**CS691 - Computer Science, Spring 2021**

**Project Initiation Document**

Project: Food Express

Project Manager: Deva Harshalai Nimmagadda

Start Date: 09-21-2022

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***Approvals (assigned to Tharun)***

This document requires the following approvals:

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| **Dr. Yuri Chernak** | Professor |  | 09-25-2022 |  |
|  |  |  |  |  |
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***Distribution (Assigned to Tharun)***

This document has been distributed to:

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| Murali Kamarapu | Lead DBA |  |  |
| Tharun Donapati | QA Analyst |  |  |
| Asma Batoo Lalamiah | Tester |  |  |

# **Document Purpose (assigned to Navya)**

To keep track of the essential details required to administer the project, this document has been produced. This document will outline the scope, goals, tasks, roles, and responsibilities, costs, and deliverables for the Food Express Application.

**The PID dictates the following critical aspects:**

* Specifics of the strategy to be used for implementing the Food Express Application.
* Details of the roles and responsibilities.
* Description of functions and activities.
* A description of the procedures.
* Specifics of the strategy for communication amongst team members and with stakeholders.
* Quality records, risks, project controls and exceptions.

   This document's sections are dynamic and may evolve throughout the course of the project. The PID document will have a record of the modifications. Every time a significant project-related decision is made, the PID will be consulted. The PID document will also be used to determine if the project was managed successfully or not, as well as whether all deliverables were provided on time or not, after the project's conclusion.

# **Background to proposed work** **(assigned to Navya)**

As we can see, the majority of people have demanding personal lives and demanding work schedules, leaving little time for self-catering. Furthermore, we have observed how online food delivery has benefited customers during the COVID 19 pandemic because it allows us to keep a safe distance from them in contrast to the conventional technique of standing in line to place an order. This brings us to the Food Express concept, which enables clients to virtually place orders at any time, from anywhere, saving time and resources that would otherwise be used to travel to pick up food. Other benefits of this initiative for clients are the simplicity with which they can reorder personalized and preferred purchases, the avoidance of possibly standing in a lengthy line at restaurants. Food Express enables customers to keep track of their orders and have them delivered right to their door.

# **Vision (assigned to Venu)**

Food Express acts as food delivery platform for its users by providing food delivery at their doorstep at the best possible time from the best restaurants around the city. We try to collaborate with most of the restaurants so that users can have various options, making it more reliable and convenient.

# **Project Objectives (assigned to venu)**

* To provide the food from various restaurants so that users have numerous options.
* Users were able to choose the restaurants based on the reviews so that they could get the best available options.
* Making the application user-friendly would enable the users to place orders quickly.
* To deliver the food in the best possible time.
* To deliver the best customer service.
* Improving the customer base for the restaurants.

# **Project Scope (assigned to Jigar, Asma)**

Our website provides a platform for users to choose and order food items in accordance with their requirements. The features include:

**Technical Requirements:**

* To download and install the required softwares.
* To decide which Database to use.
* To ensure for developers and testers to have their required tools available and installed in their systems.
* To ensure which IDE to use both for UI and Backend.
* To discuss roles and responsibilities in a team.
* To apply the best UX/UI practices.
* To apply backend coding standards to the better readability of the code.
* To ensure that the ream members have required skills, and also help them to provide the resources and reference of the required technology.
* To set up the common repository for code commit/push with required permissions.
* To set up development, staging and production environment.

**Functional Requirements:**

* User register and login function.
* Reset/change password function.
* Users can select restaurants using search bar.
* List of food items generation based on user’s preference.
* Assist users in finding the closest restaurant and placing orders for their preferred meals.
* Users can track the order using google maps.
* A safe payment method.

