**CS691 - Computer Science, Spring 2022**

**Project Initiation Document**

Project: **NutraMeals**

Project Manager: **Daksh Rawat**

Start Date: **02-09-2022**

Completion Date:

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|  |  |  |  |

Approvals

This document requires the following approvals:

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Distribution

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| Divya Kotapati | Tester | 02-09-2022 | 1 |

# Document Purpose (Daksh Rawat)

This document has been created to record the basic information needed to manage the project. The document will describe the scope, objectives, tasks, roles and responsibilities, costs and deliverables related to Food for NutraMeals Web Application

The PID dictates the following critical aspects:

* Details of the approach to be adopted for the implementation of the Food for NutraMeals Web Application Project.
* Details of the roles and responsibilities.
* Description of functions and activities.
* Explanation of the processes.
* Details of the communication plan between team members and with the stakeholders.
* Quality records, risks, project controls and exceptions.

The sections of this document are dynamic and could potentially change over the lifetime of the project. The changes will be recorded in the PID document. The PID will be referred each time when a major decision is taken about the project. Also, the PID document will be used at the end of the project to measure whether the project was managed successfully or not and weather all deliverables were produced in timely manner or not.

# Background to the Proposed Work (Avni Mitawalkar)

People have been through difficult times during the pandemic with the lockdown and testing positive for covid, which has severe impact on one’s health. This has brought into limelight the importance of eating good food and building immunity to safeguard oneself.

As a person is diagnosed with COVID virus he/she must go under isolation. This poses a challenge for the patient to shop and prepare food. The purpose of the project is to offer healthy meals to people at an affordable cost and deliver them. With the system we will be developing, users can use it to browse restaurants, their menus, select meal plans that suit them best and have them delivered to their doorstep.

Through “NutraMeals” website we present a comprehensive solution for meal planning and delivery. Its intuitive visual interface will make selecting healthy meal plans and placing orders easy and affordable for the users.

# Vision (Nikita Jarile)

In COVID-19 pandemic situation, affected families are stranded at their home and are deprived of necessities like food and grocery supply.

**“NutraMeals”** will help such families to get their healthy daily meal at their doorstep. People can select healthy meal of their choice and we will link restaurants to such users in need. Also, Restaurants added to our website will essentially provide only healthy food options.

**“NutraMeals”** is a platform where people can order healthy food at affordable prices and Restaurants will provide food to them at their doorstep with contactless delivery.

# Project Objectives (Sanket Koli)

* To create a website including the functionalities of searching collaborated restaurants, searching meals, ordering healthy meals with reasonable prices and food delivery services.
* To create a user-friendly interface and create convenient and fast order processing time.
* To add variety in meal options to users.
* To promote healthier and easier lifestyle.
* To partner with food delivery services and restaurants to generate website profit.

# Project Scope (Manoj Srinivasu)

“NutraMeals” project aimed at developing an online food ordering system. The   
features include:

**Functional:**

* User register and login function.
* Food search function.
* Food order function.
* Restaurant register and login function.
* Security payment process.

**Technical:**

* The application’s interface will be developed using HTML & CSS Using eclipse.
* Java will be used to develop the business logic for the application.
* MySQL will be used as the persistence store for the application.

# Business Case

Business Case (NutraMeals)

Business case information can be structured by completing the table below.

