**CS691 - Computer Science, Spring 2021**

**Project Initiation Document**

Project: The Circular Pie

Project Manager: Yash Kantharia

Start Date: 01-23-2023

Completion Date: TBD

Table of Contents

[Document Purpose](#_heading=h.gjdgxs) 3

[Background to the Proposed Work](#_heading=h.30j0zll) 3

[Vision 4](#_heading=h.1fob9te)

[Project Objectives 4](#_heading=h.3znysh7)

[Project Scope 4](#_heading=h.2et92p0)

[Business Case](#_heading=h.tyjcwt) 4

[Assumptions](#_heading=h.1t3h5sf) 8

[Constraints](#_heading=h.4d34og8) 8

[Risk Management Strategy](#_heading=h.2s8eyo1) 9

[Deliverables](#_heading=h.17dp8vu) 11

[Stakeholders](#_heading=h.3rdcrjn) 12

[Project Team](#_heading=h.26in1rg) 12

[Project Plan](#_heading=h.lnxbz9) 15

[Project Controls 17](#_heading=h.35nkun2)

[Communication Plan 17](#_heading=h.1ksv4uv)

Document Details

| Version | Modifications | Author | Date |
| --- | --- | --- | --- |
| 1. | Initial PID Draft | All | 02-05-2023 |
| 2. | Refined PID document with Initial Project Plan | All | 02-12-2023 |
| 3. | Redefined stakeholders | Poonam Adtani | 02-19-2023 |
|  |  |  |  |

Approvals

This document requires the following approvals:

| Name | Role | Signature | Date | Version |
| --- | --- | --- | --- | --- |
| Yash Kantharia | Project Manager |  | 02/19/2023 | v0.4 |
| Poonam Adtani | Dev Lead |  | 02/19/2023 | v0.4 |
| Alan Parmar | Business Analyst |  | 02/19/2023 | v0.4 |
| Maneesha Narahari | DBA |  | 02/19/2023 | v0.4 |
| Tharun Reddy | Dev |  | 02/19/2023 | v0.4 |
| Saichand Reddy | QA Analyst |  | 02/19/2023 | v0.4 |
| Sarvesh Desai | Product Owner |  | 02/19/2023 | v0.4 |

Distribution

This document has been distributed to:

| Name | Role | Date of Issue | Version |
| --- | --- | --- | --- |
| Yash Kantharia | Project Manager | 02/19/2023 | v0.4 |
| Poonam Adtani | Dev Lead | 02/19/2023 | v0.4 |
| Alan Parmar | Business Analyst | 02/19/2023 | v0.4 |
| Maneesha Narahari | DBA | 02/19/2023 | v0.4 |
| Tharun Reddy | Dev | 02/19/2023 | v0.4 |
| Saichand Reddy | QA Analyst | 02/19/2023 | v0.4 |
| Sarvesh Desai | Product Owner | 02/19/2023 | v0.4 |

# 

# Document Purpose (assigned to Poonam)

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 “U-Drive”

website.

The PID dictates the following critical aspects:

* Details of the approach to be adopted for the implementation of the “Circular Pie” 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 whether all deliverables were produced in a timely manner or not.

# Background to the Proposed Work (assigned to Maneesha)

This section includes the purpose of the project:

* Why the project needs to be delivered.

The project aims to provide a platform to the end users where they can create a customized pizza order swiftly and get the order delivered in 30 minutes. The online platform would provide a basic yet efficient workflow to make the ordering process very simple for the end user. This would provide the users a simple and value for money option in the market with real time support to enhance customer satisfaction.

* The end results upon project completion

Our project aims to deliver an online web platform where the customers can customize their pizza. The order would be sent to the nearest store where it would be processed and delivered from. The focus is to deliver the best quality pizza in and around 30 minutes. The user would also have the convenience of making the payment online to complete their order. Local businesses can post their ads on our website for marketing which will benefit us with ad revenue.

* The consequences of not delivering the project.

1. Inefficient order management: The restaurants without the web platform cannot enhance their sales digitally.
2. Restaurants need to invest more on human power to take the orders.
3. The organization may face losses on investment already made in development of the project.

# 

# Vision (assigned to Yash)

To provide the convenience to our customers of customizing their pizza, placing an order and making an online payment. The website would provide a simple flow of steps to make it easy for the user to make an order as soon as possible.

# Project Objectives (assigned to Alan)

This section includes how the purpose of the project breaks down into individual objectives and the specific, measurable results expected upon project completion.

