
GROUP 5

Justatea-F&B Ecommerce website Software Development Plan Version 1.0

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Software Development Plan	Date: 20/06/2024
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Revision History

Date	Version	Description	Author
20/06/2024	1.0	Initial version of Project Plan for Justatea	22127307 - Trần Đức Bình 22127378 - Lê Quang Tân

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Software Development Plan

1. Introduction

The F&B E-Commerce Website is an innovative and comprehensive online platform designed to offer a diverse selection of food and beverages to consumers with ease and convenience. This software development plan outlines the strategic approach, technical specifications, and operational framework required to build, deploy, and maintain the website. The document provides a detailed roadmap for the project, covering all aspects from initial concept to final implementation.

2. Project Overview

2.1 Project Purpose, Scope, and Objectives

2.2 Purpose

The primary objective of the F&B E-Commerce Website is to create an intuitive, user-friendly, and efficient platform that caters to a wide range of food and beverage needs, including tea, coffee, juice and small snacks like cake.

Scope

The website aims to provide an exceptional online shopping experience by integrating advanced search functionalities, secure payment gateways, personalized recommendations, and reliable delivery services.

Objective

1. Enhanced user experience: create user-friendly interface to ensure smooth and enjoyable shopping experience.
2. Increase sales: digital marketing and personalized recommendation for boosting sales.
3. Build brand loyalty: build brand identity, offer exclusive deals, promotions to create a loyal customer base.
4. Ensure security: implement strict security measures for protecting user data and safe transactions.
5. Efficient streamline operations: optimize backend operation to enhance inventory management, order processing, delivery logistics and minimize the work for both employees and owner.

2.3 Assumptions and Constraints

Assumption

- **Brand products and assets:** Already having the brand's logo, color theme, products's details.
- **User Behavior:** Consumers prefer a seamless and secure online shopping experience, including personalized recommendations and efficient delivery services.
- **Delivery Partnerships:** Reliable partnerships with delivery services are established and maintained to ensure steady timely deliveries.
- **Legal Compliance:** All necessary licenses and regulatory compliances related to selling beverages online, especially alcoholic drinks, will be obtained and adhered to.
- **Development Team Expertise:** The project team possesses the basic skills and expertise in web development, e-commerce platforms, cybersecurity, and digital marketing.
- **Customer Support:** Adequate resources will be allocated for customer support to handle inquiries, complaints, and feedback efficiently.

Constraints

- **Time:** Project has a fixed schedule of 12 weeks.
- **Budget:** Zero-budget project.
- **Staff:** Project has 5 people, there will be no more people added during the project.

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- **Fixed sprint:** Each sprint is fixed for 2 weeks.
- **Third party:** Other payment methods that are not COD will need third party involvement.
- **Security and privacy:** The website may not have high security and privacy for users.
- **Compatibility:** The website must be compatible with various devices and browsers, requiring thorough testing and potential compromises on certain advanced features.
- **Skills:** Team members may lack web development knowledge and need to improve over the course of the project.
- **Project size:** The scale of the project may be too big
- **Technical limit:** due to zero-budget for the project we can't access full options and services for software tools..

2.4 Project Deliverables

The final product will meet all the requirements from the customer - Deliverable date: final week of the project.

Other deliverables produced during the project:

Project initiation:

- Project charter: document outlining the project scope, objectives, stakeholders.

Project planning:

- Project plan: plan include timeline, resources allocation, phases for project.
- Risk management plan: identification and analysis of potential risks with solutions.
- Requirements documentation: breakdown customer requirements for functional and nonfunctional requirements.

Design

- Software architecture design: diagram and documentation for architecture for the website
- UI/UX design: prototype for user interface and user experience.
- Database design: data models for database.
- Integration plan: plan for using third party services

Development phase

- Source code: well-documented code base.
- Api: api for external and internal uses.
- User interface: front end with all functions for customers.
- Admin panel: admin site for managing products and stores.

Testing phase

- Test plan: unit tests, system tests, integration tests.
- Test cases and scripts: detailed test cases and script.
- Bug report: documented and tracking bug report.

Deployment phase

- Deployment plan: plan for deploying software online.
- User manuals and documentation: well-documented about user manuals, online policies.

