**CS691 - Computer Science, Fall 2019**

**Project Initiation Document**

Project: ToGo

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Completion Date:

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# Document Purpose

This document (Project Initiation Document – PID) has been created to record the basic information needed to manage the project for overall success. The purpose of the document is to describe the scope, objectives, tasks, roles and responsibilities, costs and deliverables related to “ToGo” website.

Specifically, the PID will communicates the following critical aspects:

* Details of the approach to be adopted for the implementation of the “ToGo” Application.
* Details of the roles and responsibilities, functions and activities.
* Explanation of the processes and products.
* 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. Once approved, the PID will be the baseline against which the success of project will be measured.

# Background to the Proposed Work

The World currently has population of approximately 7.3 billion people and as expected there is a constant movement of people and goods from one location to other location. In this busy world, people are fully packed with their daily routine. So, it becomes difficult to send or receive any goods from other locations, friends or family. So, ‘ToGo’ application is proposed to provide door-to-door delivery services to general public at any time.

‘ToGo’ application is door-to-door delivery service application where any general public can send or receive the goods they want to. People will have access to the locations and can set pickup and drop-off locations for the goods they wish to transport. The cost for delivery made will be based on the distance and goods. The payment will be made through online or offline.

The vehicle for transport is based on the weight and type of the product. User can track his/her goods in transit and notifications will be sent to phone number or email on regular basis. The unskilled employers as delivery staff will be get benefited by the employment.

# Vision

Our vision is to create a better everyday life for everyone. ToGo web-application will move different varieties of goods from location to another when the customer/user doesn’t have time or accessibility to do that by their own. It will make their life easy. All they need to do is select the drop-in and drop-off locations, select the item type and the work is done.

# Project Objectives

The objectives of “To-Go” Web Application are stated below.

* Create a user-friendly interface to providing delivery services to general public.
* To create a web application that enables users to request an errand and save their time and effort in transporting goods at any time.
* The web application will provide pickup-and-drop services to the users.
* The web application will also provide various options of restaurants, grocery stores, pharmacies, pet supply stores, etc. from where the users can shop directly from within the ToGo website and have them deliver it to the them anywhere in the city.
* A cost for delivery will be generated based on the distance and an online payment must be made.
* Every request will be broken into acceptance of a task, assigning a delivery executive, location, item confirmation and money transfer.
* Once a customer confirms an order, the algorithm will check the type of task, store location, look for the item list and help estimate the supply time to reach the store, and the estimated time of arrival.
* The users will have to create an account and ToGo web application will register the user with login id and password
* ToGo will provide 24 x 7 delivery.
* User can cancel the order and will also be able to write a review for the service provided.
* For smooth running, a small team of individual will continuously monitor, assigned tasks, ensure that the task was completed and then re-assigned to the next set of orders.
* ToGo’s will focus on keeping user convenience at its core and provide maximum customer satisfaction.

# Project Scope

Technical:

* To apply the best UX/UI practices.
* To decide what DB to use.
* To discuss roles and responsibilities in a team.
* To install the required software.
* To ensure that the team members have necessary skills.
* To set up development, staging and production environments.

Functional:

* Users will have access to the delivery staff who are available around them.
* Locations can be accessed by the users to set pick-up and drop-off location of the goods they wish to transport.
* User will be able to choose the type of vehicle suitable for transporting the goods.
* A live tracking option is also provided for the customer.

# Business Case

|  |  |
| --- | --- |
| **Application Name** | ToGo |
| **Type of business model** | Paid Service business model |
| **Target audience of users** | Open to everyone |
| **Value proposition** | Users get access to our website to experience the door-door service for general goods. |
| **How the system is used** | Web Application  Within this application, users have access to delivery staff available around them. Users can then access locations to set the pick-up and drop-off location of any goods they wish to transport. A cost for delivery is generated based on the distance and an online payment must be made.  The following features are available:   * Type of vehicle can be chosen based on the weight of the good. * A live track can be maintained of the product in transmission.   An option to choose the method of payment to provide ease. |
| **Revenue generation** | Payment for service |
| **Partners/Suppliers (Stakeholders)** | * Small scale businessman * Credit card Vendors * Unskilled staff suppliers * Transport Systems |
| **Expected Benefits** | * Providing services to general public to save time and effort in transporting goods at any time. * Provide job opportunities at the IT level (backend team) along with work to the unskilled staff (Delivery support team). |
| **Know Prototypes** | Dunzo (<https://www.dunzo.com/>) |

# Assumptions

The assumptions supporting the Project are:

* That enough staff resource is available for all aspects of the Project to meet the declared time scalers
* The adequate funding is made available
* There is stakeholder support for the Project
* The hardware and software requirements to develop the Project are met, including Java, IDE, SQL Server, OS Systems, a repository solution to collaborate

# Risk Management Strategy

Risk management planning is the process of developing options and actions to enhance opportunities and reduce threats to project objectives. Risk management implementation is the process of executing risk mitigation actions. Risk mitigation progress monitoring includes tracking identified risks, identifying new risks, and evaluating risk process effectiveness throughout the project.

