**CS691 - Computer Science, Spring 2023**

**Project Initiation Document**

Project: MaidEase

Project Manager: Sai Teja Malladi

Start Date: 02/01/2023

Completion Date:

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**Approvals**

This document requires the following approvals:

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# Document Purpose (Assigned to Rushda)

To keep track of the essential details required to administer the project, this document has been produced. The document will outline the objectives, tasks, roles, prices, and deliverables associated with the household services offered to customers and the platform used by service provider to acquire more customers, that though an idea of this web application.

The PID establishes the following crucial elements:

* Specifics of the strategy to be used for the implementation of how customers will access household services and how this platform will assist service providers to increase their level of clientele through this web application project.
* Detailed information on the tasks and obligations.
* A description of functionalities.
* A breakdown of the procedures and processes.
* Specifics of the strategy for communication amongst team members and with stakeholders.
* Quality documentation, project controls, and exceptions.

The portions of this document are dynamic and may change throughout the project's life. The PID documentation will reflect the changes. Every time a significant decision regarding the project is made, the PID will be consulted. The PID document will also be utilized at the project's conclusion to assess if the project was managed properly and whether all deliverables were produced on time or not.

# Background to the Proposed Work (Assigned to Sai Teja)

# There are numerous platforms that provide customers individual household services, but they are not always available. Even if some services are now in operation, they lack a website or other online platform to advertise their offerings. Therefore, MaidEase enters the picture to address this significant issue. Anyone can use this program, whether they are a working professional or a frequent traveler, as the consumer receives all household services on one platform. Additionally, we offer a significant platform for service providers to list their company and draw in new clients. Many people's life will be made easier by this application. The customer will receive the services he wants, and the service provider will continue to add new clients. If this project is unsuccessful in any way and is not completed, the median between customers and household service providers will not be determined. Customers will always be looking for these services nearby, so the service provider won't see an increase in business.

# Vision (Assigned to Sai Manish)

The goal of this program is to deliver all essential household services on a single platform, making life easier for users, particularly busy professionals, and frequent travelers. This application aids the service provider in promoting and growing his company and attracting a growing number of clients.

# Project Objectives (Assigned to Tahera)

* List all the household service providers.
* Make it simple for customers to access all services on one platform
* Offer round-the-clock customer care,
* Promotes small businesses.
* Act as a middleman between service suppliers and clients.
* Gets A1 service for little to no subscription fees.

# Project Scope (Assigned to Jahid)

The application offers customer an ease to find any household service. This feature includes:

* Registration.
* Enroll in subscription plan.
* Customer Login.
* Select the service to avail
* Filters the best service provides based on price, ratings and his availability.
* Book the service and proceed to pay.
* Secure payment gateway.
* Provides ratings to service provider.
* 24/7 customer support.

The application provides a platform for service provides to grow their business. This feature work as:

* Registration.
* Enroll in subscription plan.
* Service Provider Login.
* Maintains his dashboard.
* Updates his availability, and prices frequently.
* Gets a booking and payment from customer.
* Fulfil the service and marks the order as completed.
* Response to customer support agent in case of customer query.

The project team will be looking after following work:

* Analyse and solve customer support query.
* Apply best UI/ UX practices.
* Installs and frequently updates the software required.
* All team members have full project knowledge.
* Cooperate on developing and testing the project.
* Take DB backups frequently.
* Look into runtime exceptions.

# Business Case (Assigned to Bhakti)

This section will justify the project so the board can then decide if it gets to go ahead. Benefits should be quantified and balanced against the cost and timing being estimated during the creation of the project plan.

Large projects may summarize and include a link to the full business case.

