As a diner, I want to create a user account that I can log into, so that I can have a personalised user profile
* As a diner, I want to see the full list of restaurants, so that I can preview the range of selection
* As a diner, I want to view a restaurant's individual page, menu, photos and ratings, so that I can be better informed with my decision
* As a restaurant owner, I want to create a user account that I can log into, so that I can have a customised restaurant management profile
* As a restaurant owner, I want to upload my restaurant's menu, photos and descriptions, so that diners can have all the information they need to make their dining decisions
* As a restaurant owner, I want to have an edit option on my restaurant's page, so that I can add more photos or modify any details when required
* As the website administrator, I want to have the option to view, edit or delete any of the restaurant listings, as part of providing technical and administrative support to the restaurant owners
* As the website administrator, I want to have the option to view or edit any of the diners’ profile details, as part of providing technical and administrative support to the diners
* As the website administrator, I want to manage the task of assigning user permissions and categorising users into groups of restaurateurs or diners, so that the userbase is organised

Non-functional requirements

* Pages should load within 3 seconds

## Iteration 2

* As a diner, I want to search a restaurant by cuisine, so that my search is narrowed down
* As a diner, I want to post a review of the restaurant, so that I can provide and express my feedback on my dining experience
* As a diner, I want to create and maintain a list of my saved favourite restaurants, so that I can easily purchase from them again if I want to
* As a restaurant owner, I want to view the list of reviews of my restaurant, so that I can view our diners’ feedback which will help with making business decisions
* As a restaurant owner, I want to have the option to reply to our diners’ review, so that it helps increase our engagement with them

Non-functional requirements

* Website should have authorisation and authentication security features at login

## Backlog

* As a diner, I want to select food and/or drinks from the menu and make payment, so that I can complete my purchase and wait for delivery
* As a restaurant owner, I want to view the list of diners who have made purchases from our restaurant, so that I can understand the size of our customer base that we are reaching through using OUR WEBSITE'S NAME

## Non-functional requirements

* Pages should load within 3 seconds
* Website should have authorisation and authentication security features at login
* Website performance should not slow down and can handle large number of users during peak dining times

# Bibliography

Kelso, A. (2019, August 30). *77% of diners check restaurant websites before visiting, survey finds*. Retrieved from Resturant Dive: https://www.restaurantdive.com/news/77-of-diners-visit-restaurant-websites-before-going-survey-finds/562008/

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