RMS Diagram:



The main strategies that will be used during this project is as follows:

|  |  |
| --- | --- |
| Avoid Risk | A risk that might come up that is so serious that it is needed to disband and avoid the cause altogether. |
| Control/Mitigate Risk | A risk whose activity is a required and important aspect of the project and must be able to be replaced in case of something going awry. |
| Accept Risk | Risk that the group deems that is probable and accepting the consequences (ex. Sunk costs) and is expected to happen throughout the life of the project and this must be budgeted for. |
| Transfer Risk | If risk cannot be mitigated, the group must be willing if and seek out a third party who will be able to handle the risk at a cost. |

This is a list of the possible risks that may come up over the course of the project:

|  |  |  |  |
| --- | --- | --- | --- |
| Risk | Risk Probability | Risk Impact | Mitigation method |
| Loss of staff, restructuring | Low | High | Other members of the team will be responsible to pick up extra work so deadlines will be met in a timely matter. |
| Vague Ambiguous Requirements | High | High | Through many sprints the requirements will be revised many times to ensure that clarity is achieved among every team member. |
| Quality won’t be up to standards | Medium | Medium | Extra time outside of scheduled working hours must be spent in order to assure maximum quality of project. |
| Requirement of skills needed to complete project will be met | Low | High | Prior to project all group members were chosen based on specific needs to the project to ensure maximum productiveness. |
| Software and Hardware Corruption | Medium | High | Only way is to monitor the situation on a regular basis to ensure that if something where to go wrong, backups are in place. |
| Scheduling and Communication | Low | High | It is important to keep a constant flow of communication amongst group members as well as a regular scheduled time to commit to insert stabilization and regularity in the project. |
| New Technologies | Low | Low | The more experienced team member will try and educate/guide other team members with new technologies. |

# Constraints

* Developing the Ionic Webpage of the application with strong and flexible database so that in later stages of development it can be implemented in android and ios application as well.
* Scheduling with all the team members as they have other class with projects and assignments.
* With less time to bring the idea to life the quality of the product can be affected.
* Find funding to implement the idea.

# Deliverables

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Item** | **Owner** | **Outcomes** |
| SEPT 17 | Project proposal | Project Manager | 3 Ideas for project proposal. |
| SEPT 24 | PID Document | Project Manager | Establish the project documentation. |
| OCT 01 | Project Plan, RACI | DBA | Maintain a project, risk & issue. |
| OCT 15 | Requirement Types & Analysis Diagram | Product owner & Lead Developer | Performed requirement analysis. |
| OCT 22 | User Requirement & RCT | Lead BA | Gathered business requirements. |
| OCT 29 | Functional Requirement | Lead Developer | Produced functional requirements. |
| NOV 12 | DB Models & ER Diagrams | DBA | Produced data models. |
| NOV19 | Architecture Diagrams | Lead QA | Produced high-level design specification. |
| NOV 26 | UML Design Diagrams | Product Owner | Produced detailed design specifications. |
| DEC 03 | Test Documentation | Lead QA | Execute testing and report defects. |
| DEC 10 | Preparation | Teamwork | Produced a deployment plan. |
| DEC 17 | FINAL PRESENTATION | Teamwork | Deploying software into production. |

# Stakeholders

Stakeholders(partners/vendors) for our newly developing applications. Anyone impacted by our application can be conducted as stakeholders.

External Stakeholders (Potential Application Users)

* Sponsors
* Small scale business owners
* Transport agencies
* Vendors
* Partners
* Third party Vendors
* Internal Stakeholders
* Group Members