# **Business Case (assigned to Deva)**

|  |  |
| --- | --- |
| **Application Name** | Food Delivery |
| **Type of business model** | Commission: We will collect commission from the customers when they order food. Part of the commission will be paid to the Food Distributors.    Advertising: Add will be used in the app as an additional source of income to keep the project supported.    Subscriptions: We will offer subscriptions to the customers with the benefit of premium services like less delivery charges and short delivery time, etc. |
| **Target audience of external users**  **(Customer Segments)** | **For whom are we creating value?**  Food retailers, Food Distributors, Customers, .    **Who are our most important customers?**  Food retailers (as a source of goods), Customers |
| **Groups of internal stakeholders and business users** | *Indicate who will be using the system.*  **Do we need a product development group?**  Yes, to build and develop the application/platform.  **Do we need a sales group?**  No, as we are not actually selling a product.  **Do we need a finance group (accounts payable, receivable)?**  Yes, we do. For the purpose of finding investors and patrons.  **Do we need a customer support team?**  Yes, as we are working with a diverse set of end-users.  **Do we need an advertising management group?**  Yes, we will. Attracting restaurants, and Customers to the platform. To help increase exposure. |
| **Value propositions** | **What value do we deliver to the customer?**  The main goal of the platform is to deliver food to the customer those who order it. customers value price, speed, convenience, efficiency, friendly service, Reward points.  **Which one of our customers’ problems are we helping to solve?**  Regarding delays in delivery, dissatisfaction with the food, queries about payments and refunds or any general questions and complaints.    **What bundles of products and services are we offering to each**  Food retailer: Can reach much larger number of customers without having to make any additional investment in staff or infrastructure. Free and cheep marketing platform for the Food retailers.    Food Distributors: Food Distributors receive a payment for each order they pick up and deliver to the customer. They can choose to work as much or as little as they want. Flxible work hours.    Customers: Customers get quality food with minimal effort and less price.  **Customer Segment?**  Food providers, Food distributors, Food receivers.    **Which customer needs are we satisfying?**  Need to organize connections Food retailers, Food Distributors, and Customers. We abstract the organization part of the process and allow end entities to focus on the real work. |
| **Key resources** | **What Key Resources do our Value Propositions require?**  Team of developers to create and support the platform.    **Our Distribution Channels?**  Our website and the respective smartphone platforms (App Store and Play Store).    **Customer Relationships?**  The nature of customer relationships is of a service character. Users (food retailers) list available produce/meals    **Revenue Streams?**  Service Fee, Delivery Fee, Subscriptions, Ads. |
| **How the system is used** | **What are the main business use scenarios?**  Restaurants and food retailers for the purpose of distributing food. A (Restaurants) would list items to make available on the platform. Customer will order the food from the list and the first (Delivery agents)  is responsible for picking up the package and distributing it to  customer. |
| **Revenue generation, Revenue streams** | 1. Service Fee.  2. Delivery Fee  3. Subscriptions.  4. Ads |
| **Key Partners/Suppliers**  **(Stakeholders)** | A strong initial base of Restaurants, Food Distributors and Customers. |
| **Expected Benefits** | Create a bridge between Restaurants, Food Distributors, and Customers.  5. Restaurants will be benefitted with improved customer base.  6. Food Distributors will get delivery fee, Tips  7. Customer will get Reward points which they can use for their next orders |
| **Known Prototypes** | **Reference some known portals on the Internet that are similar to your business case. You will use these prototypes for developing business, user requirements.**    **Uber Eats, Door Dash, Grubhub** |
| **Front-end Technology** | Indicate what technology will be used to develop the front-end of your application.    Ionic  React  CSS  Android Studio |
| **Back-end, Database Technology** | **Indicate what technology will be used to develop the back-end, database of your application. The database should be relational.**    **SQL,  AWS** |

# **Assumptions (assigned to Jigar)**

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This section will include assumptions made before the requirements specifications have been documented.

|  |  |  |  |
| --- | --- | --- | --- |
| **Assumption** | **Validated by** | **Status** | **Comments** |
| **Participation Time (12hr/week)** | All Members | Completed | All members have decided to provide at least 7 hours per week for this project |
| **Zoom Meeting for team(Twice every week)** | Project Manager | Completed | Project Manager will schedule Two meetings every week |
| **Updating Skill** | Business Analyst | In Process | Business Analyst will provide specific ‘Required Skills/Technology for this Week’ in the first meetings of every week |
| **Team Work** | Project Manager | In Process | Project Manager will keep details of all Modules and will assign ‘Single or Team’ work on specific modules. |
| **Keep Same Technology for development** | Business Analyst | In Process | Business Analyst will keep track of latest technologies for the development |
| **Review of common Git repository** | All members | Incomplete | Peer review and Manager review of code will be done before merging the code to the common Git repository. |
| **Team Member will stay same** | All members | Complete | All members have decided to take Project II next semester |
| **Bugs tracking** | QA Analyst | In Process | QA Analyst will track all the bugs and will discuss the bugs and divide the bugs among the team members. |

# **Constraints (assigned to Navya, Murali)**

This section will detail the factors that must be taken into account when the project is delivered.

