**Feasibility Report**

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| **Revision #** | **Date** | **Description** | **Author** | **Approver** | **Comments** |
| **1** | **23/07/2022** | **This is the first version of the feasibility report.** | **Team**  **Phoenix** | M.V.Padmasri |  |

1. **INTRODUCTION**
   1. **Overview**

The main objective of the Project on Online Food Ordering System is to manage the details of Food Item, Category, Customer, Order, Confirm Order

**Project Scope**

* + 1. **The Problem**

Non-availability of a software that would assist a common man in successfully organising an event.

* + 1. **Scope**

It manages all the information about Food Item, Payment, Confirm Order, Food Item. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Food Item, Category, Payment, Customer. It tracks all the details about the Customer, Order, Confirm Order.

* + 1. **High level system requirements**

**it** must be delivered within 30

* + 1. **Constraints**

**It** must be delivered within 3/12/2022 2022. The server for the deployment of the product has not been purchased as on date 3/12/2022.

* + 1. **Team coordinator/Interface for the project**

**Nagasundari**

* + 1. **Sponsor/People Involved with the project (other than the students)**

None

* 1. **Documentation/Literature Survey Summary**

C. Larman, APPLYING UML AND PATTERNS An Introduction to Object-OrientedAnalysis and Design and Iterative Development, 3rd ed., Massachusetts: Pearson Education, 2005.

D. Carrington, CSSE3002 Course Notes, School of ITEE University of Queensland, 2008

IEEE Recommended Practice for Software Requirements Speciﬁcations, IEEE Standard 830, 1998.

* 1. **References**
     + **SRS v2.0**
     + **User stories**

1. **Project Approach**

Online food delivery is an approach to ordering and receiving meals from restaurants, cafes, and other food outlets. The process works like this: customers visit a website or app, select a restaurant, and order a meal. The restaurant then prepares the meal and delivers it to the customer’s location.

Customers can pay for their meals online or upon delivery. The advantages of online food delivery are numerous. It saves time and money since customers can order and pay for their meals quickly and easily. Additionally, customers can order from a wider selection of restaurants than they would be able to access if they had to physically go to the restaurant.

Finally, online food delivery is more convenient since customers don’t have to leave their homes or offices to pick up their meals.

1. **Potential Solutions**

1. Developing an online food delivery platform that allows customers to order food from local restaurants.

2. Developing a mobile app for ordering food with an integrated payment system.

3. Developing a delivery fleet of drivers with GPS tracking systems that can quickly deliver food to customers.

4. Offering incentives such as discounts and promotional codes to encourage customers to use the online food delivery platform.

5. Utilizing data analytics to identify customer preferences and customize offerings.

6. Partnering with local restaurants to provide discounts and promotions.

7. Integrating customer feedback systems to improve the user experience.

8. Utilizing social media marketing to increase brand visibility and increase customer loyalty.

* 1. **Required resources**

1. Website or App Development: A website or app should be developed for customers to order food online. The website or app should have a user-friendly interface that allows customers to easily browse and select items from the food menu.

2. Food Items: An extensive selection of food items should be available for customers to choose from. The menu should include a variety of cuisines from around the world.

3. Payment System: A secure payment system should be implemented to enable customers to pay for their orders online.

4. Delivery System: A reliable delivery system should be established to ensure that the food is delivered to the customer's location in a timely manner.

5. Customer Support: A customer support team should be available to answer customer queries and provide assistance with any issues they may encounter.

* 1. **Cost/benefit analysis**

|  |  |
| --- | --- |
| Characteristics | FP count |
| Backup and recovery | 1 |
| Data communications | 5 |
| Distributed processing | 0 |
| Performance critical | 2 |
| Existing operating Environment | 1 |
| Online data entry | 4 |
| Input transaction over multiple screens | 3 |
| Master files updated online | 4 |
| Information domain values complex | 3 |
| Internal processing complex | 2 |
| Code design for reuse | 3 |
| Conversion/Installation in design | 1 |
| Multiple installations | 0 |
| Application design for change | 4 |