Project closure

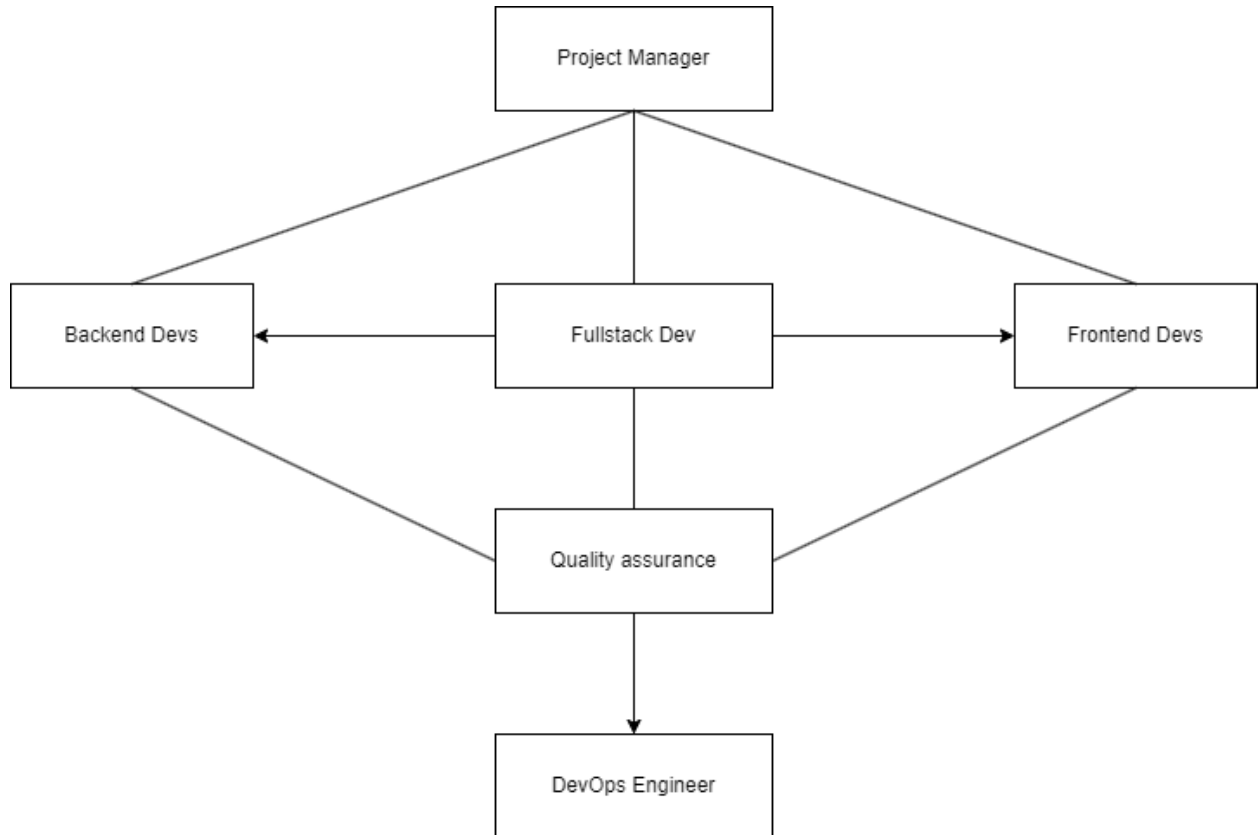
- Project review: final review to estimate how successful the project is and what we could do better.

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- Final report: comprehensive report to summarize the project's outcomes, performance and overall success.

3. Project Organization

3.1 Organizational Structure



3.2 Roles and Responsibilities

Roles	Responsibilities
Project manager (Team leader) : Trần Đức Bình	Being responsible for projects from initiation to close, making sure the work gets done efficiently and satisfactorily: <ul style="list-style-type: none"> • Plan and develop the project idea • Monitor project progress and set deadlines • Solve thorny issues that arise throughout the developing process • Evaluate project performance
Back-end developer: Trần Đức Bình, Trần Đoàn Huy Phước	Creating, maintaining, testing, and debugging the entire back-end of the website This includes the core application logic, databases, data and application integration, API, and other

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	processes taking place behind the scenes
Front-end developer : Lê Quang Tân, Trần Đức Việt	Implementing visual and interactive elements that users engage with Creating user interfaces, test websites' usability, troubleshoot coding issues and change interfaces
Fullstack developer: Hồ Thế Phúc	Works on the checkout process and payment integration Responsible for both frontend and backend components
Quality Assurance (QA) Engineer: All members	Plans and executes test cases for the entire application Identifies and reports bugs or issues Ensures software quality and adherence to requirements
DevOps Engineer: All members	Responsible for setting up the development and deployment environments Manages continuous integration and delivery processes Monitors application performance and infrastructure

4. Management Process

4.1 Project Estimates

Features	22127338	22127454	22127378	22127037	21127670	Final
User Authentication	5	3	8	4	6	5
Shopping Cart	12	15	13	16	14	14
Product Details	9	12	10	8	11	10