* Deadlines: The project should be completed within the given date by fulfilling all the requirements and features.
* Requirements: We have to make sure that all the requirements are clear to all the team members, and we make sure to fulfill all the requirements that have been set for the project.
* Budget: The project's delivery and progress are highly dependent on the project's budget. The budget should be estimated based on the project's nature and the resources allotted to finish it.
* Price: This system is organized and practical to use, and everyone may use it. In addition, given the nature of the services, the cost of the service and meal is reasonable.
* Availability: As a team we have to follow the recurring meetings scheduled for every week and make sure to be available. If not available, we must coordinate everyone’s schedule and availability to create a new meeting so that everyone is clear of all the requirements and the progress of the project.
* Busy in other Projects: If any team member is busy in other course projects, then she/he has to inform in the initial phase of the week’s deliverables itself, so that Team manager can plan the deliverables and meeting schedules accordingly, and moreover mention if she/he need any help from any of the other team members to make sure to deliver the requirements on time.

# **Risk Management Strategy (assigned to Navya)**

This section will include the risk mitigation and management techniques and strategies that will be applied to the project. This may be presented in the following format:

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk** | **Probability** | **Impact** | **Mitigation Method** |
| **Lack of development skills** | Medium | High | All team members should begin practicing development skills early in the project. |
| **Inadequate Technology** | low | low | Implementation of advanced technology to improve working proficiency of the system. |
| **Departure of teammate** | High | High | All team members should become acquainted with the activities of their colleagues in order to fill in for them in the event of their absence. |
| **Poor Planning & Requirements** | Low | High | All the team members are responsible for planning the operation of the project. They should decide proper planning for fruitful outcome. The system requirements should be fulfilled to prevent from any vulnerabilities and mislead. |

Diagram

Description automatically generated

The risk management process serves as a framework for the necessary actions. To manage risk, five basic steps are taken; these steps are referred to as the risk management process. It starts with identifying risks, then analyzes them, then prioritizes them, implements a solution, and finally monitors them.

**Identify the risk:**

The first step in the risk management process is to identify all events that could have a negative (risk) or positive (opportunity) impact on the project's objectives. A risk’s description, causes and consequences, qualitative assessment, quantitative assessment, and mitigation plan are all important factors to consider. It can also be distinguished by who is accountable for its actions. A risk (or opportunity) must have all of these characteristics in order to be valid.

**Analyze the risk:**

Risk analysis entails investigating how project outcomes and objectives may change as a result of the risk event's impact. Once the risks have been identified, they are analyzed to determine the qualitative and quantitative impact of the risk on the project so that appropriate mitigation measures can be taken.

**Evaluate the risk:**

Risk and opportunity assessments are classified as either qualitative or quantitative. A qualitative assessment evaluates the level of criticality based on the likelihood and magnitude of the event. A quantitative evaluation examines the event's financial impact or benefit. Both are required for a complete assessment of risks and opportunities.

**Treat the risk:**

To treat risks, an organization must first identify their strategies for doing so by developing a treatment plan. The risk treatment plan's goal is to reduce the risk's likelihood of occurrence (preventive action) and/or the risk's impact (mitigation action).

Risk treatment strategies include the following:

* Accept: Continue to monitor but do not take any action.
* Mitigate/Enhance: Reduce (for a risk) or increase (for an opportunity) the likelihood of occurrence and/or the severity of impact.
* Transfer/Share: Transfer risk responsibility to a third party who will bear the consequences of the problem (share the benefits of a realized opportunity).
* Avoid/Exploit: Take advantage of the opportunity or completely eliminate the uncertainty.

**Moniter the risk:**

Because circumstances change, risk management is an ongoing process. Risks should be reviewed, monitored, and tracked at regular intervals throughout your project. Risk management is heavily influenced by uncertainty. You can reduce risk for your project by designing a process around the uncertainty. It increases your chances of meeting your project objectives by lowering your risk.