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

|  |  |
| --- | --- |
| **Application Name** | **MaidEase** |
| **Type of business model** | Subscription, Advertising MaidEase will be Subscription and Advertising model. As soon as a customer registers, he or she will be enrolled in a monthly or annual subscription. For advertising will charge from service providers. We will have revenue from sources: 1. Customers 2. Service Providers |
| **Target audience of external users**  **(Customer Segments)** | **For whom are we creating value?**  Small businesses, frequent travelers, physically disabled and Working Professionals.  **Who are our most important customers?** Working professionals since they wouldn't have time to perform any household duties. Small businesses as they get platform to attract more customers. |
| **Groups of internal stakeholders, business users** | *Indicate who will be using the system in your organization, i.e., internal users.*  **Do we need a product development group?**  The platform will require the creation of a product development team. Business analysts, developers, testers, project managers, and owners make up the product development team. This group will be using MaidEase application.  **Do we need a sales group?**  No, we won’t require a separate sales group.  **Do we need a financegroup (accounts payable, receivable)?**  Yes, we would require the finance group. As MaidEase follows the subscription and advertising model, money laundering will happen between customers, service providers and MaidEase finance management.  **Do we need a customer support team?**  Yes, Customer support is required. Here customer care agents, testers, developers, project managers and business analyst will be responsible to provide support to customers and service providers through support emails/ FAQs/ Contact Us/ Customer services (chat, chatbot). This group will be using MaidEase application.  **Do we need an advertising management group?**  Yes, loyal customers and bloggers will support advertising through articles, reviews, blogs on social media platforms, and the website itself. This group will not be using the MaidEase application. |
| **Value propositions** | **What value do we deliver to the customer?**  Our main motive is to provide help to customers in their household duties. For small businesses we provide platform to get more customers so that they can provide their services. We provide discount to the customer who enroll in yearly subscription plan. Frequent customers will get promotion deals, gift cards and coupons.  **Which one of our customer’s problems are we helping to solve?**  We are targeting mainly to frequent travelers, physically disabled, and Working Professionals. Working professionals and frequent travelers since they wouldn't have time to perform any household duties. For physically disabled will be an ease to use our services.  **We wish to solve the following problems:**   * Assured Service Quality. * Boosting small businesses. * Customer Support Management. * Time saving. * Providing multiple services in single platform.   **Which customer needs are we satisfying?**   * Professional people who are constantly on the go because they wouldn't have time for any housework. * As small businesses gain exposure, they can draw in additional clients.   Customers are given transparency to choose services that suit their particular needs. |
| **Key resources** | **What Key Resources do our Value Propositions require?**  Teams from development and customer service are required to update web applications and ensure that they work with hosting platforms.  **Our Distribution Channels?**  The website is the major channel we use. The business uses its social media accounts to advertise its product. Future scope - Mobile application.  **Customer Relationships?**  The majority of our interactions with customers is self-service. Through its website, customers use the service. The website offers services, including child care, senior care, laundry, housecleaning. The website also offers customer care chat and chatbots for solving customer or service provider queries. Additionally, based on customer feedback analysis the rating is provided to service providers.  **Revenue Streams?**   * Brand Promotions * Subscriptions * Advertising |
| **How the system is used** | **What are the main system use scenarios for the External Customers?**  External Customers are Working Professionals, frequent travelers, and physically disabled. Professionals in the workforce and people who travel frequently, as they wouldn't have time for any household responsibilities. It will be simple for physically challenged people to use our services.  A situation like this occurs when a parent visits the portal in search of a nanny to watch their child. Parents can book a babysitter from this list who has the top reviews and is available at that particular hour. Any customer can use MaidEase in the same way for laundry, house cleaning, and senior care.  **What are the main system use scenarios for the Internal Users?**  Team of Developers, Testers, Customer care, Maintenance, Project Manager and Owner, and Business Analyst are the Internal Users.  A consumer faces a technical problem and report it to the customer support staff. A ticket is thereafter created by the customer service team and sent to the project manager. The project manager investigates it and informs the developers about the ticket information. Developers fix the issue and forward ahead to tester. The tester runs regression tests, scenarios-based tests, and marks tickets as solved. |
| **External Interfaces (data feeds)** | **Does the system exchange data with external systems? For example, banks, delivery contractors, restaurants, etc.**  Yes, the system is providing multiple household services therefore exchange of data is must. Customer basic information will be shared with service providers. System interacts with payment gateways for payment processing. |
| **Revenue generation, Revenue streams** | **Such as Subscription fees, renting, leasing, licensing, brokerage fees, advertising sales, etc.**  Monthly/ Yearly Subscription, Brand Promotions and Advertising |
| **Key Partners/Suppliers**  **(Stakeholders)** | ***Stakeholder – the party who is involved in or affected by your project***  Development Team, Advertising Team (Bloggers, Customers), Service Providers, Transactional Management (3rd Party Vendors), Customer Support Team, and Finance Management Team. |
| **Expected Benefits to the Customer** | 1. This website provides customers a more streamlined, personalized experience to find all household services all one platform. 2. MaidEase gives small businesses a platform to grow and gives more customers. Additionally, service providers can enroll in advertisements module. 3. Customers and service providers gets customer support 24/7 to solve any query or issue.   MaidEase collects and analyzes customer’s data which can be gathered from the order purchase history to suggest best services to customer. Additionally, information on the service provider is acquired to include him in the client's recommendations. |
| **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.laundryangels.com>  2. <https://www.urbansitter.com>  3. <https://www.sittercity.com>  4. <https://celestialcleaningnj.com>  5. <https://cloudkitchens.com> |
| **Front-end Technology** | **Indicate what technology will be used to develop the front-end of your application.** NextJS, Tailwind, Javascript, HTML5 |
| **Back-end, Database Technology** | **Indicate what technology will be used to develop the back-end, database of your application. The database should be relational.** NodeJS, Firebase, MongoDB, GraphQL, Postman |