|  |  |
| --- | --- |
| **Application Name** | **NutraMeals** |
| **Type of business model** | Examples:  Direct sales, platform, ;Subscription fees, Posting advertisement (Offer, food companies), etc. *See the document "Types of Business Models"*  Brokerage. |
| **Target audience of external users**  **(Customer Segments)** | For whom are we creating value?  Who are our most important customers?  Restaurants – looking for sell their food  Customers – covid positive patients or people looking who are looking to buy healthy meals |
| **Groups of internal stakeholders, business users** | (Production Development group, Sales group, finance group, customer service group, Advertising management group will be using their own platform)  Do we need a product development group?  Yes, we need a product development group to develop the platform.  Do we need a sales group?  Yes, we need a sales group to partner restaurants with our service.  Do we need a finance group (accounts payable, receivable)?  We will use a finance group to deal with all transactions between client and customer.  Do we need a customer support team?  Yes, the customer support team will assist with any problems with  transactions between client and customer in additions to any issue  with accessibility of the platform.  Do we need an advertising management group?  Yes, the group will develop and distribute ads to increase popularity of the app. |
| **Value propositions** | What value do we deliver to the customer?  NutraMeals will be used by people to find and order healthy meal plans at affordable rates and have them delivered.  Which one of our customer’s problems are we hel ping to solve?  As a person is diagnosed with COVID virus he/she must go under isolation. This poses a challenge for the patient to shop and prepare food. In such situations, we can offer healthy meal plans at an affordable cost and deliver them.  What bundles of products and services are we offering to each Customer Segment?  Restaurants – Increasing their reach to customers.  Customers – Providing variety of healthy meal plans and restaurants which can provide them.  Which customer needs are we satisfying?  Their need to remain isolated, rest and eat healthy at affordable rates. |
| **Key resources** | What Key Resources do our Value Propositions require?  NutraMeals main resources are its engineering employees, who  maintain and update its platform for customers.  Our Distribution Channels?  Our main channel is the website. The company promotes its offering  through its social media.  Customer Relationships?  The site provides several self-help resources and answers FAQ. There is a customer support team which can be reached for help.  Revenue Streams?  NutraMeals has 2 revenue streams – the service fee it charges customers when they order food and a one-time fee from the restaurant when they sign up with our service. |
| **How the system is used** | What are the main business use scenarios?  NutraMeals will connect restaurants who have partnered with us in providing healthy meals to covid positive patients (also any customers who want healthy meals). There will be a service fee for each transaction on the customer’s end that will be reaching to the company by using an interface of online transaction (Credit Card, PayPal etc) and then company will pay the share to the respective restaurant. The delivery services would be from the restaurant end. There will be an annual subscription for restaurants who partner with NutraMeals. Customers can search restaurants, opt for meals provided and place orders. Customer can track the orders via email and can be used for the promotion. |
| **Revenue generation, Revenue streams** | 1. Service fee 2. Annual Subscription fees |
| **Key Partners/Suppliers**  **(Stakeholders)** | Restaurants, Marketing Companies |
| **Expected Benefits** | 1. Covid patients can remain isolated and order food at their convenience. 2. No need to wait in long queues to pick up food. 3. Restaurants have greater reach when they partner with the app. They will need to spend less on marketing. 4. Convenience of ordering from any place at any time. 5. Multiple ways to pay. 6. Restaurants can handle orders with more accuracy and increase their productivity. 7. Lesser running costs for the restaurant. They can rent a small establishment and save on infrastructure and conduct their main business online. |
| **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.   1. <https://www.zomato.com/> 2. <https://www.ubereats.com/> |
| **Front-end Technology** | Indicate what technology will be used to develop the front-end of your application.  HTML, CSS, JavaScript |
| **Back-end, Database Technology** | Indicate what technology will be used to develop the back end, database of your application. The database should be relational.  Java, RESTful webservices, MySQL, SQL developer, Spring boot |

# Assumptions (Nikita Jarile)

|  |  |  |  |
| --- | --- | --- | --- |
| **Assumption** | **Validated by** | **Status** | **Comments** |
| Project Resources | Project Manager | In process | Project Manager will make all the resources available needed for the project on weekly basis |
| Work Schedule | All team members | In process | All team members dedicate at least 5 hours/week on this project |
| Project Meetings | Project Manager | In process | Project Manager will schedule two meetings per week and plan ahead agenda of each meeting |
| Weekly work to be done | Product Owner | In process | Product owner will create tasks or user stories for each week and also keep track of any backlogs from last week |
| Required Technologies | Lead Developer | In process | Lead Developer will keep track of the technologies involved in the development and discuss with all team members if any change is required in technology stack. |
| Requirements Specification | Business Analyst | In process | Business Analyst will list out all the requirements at the start of each week |
| Work Validation | QA Analyst | In process | QA Analyst will validate development work done each week as well as create reports |
| Collaborative Work | All team members | In process | All team members will help each other if required |