DI=Degree of Influence

Hence, Technical Complexity Factor (TCF)=0.65+0.01DI = 0.65 + 0.01 \* 33 = 0.98

**Unadjusted Function Points (UFP)**

|  |  |  |  |
| --- | --- | --- | --- |
| Type | Simple | Average | Complex |
| Input(I) | 3 | 4 | 6 |
| Output(O) | 4 | 5 | 7 |
| Inquiry(I) | 3 | 4 | 6 |
| Logical Internal(L) | 7 | 10 | 15 |
| Interfaces(I) | 5 | 7 | 10 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Information  Domain Value | Pessimistic  Count | Most  Likely  Count | Optimistic  Count | Estimate  Count | Weighting factor | FP  Count |
| Number  of  external inputs(I) | 5 | 3 | 2 | 3 | 4 | 12 |
| Number  of  external outputs(O) | 6 | 4 | 3 | 4 | 5 | 20 |
| Number  of  external inquiries(E) | 7 | 5 | 3 | 5 | 4 | 20 |
| Number of internal logic files(L) | 4 | 3 | 2 | 3 | 10 | 30 |
| Number of  external interfaces (F) | 4 | 2 | 1 | 2 | 7 | 14 |
|  |  |  |  |  |  | 96 |

UFP = 4I + 5O + 4E + 10L + 7F

UFP=96

Thus, Function Point (FP) = UFP \* TCF = 96 \* 0.98 = 94.08 .

cost per person per month = Rs 25,000.

Fp per month = 6 fp/pm.

Man months taken to complete the project = 94.08/6 = 15.68 man months.

Cost taken to complete the project = 25000 \* 15.68 = Rs 3,92,000.

Man months/person = 15.68 / 7 = 2.24 man months / person.

**Expected duration**

The product, online food delivery is expected to be completed by November 27,2022.

* 1. **Major deliverables**

1. An intuitive and user friendly interface for customers to make orders.

2. A secure payment system to process payments.

3. A reliable and efficient transportation system to deliver food.

4. A customer service system to handle customer inquiries and complaints.

5. A system to track orders and deliveries.

6. A system to manage customer data.

7. A system to manage inventory and stock.

8. A system to manage restaurant data.

9. A system to manage customer loyalty programs.

10. A system to manage promotional campaigns.

* 1. **Project Plan Deliverables**
     1. **Feasibility Report**

Project Plan Deliverables:

• Project Schedule: A timeline of tasks, milestones, and deadlines that need to be completed to successfully deliver the project.

• Risk Management Plan: A strategy to identify, assess, and manage potential risks associated with the project.

• Quality Assurance Plan: Defines the quality standards of the project and outlines a plan of action to ensure the standards are met.

• Resource Plan: Outlines the resources needed to complete the project, such as staffing, tools, and equipment.

• Communication Plan: Describes how the project team will communicate with stakeholders and other interested parties.

• Stakeholder Analysis: Identifies the project stakeholders and outlines their roles and responsibilities.

Feasibility Report:

• Market Analysis: Examines the current market for online food delivery services and identifies potential opportunities for growth.

• Technical Feasibility: Evaluates the technical requirements of the project and determines if they are achievable.

• Economic Feasibility: Assesses the financial costs and benefits associated with the project and determines if it is a viable option

. • Operational Feasibility: Analysis the operational aspects of the project and identifies any potential

Technical Feasibility

1. The existing infrastructure, including existing delivery systems, software, hardware and other technology.

2. The cost of implementing the service and the cost of maintaining it over time.

3. The availability of suitable personnel to manage the service.

4. The compatibility of the service with existing systems and technology.

5. The potential for scalability and the potential for expansion.

6. The ability of the service to meet customer needs and provide a competitive edge for the business.

7. The security and privacy of customer data.

8. The potential for customer feedback and how it can be incorporated into the service.

1. Time feasibility

The feasibility of online food delivery will depend on a number of factors, including the distance between the restaurant and the customer, the availability of delivery staff, the delivery fees charged, the delivery time window, and the type of food to be delivered. Generally, online food delivery services can offer delivery within 30 minutes to 1 hour if the restaurant is located nearby, and up to 2-3 hours if the restaurant is further away.

Depending on the cost estimation, the time span required for the project is 2.24 man months per person. The deadline for the project was announced as 23 November, 2022.

* + 1. **Requirements Document**
  1. Introduction

This document outlines the requirements for an online food delivery platform. The platform should enable customers to order food online and have it delivered to their homes.