Objectives in this section need to be outlined in a way that will enable them to measure the success of the project.

* To create a web platform for customizable pizza orders
* To provide ad spaces on the platform to local businesses
* To provide the end user a simple workflow of the ordering system.
* To provide the end user payment gateway to allow them to make the payments online.
* To provide customer support to the users to help resolve their queries.
* To provide the users an order tracking system.

# Project Scope (assigned to Tharun)

Our website offers a platform for users to order pizzas, and other available items on the menu online.

**Functional:**

* User register and login function.
* Search function for Menu.
* Help users to grab the best deals of the day by giving combo deals.
* Help users to track the order status.
* Secure Payment Process.

**Technical:**

* To do the best User Interface.
* To decide what DB to use
* To decide what SDLC methodology to implement.
* To discuss roles and responsibilities in a team.
* To set up development, staging and production environments.

# Business Case (assigned to Sarvesh)

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.

| **Application Name** | Circular Pie |
| --- | --- |
| **Type of business model** | Manufacturer, Advertising |
| **Target audience of external users**  **(Customer Segments)** | **For whom are we creating value?**  Customers and local businesses  **Who are our most important customers?**  Frequent customers , those who value convenience, quality, and variety in their dining options and are willing to pay for these benefits. |
| **Groups of internal stakeholders, business users** | **Do we need a product development group?**  Yes, to build and develop the application/platform.  **Do we need a sales group?**  Yes, they play a crucial role in promoting and selling the products to customers.  **Do we need a finance group (accounts payable, receivable)?**  Yes, a finance group is essential for managing the financial aspects of the business, including budgeting, forecasting, accounting, and financial reporting.  **Do we need a customer support team?**  Yes, the customer support team will be responsible for answering customer inquiries, resolving any issues that may arise, and providing information about products and services.  **Do we need an advertising management group?**  Yes, an advertising management group can be responsible for creating and executing effective advertising campaigns, to reach target customers and generate awareness of the shop  **Do we need a Resource Management group?**  Yes, a resource management group helps verify material stocks, collaborate with restaurants and manage inventory. |
| **Value propositions** | **What value do we deliver to the customer?**  We provide a platform to the customers where they can customize and order pizzas.  **Which one of our customer’s problems are we helping to solve?**  Our platform provides the convenience of customizable pizza online which can be delivered within 30 minutes.  **We wish to solve the following problems:**  - Assured Food Quality  - Authenticity  - Customer Support  **What bundles of products and services are we offering to each**  Selling a product - Selling best quality pizzas with customized ingredients  **Customer Segment?**  Those who value convenience, quality, and variety in their dining options and are willing to pay for these benefits.  **Which customer needs are we satisfying?**  Providing pizzas on a reasonable rate, instant customer support, high quality ingredients, authentic spices, variety of doughs |
| **Key resources** | **What Key Resources do our Value Propositions require?**   * Product Team for UI, Backend Development and Hosting * Customer Support Team for handling Customer Queries * Sales Team for Advertising   **Our Distribution Channels?**  Services are offered on the web platform with advertising on social media.  **Customer Relationships?**  Customers interact with the product and consume the service through the website and they can connect with the customer support team for queries and complaints.  **Revenue Streams?**   * Pizza Sales * Advertising on the website * Future Scope: Subscriptions packages (offering free delivery and discounts) |
| **How the system is used** | **What are the main system use scenarios for the External Customers?**   * Customize and order their choice of pizza * Add or Remove Promo Codes * Make Payment through a secure gateway * Future Scope: Track delivery, Subscriptions   **What are the main system use scenarios for the Internal Users?**   * Add/Remove Promotional or Ad Campaigns * Update Menu and Price * Collect User Data for Analysis and target Ad Campaigns |
| **External Interfaces (data feeds)** | **Does the system exchange data with external systems? For example, banks, delivery contractors, restaurants, etc.**  Yes, payment gateway and customer data tracking for target ads. |
| **Revenue generation, Revenue streams** | **Such as Subscription fees, renting, leasing, licensing, brokerage fees, advertising sales, etc.**   * Pizza Sales * Advertising on the website * Future Scope: Subscriptions packages (offering free delivery and discounts) |
| **Key Partners/Suppliers**  **(Stakeholders)** | ***Stakeholder – the party who is involved in or affected by your project***  Product Development Team, Advertising and Sales Team, Customer Success, Finance Team, Business Team, Resource Team, Partner Restaurants |
| **Expected Benefits to the Customer** | convenience, quality, variety, time-saving and a seamless ordering and delivery process. |
| **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.  [Marinara Pizza](https://www.marinarapizza.com/)  [Bleecker Street Pizza](https://bleeckerstreetpizza.com/) |
| **Front-end Technology** | Javascript, CSS, HTML |
| **Back-end, Database Technology** | MySQL, Python, Java |

