



First Year Project proposal

The RUSL Kitchen

A Digital Dining Experience





Research Proposal

Skill Development Project I - ICT 1108

**Bachelor of Information and Communication Technology
(BICT)**

Degree Program

Department of Information and Communication Technology

Faculty of Technology

Rajarata University of Sri Lanka

Mihintale

Details of the Project

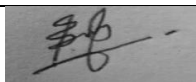

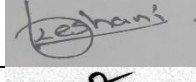
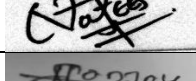
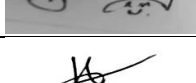

Project Title : The RUSL Kitchen (A Digital Dining Experience)

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Submission Date : 2023/03/29

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Introduction

We propose creating a restaurant website for **The RUSL Kitchen (A Digital Dining Experience)** as our first-year project. In today's digital world, restaurants must have an online presence in order to attract new customers and develop brand awareness. We can assist the restaurant display its distinct environment, cuisine, and values by establishing a website, as well as make it easier for consumers to access information and make bookings.

Our suggested website will include high-quality photos of the restaurant's meals, a menu, the restaurant's location, operating hours, and contact information. We will also give a user-friendly interface via which consumers may book reservations, order food for pickup, and buy gift cards. We can boost client happiness and encourage repeat business by providing these easy options.

In conclusion, our planned project to create a restaurant website is an interesting chance to apply our skills and knowledge to a real-world problem. Working directly with the restaurant owners and personnel, we can develop a website that fulfils their goals while exceeding their customers' expectations. We are excited to bring this initiative to reality and make a difference in our industry.

Our objective is to design a website that thrills and engages guests while also meeting the demands of the business. We can assist the restaurant in attracting new customers, increasing income, and meeting their business objectives by providing a great online experience.

Problem Statement

The University of Rajarata is a large institution that serves a diverse student population, with students coming from different parts of the country and even from other parts of the world. One of the major concerns for the university is the dining experience for students, as it can have a significant impact on their overall well-being and academic performance. The current dining system at the university is outdated and ineffective, leading to long wait times, limited food options, and overall dissatisfaction among students.

The RUSL - A Digital Dining Experience project aims to address these issues by providing a more efficient and convenient dining experience for students. The project will involve the development of a digital platform that allows students to access the menu, order their food, and track the status of their orders in real-time. This will eliminate the need for students to wait in long lines or physically visit the kitchen to place their orders. Moreover, the project will also provide students with a wider range of food options, catering to different dietary needs and preferences. This will not only improve the dining experience for students but also promote healthier eating habits among the student population. The proposed digital dining experience will also benefit the university by reducing food waste, increasing operational efficiency, and providing valuable data insights into student dining habits. In summary, the University of Rajarata Kitchen - A Digital Dining Experience project will significantly improve the dining experience for students, making it more convenient, efficient, and enjoyable.

Aim

The aim of the RUSL Kitchen - A Digital Dining Experience project is to provide a more efficient and convenient dining experience for a diverse range of target audiences, improving their overall well-being and promoting healthier eating habits.

Objectives

1. To provide a more efficient and convenient dining experience for students and other target audiences by allowing them to access the menu, order their food, and track the status of their orders in real-time.
2. To offer a wider range of food options that cater to different dietary needs and preferences, promoting healthier eating habits among the target audience.
3. To reduce food waste and increase operational efficiency for the university by providing valuable data insights into student dining habits.
4. To improve overall satisfaction and well-being among the target audience, leading to better academic and professional performance.
5. **Increase online visibility:** Develop a website that is optimized for search engines to increase online visibility and attract more potential customers to the restaurant's website.
6. **Improve customer experience:** Create a user-friendly website that provides a seamless customer experience, including easy-to-use online booking, comprehensive menu with nutritional information, and online ordering system.
7. **Increase revenue:** Develop a website that drives more revenue by offering online ordering, special promotions, and exclusive online discounts.
8. **Enhance the restaurant's brand image:** Create a website that accurately represents the restaurant's brand image, showcasing the restaurant's unique selling points such as signature dishes, location, and ambiance.
9. **Increase customer engagement:** Encourage customers to engage with the restaurant by leaving reviews and feedback on the website to improve the overall customer experience.
10. **Expand customer base:** Develop a website that appeals to a wider audience and attracts new customers to the restaurant.
11. **Increase customer loyalty:** Implement a loyalty program through the website to increase customer retention and promote repeat business.