# Assumptions (Assigned to Amala)

|  |  |  |  |
| --- | --- | --- | --- |
| Assumption | Validated by | Status | Comments |
| Skill Requirement | All Members | In Process | In order to create and deploy the service-based application, it is presumable that all members will have the requisite technical and functional skills. |
| Teamwork | Product Manager | In Process | All team members will be given tasks by the product manager. |
| Meetings | Project Manager | In Process | Weekly 1-2 meetings discussing progress of the project and assigning tasks |
| Project Resources | QA Analyst | In Process | Every two weeks, an analyst will check/ update all of the devices and resources. |

# Constraints (Assigned to Nidhi)

* Quality - Lack of communication, poor design or development skills and too many project changes might also have an effect on the quality of the project.
* Time - Every team member must adhere to the deadlines to fulfil deliverables. The deadlines and eventually the total time of the project might increase if the scope is changed or increased during the project.
* Risk - There is risk of extended deadlines if some team member drops out of the course and other team members must fill in their assignments.
* Scope - The project’s magnitude in terms of quality, detail, and deliverables must be taken into consideration while defining the scope. Anything that is is beyond the requirements should not be defined as present scope.

# Risk Management Strategy (Assigned to Rushda)

Risk management planning is the process of identifying, assessing, and prioritizing risks that could impact an organization's ability to achieve its objectives. The goal of risk management planning is to minimize the negative impact of risks on an organization and maximize the potential positive outcomes. The process typically involves the following steps:

Diagram

Description automatically generated

The objective of risk management planning is to create a structured approach to addressing uncertainty and to ensure that an organization has the resources and contingency plans in place to manage potential risks.

Some potential risks in this business model with mitigation methods include:

|  |  |  |  |
| --- | --- | --- | --- |
| Risk | Probability | Impact | Mitigation Method |
| Absence of teammate | High | High | To be able to fill in for absent team members, all members should get familiar with each other's duties. |
| Weaker developing skills | Medium | High | All team members should begin to put their development abilities into practice at early stage of the project. |
| Limited software testing skills | Medium | Medium | Developers should perform peer testing within themselves, Regression testing should be performed so that other part of code is not affected. |
| Project takes longer than expected to complete | Medium | Medium | Having a project plan and being organized. Complete each task before the deadline. If there is time, proceed as soon as possible to the following stage. |

# 

# Deliverables (Assigned to Sai Teja)

The project's deliverables for the first phase are:

|  |  |  |
| --- | --- | --- |
| No | Artifact Name | Responsible Party |
| 1 | Project Plan | PM |
| 2 | PID document | PM |
| 3 | BRM Diagram | DBA |
| 4 | Context Diagram | Product owner |
| 5 | Architecture Diagrams (2) | Lead developer |
| 6 | User Requirements | BA |
| 7 | RCT (includes func. decomp., supplementary reqs) | BA |
| 8 | Use-Case Diagram (UML) | Lead Developer |
| 9 | Activity Diagram (UML) | DBA |
| 10 | Data-flow Diagram | QA |
| 11 | Functional Requirements (user stories) | Product owner |
| 12 | Class Diagram (UML) | QA |
| 13 | Sequence Diagram (UML) | Project Team |
| 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 (Assigned to Sai Manish)