**Deliverables (assigned to Lohith)**

This section should include the main deliverables and outcomes the project is expected to achieve. It may be presented in the following format (see the project delivery schedule on Blackboard):

|  |  |  |
| --- | --- | --- |
| **No** | **Artifact Name** | **Responsible Party** |
| **1** | Project Plan | PM |
| **2** | PID document | PM |
| **3** | BRM Diagram | Product Owner |
| **4** | Context Diagram | Lead BA |
| **5** | Architecture Diagrams | Lead Dev/DBA |
| **6** | User Requirements | Product Owner |
| **7** | RCT | Lead BA |
| **8** | Use-Case Diagram (UML) | Lead BA |
| **9** | Activity Diagram (UML) | Lead BA |
| **10** | Data-flow Diagram | Lead BA |
| **11** | Functional Requirements (user stories) | Lead BA |
| **12** | Class Diagram (UML) | Lead Dev |
| **13** | Sequence Diagram (UML) | Lead Dev |
| **14** | ER Diagrams (conceptual, logical) | DBA |
| **15** | Table Specs | DBA |
| **16** | Source code sample (part of Application Demo) | Lead Dev |
| **17** | Test Plan document | Lead QA |
| **18** | Application Demo | All |

*Take a list of deliverables from the Project Delivery Schedule excel document.*

# **Stakeholders (assigned to Murali)**

Project Stakeholder – the party who is involved in or affected by your project.

|  |  |
| --- | --- |
| **Stakeholder** | **Interest** |
| Project Manager | The Project Manager develops the Project Plan with the team  and manages the team’s performance of project |
| Project Team | Team will be for executing tasks and producing deliverables as outlined in  the Project Plan. |
| Food Retailers | Restaurants, cafes sign in using their email and password and set the menu availability |
| Food Distributors | Delivery partners pick up the orders from the restaurants and deliver them to the customers. They get a delivery request and as soon as they accept the request, they are provided with the information on the order, restaurant, and address of the customer. |
| Banking/CC Companies | Providing payment options and refunds |
| Customers | The persons who order food from the app |

# **Project Team (assigned to Venu, Tharun)**

|  |  |
| --- | --- |
| **Project Roles** | **TEAM 2** |
| Project Manager | Deva Nimmagadda |
| Product Owner | Venu Yada |
| Business Analyst | Navya Vemuri |
| Lead Developer | Lohith Kandakatla |
| Developer | Jigar Vaishnav |
| Lead DBA | Murali Kamarapu |
| QA Analyst | Tharun Donapati |
| Tester | Asma Batoo Lalamiah |

Table

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# **Project Plan (assigned to Tharun, Lohith)**

This section will include a summary of the project plan, including a schedule of activities and resource requirements.

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Please note, the project plan and schedule are produced for this semester only and will be used for tracking progress during this semester.

# **Project Controls (assigned to Deva)**

This section will include:

* The second day after every lecture class is a meeting scheduled to discuss the tasks for the week.
* Meeting time is scheduled based on majority of the team’s time preferences.
* Slack, Zoom and WhatsApp are the communication platforms fo the project.
* All the works submitted to the professor will be sent via project manager.
* Polls are conducted for important decisions.

# **Communication Plan (assigned to Asma)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Stakeholder** | **Frequency** | **Type** | **Purpose** |
| **Project Manager** | Daily | Email, Zoom Meetings, Slack, WhatsApp chat/call, Phone | To discuss on the project progress, current status, estimates, requirements prioritization, assigning the tasks,  roles and responsibilities within the team. To discuss the technical issues of the project and also communication issues between the team members. |
| **Project Team** | Daily | Email, Zoom Meetings, Slack, WhatsApp chat/call, Phone | To discuss working progress, new requirements analysis, mission or incorrect requirements, discussion of defects and their solutions and potential issues. |
| **Food Retailers** | At key stages | Email, phone, personal meetings | To get the retailer’s location and other details |
| **Food Distributors** | At key stages | Email, phone, personal meetings | To get the Food Distributors location and other details |
| **Customers/End Users** | Mainly during the testing phase and after release. | Email, online testing sessions, attend workshops for website | To Obtain feedback |
| **Quality Management Team** | Daily | Email, Skype for Business | To ensure that all key processes are implemented correctly. |

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