The benefits that will be generated if these objectives are achieved include,

1. Improved online visibility.
2. Increased revenue.
3. Enhanced brand image.
4. Improved customer loyalty.
5. Improved dining experience for students and other stakeholders, leading to greater satisfaction and well-being.
6. Increased efficiency and convenience in the ordering and delivery process, reducing wait times and streamlining the overall dining experience.
7. Access to a wider range of food options, catering to different dietary needs and preferences, promoting healthier eating habits among the student population.
8. Reduction in food waste through more precise ordering and inventory management, leading to cost savings and environmental benefits.
9. Valuable data insights into student dining habits, enabling the university to make informed decisions about menu offerings and operational efficiency.

Potential for increased revenue and profitability through expanded offerings and improved customer satisfaction. By addressing the challenges with the current website and improving the overall customer experience, RUSL Kitchen will be better equipped to compete in the local market and attract and retain more customers.

Scope of the Project

The scope RUSL Kitchen - A Digital Dining Experience project includes the development and implementation of a digital platform that allows various target audiences, including undergraduate students, university academic and non-academic staff, local residents, tourists, foodies, business professionals, families with children, health-conscious individuals, and special occasions to access a wider range of food options, order their food, and track the status of their orders in real-time. The project will aim to improve the overall dining experience for all stakeholders, promote healthier eating habits, reduce food waste, increase operational efficiency, and provide valuable data insights into dining habits. The project will also include training for staff and continuous improvement measures to ensure the platform's sustainability and effectiveness in the long term. The proposed project is to develop a professional and user-friendly website for RUSL Kitchen restaurant. The website will showcase the restaurant's menu, location, hours of operation, and other relevant information, while also providing customers with the ability to make reservations and order food online. The website will be designed to appeal to the restaurant's target audience, for an exceptional dining experience.

Overall, the University of Rajarata Kitchen - A Digital Dining Experience project's scope is extensive, aiming to transform the dining experience at the university into a modern, efficient, and enjoyable experience for all stakeholders.

Technical Approach

Under the technical approach we first consider the purpose of the website.

Features Of the Website:

1. **To showcase the menu:** One of the primary purposes of a restaurant website is to showcase the menu of the restaurant. The website provides a detailed description of the dishes, including their ingredients, preparation methods, and pricing.
2. **Experience the menu with Augmented Reality (AR) technology:** The physical menu you get when you go to our restaurant, if you use our web service on your phone, you can experience it with AR technology.
3. **To make reservations:** Many restaurants allow customers to make reservations online through their website. This is a convenient way for customers to book a table without having to call the restaurant.
4. **To provide location and contact information:** A restaurant website typically includes information about the restaurant's location, hours of operation, and contact information, including phone number and email address.
5. **To promote special events:** Restaurants often host special events, such as live music nights, wine tastings, or holiday-themed dinners. The website can be used to promote these events and encourage customers to attend.
6. **To showcase the ambiance and decor:** A restaurant's ambiance and decor can be an important factor in attracting customers. A website can feature photos and videos of the restaurant's interior and exterior to give customers a sense of the atmosphere.
7. **To provide reviews and ratings:** Some restaurant websites feature customer reviews and ratings. This can help potential customers make a decision about whether or not to visit the restaurant.
8. **To offer online ordering:** Many restaurants offer online ordering through their website. This allows customers to place an order for pickup or delivery without having to call the restaurant.

9. **To promote loyalty programs:** Some restaurants offer loyalty programs to reward repeat customers. The website can be used to promote these programs and encourage customers to sign up.
10. **To provide nutritional information:** Some customers may be interested in the nutritional information of the dishes. A restaurant website can provide this information to help customers make informed choices.

Target audience:

Undergraduate students , University academic and non-academic staff, Local residents, Tourists, Foodies, Business professionals, Families with children, Health-conscious individuals, Special occasions.

Methodology

The technical approach will also involve agile development methodologies to ensure the project's flexibility and adaptability to changing requirements and user feedback. The project team will work in sprints to deliver incremental features and functionality and conduct regular testing and user acceptance to ensure quality and usability. Additionally, continuous integration and deployment practices will be implemented to ensure the platform's stability and reliability.

Design the website's layout:

Adobe XD, Adobe Photoshop and Adobe Illustrator software are used to create the website layout and user interface.