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

This section includes a list of all known stakeholders and their interests in the project:

|  |  |
| --- | --- |
| Stakeholder | Interest |
| Service Providers | Provide services to customers, small business subscription, Promotion business through advisement, More income. |
| Customers | Service subscription, All household service at all stops, customer support |
| Customer Support | Customer service, posting issues to product team. |
| Project Team | Managing UI, Solving issues posted, Maintain Project. |

**Project Team (assigned to Tahera)**

The project team includes the following roles

* Project Manager
* Product Owner
* Lead Developer
* Software Developer
* Lead BA
* QA Analyst
* Software Tester
* DBA

|  |
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|  |

Table

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# Project Plan (Assigned to Nidhi)

The project for this semester (Project I) will use a waterfall paradigm with the phases listed below. The project team will set the foundation for the upcoming semester during the two weeks of the implementation phase by implementing the home page and login functionalities.

The project plan includes 5 milestones defined below:

Table

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**Milestones:**

* MS1: Initial Project Plan: (02/12/2023)  
  An initial project plan is a draft that describes the primary goals, parameters, and outputs of a project. It serves as a project blueprint and outlines exactly what has to be done, who will execute it, and when it needs to be finished.
* MS2: Requirements Completed: (03/05/2023)  
  A critical step in the project development process is requirement collecting, during which stakeholders' knowledge about the project's goals, limitations, and expected outcomes is gathered. This phase's goal is to make sure that the project is in line with the demands of the stakeholders and that the project team is aware of all the tasks that must be completed.
* MS3: Design Completed: (04/10/2023)  
  The design phase in a project is the stage where the concept and ideas generated in the planning phase are turned into a detailed and executable plan.
* MS4: Coding Completed: (04/10/2023)  
  The coding phase in a project is the stage where the design and specifications developed in the previous phases are turned into a working system or product. During this phase, the project team writes code to implement the solution, create user interfaces, and integrate components and systems.
* MS5: Testing Completed: (04/23/2023)  
  The testing phase in a project is the stage where the project is evaluated and validated to ensure that it meets the specified requirements and works as intended. During this phase, the project team performs various types of testing, such as unit testing, integration testing, system testing, and user acceptance testing, to verify the quality and functionality of the project.

# Project Controls (Assigned to Bhakti)

* All project aspects will be maintained in English, including, but not limited to, communications, documents, source code and presentation.
* Project manager will be organizing two weekly meetings either in person or through remote video conferencing, to discuss progress, delegate tasks, and actively collaborate on project asset. Final decisions will be made by the end of the meetings taking everyone’s opinion in the consideration.
* Methods of communication include zoom for video conferencing, text by phone among team members, and Slack/Email for team and professor communication.
* In case any member cannot make for the meeting, manager should reschedule a meeting or held it online through Zoom.
* Project documents will be kept and shared using Google Drive for remote access and ease of editing.
* Minutes of all project meetings will be circulated to all attendees, summarizing key decisions, actions, and next steps.
* Manager will also keep a track of the deadlines and ensure that everyone plays their role accurately. Regular updates on the progress of the project will be sent to all stakeholders. The updates will cover the status of tasks, risks, issues, and milestones.

# Communication Plan (Assigned to Amala)

This section will include how stakeholders will be communicated with during the project and how frequently. This should include a note on where to find the Communications Plan if you have one.

|  |  |  |  |
| --- | --- | --- | --- |
| Stakeholder | Frequency | Type | Purpose |
| Professor | Meetings and deliverable drafts at crucial points | Slack, Email. | To approve Project implementation and execution. Advise if there are any potential issues. |
| Project Team | Daily | Slack, Email, project meetings, phone | Talk about the work being done, new requirements, mission-related or incorrect requirements, flaws and how to fix them, and prospective problems. |
| Quality Management Team | Daily | Slack, Email, project meetings, phone | Manual testing, regression testing, a thorough understanding of the business, regular monitoring of the project's security system, and the resolution of any issues should all be done to guarantee that functionality is running properly. |
| Service Providers | Daily | Email, Phone | Solving customer queries. |
| Customer | Daily (24/7) | Web Application, Chatbots, Email, Customer Support chat, Online testing session | To avail any service from MaidEase, customer support service, and to obtain feedback, solve customer query |