# 

# Constraints (Sen Wang)

The things that need to be taken into consideration during the delivery of this project are

* Time: This is a team project, but each person has a different schedule. We will set a meeting the day after our lecture according to different schedules, in which we will separate tasks and assign them to each person. Everybody can work on assigned tasks with their schedule. Before the deadline, we will have another meeting to review and discuss our tasks to confirm the documents submitted.
* Personal emergency: Given missing group members suddenly, we will share the work, so nobody needs to complete double tasks and we can still submit required documents on time.
* Weekly meeting: As stated above, if someone stuck in something can’t join the scheduled meeting, we have the recording video available for absent teammates.
* Deadlines: Each deliverable must be submitted on time.
* Requirements: we need to make sure that our application fulfils user requirements, functional requirements, performance requirements, design requirements, and other expected requirements.

# Risk Management Strategy (All team members)

|  |  |  |  |
| --- | --- | --- | --- |
| Risk | Probability | Impact | Mitigation Method |
| Technical Risk | Medium | High | All team members should start to practice development skills at early stage of the project. |
| Schedule Risk | Medium | Medium | Being organized with project plan. Finish each activity before deadline. If there is extra time, move to the next step as soon as possible. |
| Operational Risk | Medium | High | Using open-source technologies. Timely trainings for the team members. Applying for licenses ahead of time |
| Project team members leaving | Low | Medium | Documenting the details of your project Creating a training program for new team members Asking employees who are leaving to prepare transition plans |

# Diagram Description automatically generated

Description: -

* First to understand the list of risk that might occur during your project implementation.
* After listing the various list analyzation comes into picture, where analysis result will help to prioritize the risk.
* Risk planning is the next step that will help to avoid and contingency.
* Lastly, risk assessment is done known as risk monitoring where if there is an flaw is it again moves to risk analysis step for setting priority.

# Deliverables (Sen Wang)

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 |

.

# Stakeholders (Divya Kotapati)

Following are the Key Stakeholders of the Project:

|  |  |
| --- | --- |
| Stakeholders | Interest |
| Restaurants | As NutraMeals is an online Food Delivery and Restaurant Discovery Platform, We will invite / Partner with Restaurants to Provide healthy Nutritious Food using NutraMeals Web Application. |
| PayPal Merchant | To enable Online Transactions, accept payments and to send an email invoice, order confirmation to End Users |
| Delivery Partners | To deliver the food to the Customers. The Key Delivery Partners are Restaurants, Uber, Third party delivery person |
| Advertising Companies | To Promote the App and Increase the Sales. |
| End Users | End users are the customers who will utilize the App for ordering the Food. |

# Project Team (Sanket Koli)

The project team includes the following roles:

|  |  |
| --- | --- |
| * Daksh Rawat | : Project Manager |
| * Avni Mitawalkar | : Product Owner |
| * Nikita Jarile | : Lead Developer |
| * Sanket Koli | : Developer |
| * Sen Wang * Manoj Srinivasu | : Lead Business Analyst  : Lead Database Developer |
| * Divya Kotapati | : Tester |

Roles and Responsibilities of the team roles are defined in the RACI Table below:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Project Roles** | | | | | | |
| **Project Phase** | **Project Tasks** | Project Manager | Product Owner | Lead Dev | Developer | Lead BA | Tester | DBA |
| Project Management | Develop a project plan | A,R | C | C | I | C | I | I |
| Provide cost estimate | A,R | C | I | I | C | I | I |
| Hire resources | A,R | C | R | I | I | I | C |
| Establish a project documentation portal | A,R | I | C | C | I | I | I |
| Maintain a project risk and issue log | A,R | I | C | C | C | I | C |
| Provide project status reports | A | I | R | C | I | I | I |
| Requirements | Perform requirements analysts | A | C | C | C | R | C | I |
| Gather business requirements | A | R | I | C | R | I | I |
| Produce functional requirements | A | C | C | C | R | I | I |
| Design | Produce high-level design specs | A | I | R | C | I | I | C |
| Produce data model | A | I | R | I | I | I | R |
| Produce detailed design specs | A | I | R | I | I | I | C |
| Coding | Establish a code repository (GitHub) | A | I | R | R | C | I | C |
| Develop component code | A | I | R | R | I | I | I |
| Testing | Develop a test plan | A | C | C,R | C,R | C | I | C |
| Establish a test repository | A | I | C,R | C,R | I | I | C |
| Develop test specifications | A | I | I | C | I | R | I |
| Execute testing, report defects | A | C | I | C | C | R | I |
| Conduct defect review calls | A | C | C | C | I | C | I |
| Produce, deliver defect metrics | A | C | C | I | I | R | I |
| Support test environments | A | I | R | C | I | C | R |
| Deployment | Produce a deployment plan | A | I | R | I | I | I | R |
| Produce deployment procedures | A | I | R | I | I | I | R |
| Deploy software into production | A | I | R | I | I | I | R |