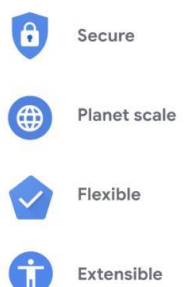
Structure and technical background:

1. **home page:** This is the first page that visitors will see when they land on our website. It includes a brief description of restaurant, an overview of menu offerings, high-quality images of restaurant, and a clear call-to-action to make a reservation or order online.

Flutter framework is used to build this website and also dart, HTML, CSS, Java Script scripts and Bootstrap are used to develop the home page.

2. **Login or Signup Forms:** A form that allows customers to enter their email address or username and password to log in or sign up. You can also provide the option to log in or sign up with a social media account.

For this purpose, the Firebase service offered by Google is used. Here, Firebase Authentication Service and Firebase Firestore are used.



3. **Menu page:** This page should showcase the restaurant's food and drink menu, including prices and descriptions.

It is built using the Dart language and several Flutter plugins.



4. **Experience the menu with Augmented Reality (AR) technology page:** The physical menu you get when you go to our restaurant, if you use our web service on your phone, you can experience it with AR technology.

For this purpose, the flutter plugging ARcore service API offered by Google is used.



5. **Reservation Page:** This page should allow customers to make reservations online or provide information on how to make a reservation.

It is built using the Dart language and several Flutter plugins. For this also use firebase Authentication service and firebase firestore service.

6. **Location and Contact Page:** This page provide the restaurant's address, hours of operation, phone number, email address, and a map.
- 7.

HTML, CSS, Java Script scripts and Bootstrap are used to develop the page. Also Embed Google Map for this page.

8. **To make reservations page:** Many restaurants allow customers to make reservations online through their website. This is a convenient way for customers to book a table without having to call the restaurant.

It is built using the Dart language and several Flutter plugins. For this also use firebase Authentication service and firebase firestore service.

9. **Reviews Page:** This page feature customer reviews and testimonials to help build trust and credibility.

It is built using the Dart language and several Flutter plugins. For this also use firebase Authentication service and firebase firestore service.

10. **Blog page:** This page should feature articles about the restaurant's news, events, menu updates, and promotions.

It is built using the Dart language and several Flutter plugins. For this also use firebase Authentication service and firebase firestore service

11. **Gallery Page:** This page should showcase photos and videos of the restaurant's interior, exterior, and food.

It is built using the Dart language and several Flutter plugins. For this also use firebase Authentication service and firebase firestore service

12. **Social Media page:** This page should provide links to the restaurant's social media profiles, such as Facebook, Instagram, Twitter, and LinkedIn.

is built using the Dart language and several Flutter plugins. For this also use firebase Authentication service and firebase firestore service

website hosting service:

For this, get Firebase's free cloud hosting service provided by Google.



Create a responsive design:

Ensure that the website is responsive and looks great on all devices. This can be achieved by using responsive design techniques, such as fluid layouts and media queries.

Incorporate high-quality images:

High-quality images are essential for a restaurant website as they help to showcase the restaurant's food and ambiance. Use professional photographs to create an eye-catching design.

Test the website:

Test the website thoroughly to ensure that it is functioning correctly and all links are working correctly. Ask friends and family to test the website and provide feedback.

Launch the website:

Once the website is tested, launch it to the public. Promote the website on social media, online directories, and other marketing channels to attract customers

Team and Roles:

This would describe the roles and responsibilities of the project team,

The project manager: A. Sanjayan

Web designer: J.M.Sandamali

Developer: E.M.S.M.Edirisooriya

Content creator: K.G.N.K.Egodagedara

UI/UX Designer: S. Ahmath Nafees

Database Administrator: V.P.K. Isuranga

Project Work Plan

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Identify project topic												
Project proposal												
Designing												
Implementation												
Testing												
Finalized the topic												

Conclusion

In conclusion, the RUSL Kitchen - A Digital Dining Experience project aims to address the outdated and ineffective dining system at the university. By developing a digital platform that allows for easy access to a wider range of food options, and promotes healthier eating habits, the project will significantly improve the dining experience for all stakeholders, including undergraduate students, university academic and non-academic staff, local residents, tourists, foodies, business professionals, families with children, health-conscious individuals, and special occasions. The project will also benefit the university by reducing food waste, increasing operational efficiency, and providing valuable data insights into dining habits. The technical requirements of the project include the use of Flutter, Firebase, HTML, CSS, Bootstrap, and JS. With a dedicated team and clear roles and responsibilities, the project aims to achieve its objectives and provide a sustainable and effective solution in the long term.

References

<https://flutter.dev/>

<https://firebase.google.com/docs>