# Assumptions (assigned to Yash)

This section will include assumptions made before the requirements specifications have been documented. It may look something like this:

| Assumption | Validated by | Status | Comments |
| --- | --- | --- | --- |
| Meetings | Project Manager | Completed | Project Manager will schedule two weekly meetings and one progress check meeting |
| Skill requirement | Lead Developer | In Progress | Lead Developer will coordinate with the developer team to finalize the technical scope and requirements of the project and assign duties and responsibilities to the members in the team. |
| Version Control | Product Owner | In Progress | Product Owner will collaborate with team members to organize and maintain versions of documents and code for the project on Github. |
| Supplier’s support | Product Owner | In Progress | Product Owner to find suppliers to provide raw material for pizza, packaging, equipment for processing the pizza and delivery agents. |
| Participation Time | All Members | Completed | All members have decided to at least provide 6 hours per week to this project |
| Team Work | Manager | In Progress | Manager will keep details of all Modules and will assign ‘Single or Team’ work on specific modules. |

# 

# Constraints (assigned to Poonam)

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

* Time: As this is a team project, there are multiple people with different schedules and different levels of

time available. Each person has to plan within their own schedule to find time to do individual work for this project and additionally, as a team, we have to work around everyone’s schedule to find time to meet that works for everyone.

* Missing Group Member: Our Tester has left the group to take a different course so we are one person short, particularly someone with valuable testing experience. We must therefore all take a share of this person’s work so that the burden is not all left on one person to complete that of two people.
* Deadlines: Despite limited time as stated above, the deadlines for each deliverable must be met.
* Requirements: We have to make sure that the application that we develop fulfills the requirements that have been set for this project.

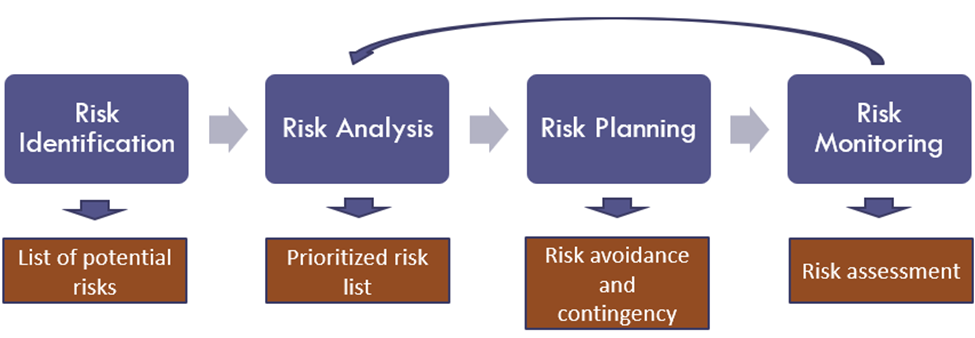
# Risk Management Strategy (assigned to Saichand)

A risk management strategy for an online pizza website would involve identifying and mitigating potential risks that could impact the business. Here are some steps that can be taken to minimize risks for the website

| Risk | Probability | Impact | Mitigation Method |
| --- | --- | --- | --- |
| Lack of development skills | Medium | High | All team members should start to practice development skills at an early stage of the project. This will ensure the smooth delivery of the project. |
| Technology risks | Medium | High | In the event of any technical difficulties or malfunctions, the website should have a disaster recovery strategy in place to rapidly resume operations. To reduce downtime and make sure the website is performing at its best, regular backups and upgrades should also be performed. |
| Payment risks | Medium | High | To handle transactions, the website should make use of a trusted and secure payment gateway. Additionally, it must regularly monitor transactions for fraud and also have fraud detection and prevention procedures in place. |
| Teammate’s departure | Medium | High | All team members should get familiar with other members’ activities to be able to replace them in case of departure. |
| Security risks | High | High | To safeguard sensitive information including client names, addresses, and payment information, the website should have secure servers and employ encryption. Security audits should be performed on a regular basis to find any vulnerabilities and take corrective action. |

MOST SIGNIFICANT RISKS:

Both security risk and payment risk can have a significant influence on project success and should be controlled properly as part of the risk management process. This might include the implementation of security rules and steps to secure sensitive information and assets, as well as creating clear payment terms and processes to reduce payment risk.