1. Goals

The goal of this project is to create an online food delivery platform that provides a convenient and efficient way for customers to order food online and have it delivered to their homes.

1. Requirements

3.1 General

• The platform should have a user-friendly interface that is easy to understand and navigate.

• The platform should provide customers with the ability to search for restaurants, browse menu items, and place orders.

• The platform should provide customers with the ability to customize orders, such as adding special instructions or substitutions.

• The platform should provide customers with the ability to pay for their orders online.

• The platform should provide customers with the ability to track the status of their orders.

3.2 Delivery

• The platform should provide customers with the ability to select a delivery time and location.

• The platform should support third-party delivery services.

• The platform should provide customers with the ability to select the delivery method (e.g. car, bike)

* + 1. **Design Document**

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1. Introduction

This design document outlines the design and implementation of an online food delivery service. This document is intended to provide a detailed description of the system architecture and components, as well as the software design, development, and testing process to be followed. The design document will cover the user requirements and system architecture, the data model, the user interface, and the system integration process.

2. User Requirements The user requirements for the online food delivery system are as follows:

• The system must enable customers to easily search and view menus of restaurants and place orders online.

• The system must allow customers to pay for their orders online using a variety of payment methods, such as credit cards and PayPal.

• The system must provide an easy-to-use interface for restaurant owners to manage orders and inventory.

• The system must integrate with existing delivery services to enable delivery of ordered food to customers.

• The system must provide an easy-to-use interface for customers to track their orders and provide feedback.

• The system must be secure and reliable.

1. System Architecture

The system architecture for the online food delivery system consists of the following components:

* 1. **Use cases for the solution**

1. User Registration: Users can create an account with the system to access its features.

2. Search for Restaurants: Users can search for restaurants in their area for food delivery.

3. Food Selection: Users can select the food items they want to order from the available menu.

4. Payment Processing: Users can process their payments for the order.

5. Delivery Tracking: Users can track the delivery of their food order.

6. Reviews and Ratings: Users can rate and review their food delivery experience.

7. Promotions and Discounts: Users can avail of promotions and discounts offered by the system.

8. Customer Service: Users can contact customer service for any queries or issues related to the food ordering experience.

* 1. **High level risks and challenges**

**Risks**

1. Security Risks: Online food delivery services require customers to enter personal and payment information, making them vulnerable to cyber attacks. There is also a risk of identity theft if customer information is not adequately protected.

2. Personal Injury Risks: With home delivery, there is a risk of personal injury due to the handling of hot and/or heavy items.

3. Food Quality Risks: With online food delivery services, there is the potential for food to be mishandled or become contaminated during transit. This could lead to food poisoning or spoilage.

4. Delivery Delays: There is a risk of delivery delays due to traffic, weather, and/or other unforeseen circumstances.

5. Customer Service Risks: Poor customer service can lead to customer dissatisfaction, which could result in negative word-of-mouth and reduced customer loyalty.

**Challenges**

1. Meeting customer expectations: Customers have come to expect fast and reliable delivery services. Meeting their expectations is a challenge that food delivery companies need to address in order to stay competitive.

2. Managing a complex supply chain: Food delivery companies need to manage a complex supply chain that includes the restaurant, delivery drivers, and the customer. The complexity of this supply chain can lead to difficulties in managing costs and ensuring quality and timely delivery.

3. Maintaining safety and hygiene standards: Maintaining safety and hygiene standards while delivering food can be a challenge, as customers want to ensure that the food they order is safe to eat.

4. Ensuring reliability: Ensuring reliability and quality of service is essential for a successful food delivery business. Customers expect their orders to arrive on time and in good condition.

5. Keeping up with technology: Technology is constantly evolving and food delivery companies need to keep up with the latest innovations in order to remain competitive. 6. Attracting and retaining customers: Attracting and retaining customers is essential for a successful food delivery business. Companies need to be able to provide a good customer experience in order to build loyalty and keep customers coming back..