# Project Team

|  |  |
| --- | --- |
| **Role** | **Name** |
| Project Manager | Purti Choudhary |
| Project Owner | Aniket Munim |
| Business Analyst | Samiksha Mathur |
| Lead Developer | Amrit Choudhary |
| Developer | Anil Bandari |
| DBA | Lakshmi Chamarathi |
| Lead QA Analyst | Aditya Gajjar |
| Tester | Khaja Nazish |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Area Project Tasks** | | **Project Roles** | | | | | | | | | | | | | |
| Project Manager | | Project Owner | Lead Developer | | Developer | | Business Analyst | | Lead QA Analyst | | Tester | DBA | |
| Project Management | Develop a project plan | A, R | C | | | C | | I | C, I | C | | I | | | I |
| Provide cost estimate | A, R | R | | | I | | I | I | I | | I | | | I |
| Maintain project risk and issue log | A | R | | | C | | C | C | C | | C | | | C |
| Provide project status report | A | R | | | C | | I | C, I | C | | I | | | I |
| Requirements | Perform requirement analysis | A | I | | | C | | I | R, I | I | | I | | | I |
| Gather business requirements | A | I | | | C | | I | R, C | I | | I | | | I |
| Produce functional requirements | A | I | | | C | | C | R | C | | I | | | I |
| Design | Produce high-level design specs | A | I | | | R | | C | C | I | | I | | | C |
| Produce data model | A | I | | | C | | C | C | I | | I | | | R |
| Produce detailed design specs | A | I | | | R | | R | C | I | | I | | | R |
| Coding | Establish code repository | A | I | | | R | | R | I | I | | I | | | I |
| Develop component code | A | I | | | R | | R | I | I | | I | | | I |
| Testing | Develop test plan | A | I | | | C | | I | C | R | | C | | | C |
| Establish a test repository | A | I | | | C | | I | I | R | | C | | | I |
| Develop test specifications | A | I | | | I | | I | I | R | | R | | | I |
| Execute tests, report defects | A | I | | | I | | I | I | R | | R | | | I |
| Conduct defect review calls | A | I | | | C | | I | C | R | | C | | | C |
| Produce, deliver defect metrics | A | C | | | C | | I | C | R | | C | | | I |
| Support test environments | A | I | | | R | | R | I | C | | I | | | R |
| Deployment | Produce a development plan | A | I | | | R | | R | I | I | | I | | | R |
| Produce development procedures | A | I | | | R | | R | I | I | | I | | | R |
| Deploy software into production | A | I | | | R | | R | I | C | | C | | | R |

**Project Plan**

Our team plans to follow Agile methodology, to allow for opportunities for stakeholder and team engagement during and after each Sprint. This collaboration with the team and stakeholders will help shape the application's usability. Agile also allows for change if something isn’t working, so our team can consistently refine and re-prioritize items. See below the major milestone schedule:

|  |  |  |  |
| --- | --- | --- | --- |
| **Weekly Delivery Schedule** | | | |
|  |  |  |  |
| **Project Phase** | **Week** | **Deliverables** | **Owner Role** |
| Project Planning | 2 | Project Proposal | PM |
|  | 3 | PID document; selected development process | PM |
|  | 4 | Project Plan, RACI, refined PID | PM |
| Requirements Analysis | 5 | BRM Diagram | Product Owner |
|  | 5 | Context Diagram | Lead BA |
|  | 5 | Requirements Types | Lead BA |
|  | 6 | User Requirements | Product Owner |
|  | 6 | RCT (includes func. decomp., supplementary reqs) | Lead BA |
|  | 7 | UML analysis diagrams (use case, activity diagrams) | Lead BA |
|  | 7 | Data-flow Diagram | Lead BA |
|  | 7 | Functional Requirements (use cases or user stories) | Lead BA |
| High-level Design | 9 | ER Diagrams (conceptual, logical) | DBA |
|  | 9 | Database Table Specs | DBA |
|  | 10 | Architecture Diagrams (2) | Lead Dev/DBA |
|  | 11 | Class Diagram (UML) | Lead Dev |
|  | 11 | Sequence Diagram (UML) | Lead Dev |
| Implementation | 8,9,10,11 | Source code sample | Lead Dev |
| Testing | 12,13 | Test documents (test plan, test design, test cases) | Lead QA |

Milestones:

MS1: Initial Project Plan (10/01/2019)

MS2: Requirements Completed (10/22/2019)

MS3: Design Completed (11/19/2019)

MS4: Coding Completed (11/26/2019)

MS5: Testing Completed (12/03/2019)

MS6: Project Presentation (12/17/2019)

# Project Controls

1. Meetings with the Project Manager will be held regularly to monitor progress and manage arising issues. There will be one weekly meeting where the entire group is expected to be present. One or two other meetings will be conducted throughout the week depending on the schedule. These meetings can be remote or in-person.

2. The Project Manager will produce regular reports for Professor Chernak and Stakeholders.

3. Communication will be done via Email or Slack within the project team. Email exchange will be the primary means of communicating with Professer and stakeholders

4. GitHub will be used as a repository for official documentation and will contain all project documentation.

5. All source code will be uploaded to PROJECT REPOSITORY in GitHub.

# Communication Plan

|  |  |  |  |
| --- | --- | --- | --- |
| **Stakeholder** | **Frequency** | **Type** | **Purpose** |
| **Professor** | At key stages - meetings and deliverable drafts | Email, Slack | To approve Project implementation and direction. Advise if there are any potential issues. |
| **Project Team** | Daily | Email, Slack, Skype for Business, personal meetings, WhatsApp, zoom | Maintain progress and ensure that the team is meeting weekly requirements. |
| **End Users** | Potentially during the testing phase and after release. | Email, online testing sessions, attend NYC events | Feedback! |