Risk management is the process of identifying, assessing, and prioritizing potential risks to an organization, and then taking appropriate steps to minimize or mitigate those risks. A risk management strategy is a plan that outlines how an organization will approach risk management, including the steps it will take to identify, assess, and respond to risks.

* The first phase of the risk management plan involves identifying the potential risks that an organization may face, such as operational risks, financial risks, and reputational risks.
* The second phase is to prioritize the risks based on their likelihood of occurrence and potential impact. This helps organizations focus their efforts on managing the risks that pose the greatest threat., and reputational risks.
* Risk planning is an essential part of risk management that entails developing and executing strategies to control or mitigate the effect of identified risks. It is the process of taking proactive efforts to plan for and respond to possible risks, as well as to minimize the damage or loss that may occur if a risk materializes.
* Risk response plans should be evaluated and assessed on a regular basis to ensure that they remain relevant and effective. The organization should also examine each risk's impact and modify risk response strategies accordingly.

# Deliverables (assigned to Poonam and Yash)

The deliverables of the project for phase 1 are:

| No | Artifact Name | Responsible Party |
| --- | --- | --- |
| 1 | Project proposal | Project Manager |
| 2 | PID Document | Project Manager |
| 3 | Project Plan, RACI | DBA |
| 4 | Requirement Types | Product owner |
| 5 | Analysis Diagram | Lead Developer |
| 6 | User Requirement | Lead BA |
| 7 | RCT | Lead BA |
| 8 | Functional Requirement | Lead Developer |
| 9 | Workshop 1 Preparation | Project Team |
| 10 | Mid-term Exam Preparation | Project Team |
| 11 | DB model, ER Diagrams | DBA |
| 12 | Architecture Diagrams | Lead QA |
| 13 | UML Design Diagrams | Product Owner |
| 14 | Test Documentation | Lead QA |
| 15 | Workshop 2 Preparation | Project Team |
| 16 | Final Exam Preparation | Project Team |
| 17 | FINAL PRESENTATION | Project Team |

# Stakeholders (assigned to Maneesha)

Project stakeholders are below:

| Stakeholder | Interest |
| --- | --- |
| Customers | Who are ordering the pizza. |
| Delivery service provider | Who are delivering the product. |
| Partner Restaurants | Where the pizza order is placed. |
| Customer Support Team | Customer support, workers in the restaurants. |
| Advertising Customers | Local businesses who post their ads on our platform |
| Raw Material Suppliers | Who provides food items and raw materials |

# Project Team (assigned to Saichand)

The project team includes the following roles

● Project Manager

● Product Owner

● Lead Developer

● Developer

● Business Analyst

● QA Lead

● DBA

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

# Project Plan (assigned to Maneesha and Tharun)

This semester (Project I), the project will follow the Waterfall model comprised on the phases

shown below. The implementation phase is scheduled for 2 weeks where the project team will

implement the Home page and login features, laying grounds for the next semester.

The project plan includes 5 milestones defined below.