* 1. **Time commitments from Team**

The team is committed to work on the product, online food delivery till November 27/2022

* 1. **High level schedule with Milestones**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sl.No | Phase | Activity | Start Date | Planned End Date | Who all | Comments |
| 1. | Requirement analysis | Collect data from end users. Release SRS v1.0 | 28/8/2022 | 31/8/2022 | Complete Team Phoenix | To interact with event managers to gather the necessary requirements |
|  | Requirement analysis | Define the problem statement and understand the user requirements | 31/8/2022 | 5/9/2022 | The whole Team Phoenix | Spend more time on understanding the need of the user and to freeze the requirements. |
| 2. | Planning | Decide on technical and time feasibility,  work breakdown, | 6/9/2022 | 8/9/2022 | Project Manager | To review various process models. |
|  |  | Decide on project schedule and a process model. | 8/9/2022 | 12/9/2022 | Project Manager | To work on  team dynamics and work division |
| 3. | Designing  and Coding | Envision the UI by manually drawing UI. | 12/9/2022 | 27/9/2022 | Designers | To get a clear picture of how the UI would look like. |
|  | Designing  and Coding | Implement a basic working model of the UI. | 12/10/2022 | 27/10/2022 | Front end Developers  as a pair. | To have a basic webpage designed for an event manager and a todo list for him.  (The subsequent week won’t be available for the firm because of predefined commitments) |
| 4. | Designing  and Coding | Have a model of each actor in every use cases described in SRS.  Build a database  for Event4u that models all the actors. | 12/10/2022 | 21/10/2022 | Designers,  Backend developers as a pair.  Front developers as a pair | Build a budget tracker.  Learn to use django and to have the application program interface ready from the backend. |
| 5. | Coding and  testing | Integrate front end and backend of the design.  Build the test cases to evaluate the product. | 22/10/2022 | 1/11/202 | Front end  Developers and the backend developers.  Pair of  testers | (Depends on 4 and 5)  Have  a complete  package of  working  Model. |
|  | Coding and  testing | Based on the  test results make  necessary  changes to  the code. | 17/11/202 | 20/11/2022 | All the  implemento  rs and  testers. | Bug fixing  period.(  The subsequent week won’t be available for the firm because of predefined commitments) |
| 7. | Testing, Software  refinement and  product  release. | Make  the product  add any user  requested  features(if any). | 20/11/202 | 27/11/2022 | Complete  team  phoenix | Bug fixing  and final  review period |

* 1. **Interaction and Communication plan within and outside the project**

Within the Project:

1. Establish a chain of communication between the project manager and all team members. This should include regular meetings and updates, email and messaging, and other methods of communication that are suitable for the project.

2. Create a clear plan for tasks and timelines for each team member to follow. Make sure all team members are aware of their responsibilities and expectations.

3. Document all conversations and decisions made in the project, including any changes to the plan and timeline.

4. Utilize project management software to track progress throughout the project.

Outside the Project:

1. Connect with customers, restaurants, and other stakeholders to understand their needs and expectations.

2. Develop a marketing plan that includes social media, email campaigns, and other methods of outreach.

3. Set up customer service protocols to handle any inquiries or complaints.

4. Monitor customer feedback and use it to improve the service.

* 1. **Assumptions**

1. Customers will have access to the internet and a device capable of accessing the online food delivery service.

2. The food delivery service will have a wide variety of food options available.

3. Customers will be able to choose from a range of delivery options, such as express delivery, scheduled delivery, and pickup.

4. Customers will be able to pay for their orders using a variety of payment methods, such as credit cards, PayPal, Apple Pay, and other digital wallets.

5. The delivery service will provide clear instructions on how to order and track orders.

6. The delivery service will ensure that orders are delivered on time.

7. The delivery service will provide customers with an easy-to-use and reliable customer service system.

8. The delivery service will provide customers with detailed information about their orders, including estimated delivery time, order status, and payment information.

* 1. **Other considerations**

When considering an online food delivery service, there are several other considerations to take into account. These include:

1. Quality of Food: Make sure the food you are ordering is of high quality and freshly-prepared. Look for online reviews of the restaurant or delivery service and check out the menu options to ensure they are offering food that is both nutritious and delicious.

2. Delivery Time: Consider the estimated delivery time to ensure that the food arrives at the right time, when you want to eat it.

3. Cost: Compare the cost of the food with other delivery services to make sure you are getting the best value for your money.

4. Customer Service: Check to see how customer service is handled, in case you have any questions or concerns about your order.

5. Payment Options: Make sure the payment options are secure and convenient.

6. Food Safety: Ensure that the food is properly packaged and transported to maintain its freshness and quality.