# Project Plan (Daksh, Divya, Manoj, & Sen)

The project will have a path of that will follow Agile project management methodology. For the development process. The Product Owner will mainly be responsible for product management and quality. Lead developer and developer will work on background coding. Database analyst will work on aggregating the data. The Lead BA and Project Manager will act as Scrum Master. The Tester will work on final testing.

There will be few SCRUM sprints. Each sprint will last two weeks. The sprint will start with a sprint planning meeting and will end with a sprint retrospective meeting. Besides the sprint planning meeting and sprint retrospective meeting, there will also be thirty to forty-five minutes sprint review virtual meetings every week. Development tool that will be used to supplement SCRUM is Google Sheets.  The Agile board will be created in Google Sheets.

Milestones:

MS1: Initial Project Plan (02/17/2022)

MS2: Requirements Completed (03/10/2022)

MS3: Design Completed (04/22/2018)

MS4: Coding Completed (04/29/2022)

MS5: Testing Completed (05/06/2022)

MS6: Project Presentation (05/10/2022)

Table

Description automatically generated

# Project Controls

All the official Meetings, communications, project documentation and presentations should be in English. Project manager will be organizing weekly meetings on Wednesday and Friday. Additional meetings will be conducted based on the requirements and the availability of Team. In case of absence of any member, the Project manager should reschedule a meeting or should send the recordings of the meeting to that Member / person. Important points and topics related to the Project will be discussed in the meetings. Each team member must share their ideas and approach related to the task in the weekly meetings. Meeting minutes will be maintained and updated to the instructor by the project manager.

Project Manager must collect the feedback from Instructor and update all the team members. Most of the asynchronous communication will be through Slack, zoom meet. Final decisions will be made by the end of the meetings by taking everyone’s opinion into consideration. Manager will also keep a track of the deadlines and ensure that everyone plays their role accurately. Important updates and Project Progress should be posted on Slack. Sharing the files on GitHub is a shared responsibility of Team Members and Project Manager. Team Members must complete and submit their tasks before the deadlines.

# Communication Plan (Sanket Koli & Divya Kotapati)

|  |  |  |  |
| --- | --- | --- | --- |
| Stake Holder | Frequency | Type | Purpose |
| Professor | Weekly | Email/Slack | To approve the tasks and advising for any potential changes in Project  To gather the feedback of the Weekly tasks |
| Project Team | Twice in a Week, Daily if needed | Email, Zoom for Project Meetings, Slack | To discuss the tasks and deliverables of the project |
| Restaurants | At key stages after Implementation | Email, phone, personal meetings | To discuss about the Application |
| Delivery Partners | At key stages after Implementation | Email, phone, personal meetings | To discuss about the Application and the delivery guidelines |
| Advertising Stakeholders | At key stages | Email, phone, personal meetings | To discuss about the Application Promotion |
| End Users | Potentially during the testing phase and after release. | Conducting Workshops | To know the Feedback! of the application usage |
| Pay Pal Merchant | At key stages during the Integration | Email, phone, personal meetings | To discuss about the integration of Online Payment System / Process, and Policies |

Home Page Design

A picture containing text, food, dish

Description automatically generated