| **PROJECT PHASE** | **ACTIVITY** | **TASK OWNER** | **START DATE** | **END DATE** |
| --- | --- | --- | --- | --- |
|  | Discuss project proposals | Yash Kantharia | 20-Jan | 24-Jan |
|  | Confirm Project Team Roles | Yash Kantharia | 25-Jan | 31-Jan |
| **PROJECT INITIATION** | Develop two business cases | Yash Kantharia/Poonam Adtani/Maneesha Narahari | 25-Jan | 31-Jan |
|  | Develop Project Initiation Document (PID) | ALL | 25-Jan | 31-Jan |
|  | Produce initial Project Plan, RACI | Maneesha / Tharun Reddy | 25-Jan | 31-Jan |
| MILESTONE 1: INITIAL PROJECT PLAN COMPLETED | | | | |
|  | Produce BRM diagram, define User Roles | Yash Kantharia | 01-Feb | 07-Feb |
| **REQUIREMENTS DEFINITION** | Produce Context Diagram, Define System Interfaces | Yash Kantharia / Sarvesh Desai / Poonam Adtani | 01-Feb | 07-Feb |
| Define Business Requirements | Yash Kantharia | 01-Feb | 07-Feb |
| Produce Architecture Diagrams | Poonam Adtani/Sarvesh Desai/Maneesha Narahari | 01-Feb | 07-Feb |
| Define Functional Decomposition | Alan Parmar/Sarvesh Desai | 08-Feb | 14-Feb |
| Produce RCT document | Alan Parmar/Sarvesh Desai | 14-Feb | 21-Feb |
|  | Decide which features to implement this semester | Poonam Adtani | 14-Feb | 21-Feb |
|  | Produce analysis diagrams (UML, DFD) | Poonam Adtani/Yash Kantharia/Sarvesh Desai | 14-Feb | 21-Feb |
| Define functional requirements (User Stories) | Maneesha/ Tharun Reddy | 14-Feb | 21-Feb |
| Update Project Plan with additional requirements tasks | Maneesha/ Tharun Reddy | 14-Feb | 21-Feb |
| MILESTONE 2: REQUIREMENTS COMPLETED | | | | |
|  | Architecture design (Class, Sequence Diagrams) | Poonam Adtani/Maneesha Narahari | 01-Mar | 07-Mar |
|  | Database Design (ERD, Table spec) | Maneesha Narahari | 01-Mar | 07-Mar |
| **DESIGN** | System Interface Design | Sarvesh Desai/Poonam Adtani | 08-Mar | 21-Mar |
|  | User interface design | Sarvesh Desai | 08-Mar | 21-Mar |
| MILESTONE 3: DESIGN COMPLETED | | | | |
|  | GUI & Functionality Detailed Design | Poonam Adtani/ Tharun Reddy | 21-Mar | 28-Mar |
| **CODE** | Establish code repository in GitHUb | Poonam Adtani/ Tharun Reddy | 28-Mar | 04-Apr |
|  | Coding & Implemenation | ALL | 28-Mar | 04-Apr |
| MILESTONE 4: CODING COMPLETED | | | | |
|  | Plan testing, produce a Test Plan document | Saichand/ Poonam | 04-Apr | 11-Apr |
|  | Evaluate Features to be Tested | Saichand/ Poonam | 04-Apr | 11-Apr |
|  | Design Test Cases | Saichand/ Poonam | 12-Apr | 18-Apr |
| **INTEGRATION AND TESTING** | Execute Test Cases | Saichand/ Poonam | 12-Apr | 18-Apr |
|  | Analyze Test Results | ALL | 19-Apr | 25-Apr |
| MILESTONE 5: TESTING COMPLETED | | | | |
| **IMPLEMENTATION** | Prepare Application Demo for the Presentation PowerPoint | All | 26-Apr | 09-May |

# 

Milestones :

MS1: Initial Project Plan Completed

MS2: Requirements Completed

MS3: Design Completed

MS4: Coding Completed

MS5: Testing Completed

# 

# Project Controls (assigned to Poonam and Yash)

# All project aspects will be maintained in English, including, but not limited to, communications, documents, and source code.

Official meetings will be held at least once a week, either in person or through remote video conferencing, in order to discuss progress, delegate tasks, and actively collaborate on project assets. Methods of communication include Microsoft Teams for video conferencing, text by phone among team members, and Slack for team and professor communication.

Project documents will be kept and shared using GoogleDrive and Github for remote access and ease of editing.

# 

# Communication Plan (assigned to Sarvesh)

| Stakeholder | Frequency | Type | Purpose |
| --- | --- | --- | --- |
| Professor | Weekly | Email/Slack | Provide important communications for project implementation tasks and advisements. |
| Project Manager | Weekly | Email, Slack, Whatsapp | Conducts Team Meetings and checks progress of current tasks. Sends minutes of progress check meetings on Email. |
| Product Owner / Product Development Team | AD HOC | Email, Slack | Communications regarding product improvements, bugs and releases. |
| Tester | ADHOC | Email, Slack | Approve releases after testing or report bugs to the product and development teams. |
| Customer Success Team | ADHOC | Email | Customer Success Team to communicate with the end users and respective stakeholders to resolve user queries. |
| Finance Team | Monthly, ADHOC | Email, Slack | Finance Team to provide stats and analysis of the profits and expenditures to optimize the capital utilization. |
| Advertising Team | ADHOC | Email, Phone | To send and receive communications from local businesses to provide them ad spaces on the website at reasonable costs. |

ADHOC: created or done for a particular purpose as necessary