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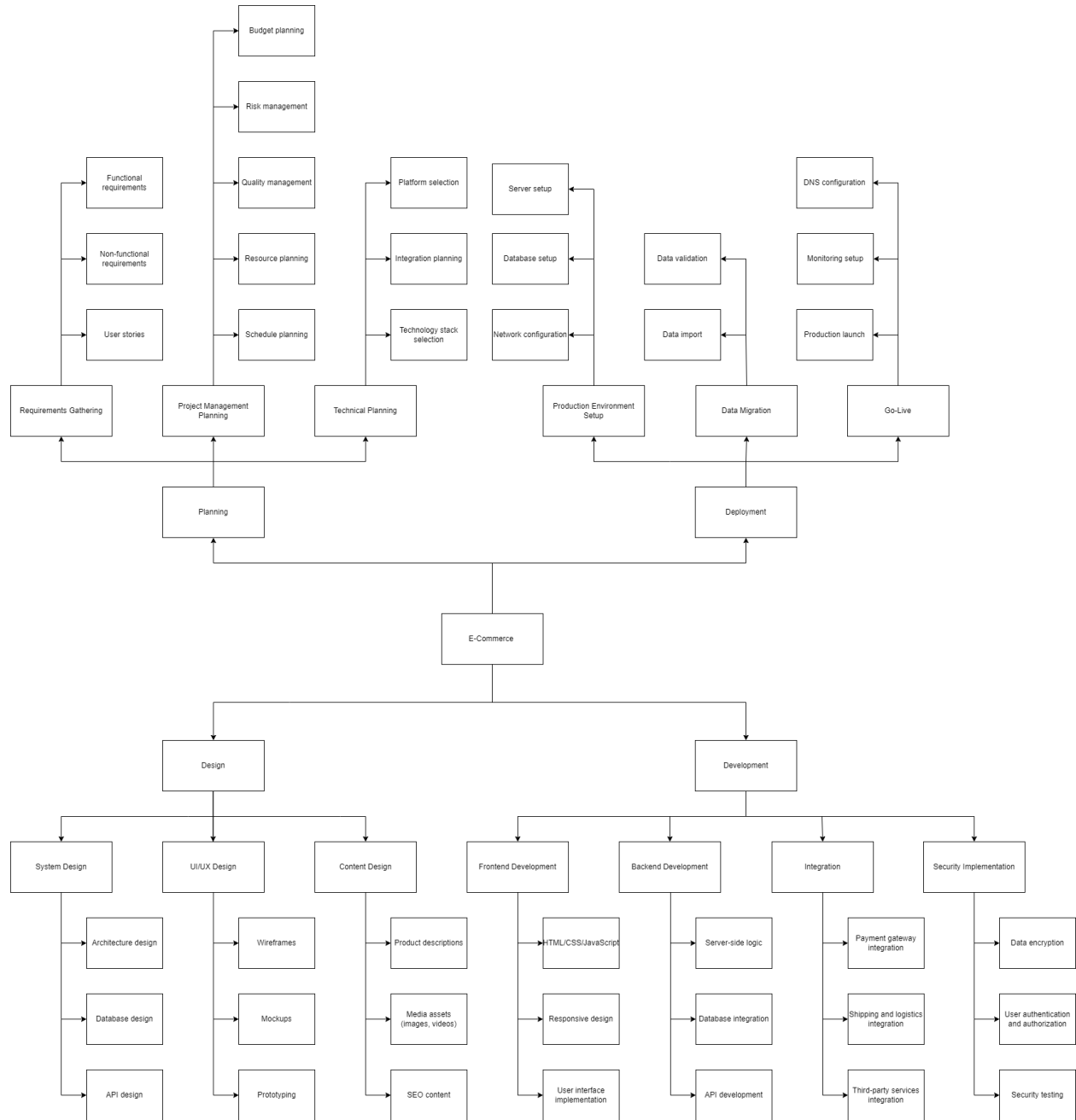
Checkout Process And Payment	24	30	26	28	32	28
Search and Filtering	13	14	12	15	11	13
Reviews and Recommendations	12	15	13	12	12	14
Chat Bot	8	5	2	3	2	4
Testing and fixing bugs	5	7	12	2	10	8

Estimation table for project with estimate efforts (man-day)

4.2 Project Plan

4.2.1 Phase and Iteration Plan

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Work breakdown structure

Phase	Iteration	Objectives
Inception	Sprint 1	Gather and document client requirements. Identify the key features and functionalities needed for the e-commerce website. Establish a high-level vision and scope for the project. Determine initial project constraints and assumptions.

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Phase	Iteration	Objectives
Elaboration	Sprint 2	Define detailed project goals and deliverables. Select the most suitable software development methodology. Define roles, responsibilities, and obligations of team members. Develop a detailed project timeline and milestones. Create a project budget and allocate resources accordingly.
Construction	Sprint 3	Develop and implement user authentication features. Create and integrate a shopping cart system. Develop product detail pages, including images, descriptions, and pricing. Implement a basic chat bot for customer support. Conduct initial testing of these features to ensure they function correctly.
	Sprint 4	Demonstrate the completed features (user authentication, shopping cart, product details, chat bot) to the client. Gather client feedback and identify any required adjustments or additional features. Refine the project plan based on client input.
	Sprint 5	Review and refine previously developed features based on client feedback. Develop new features such as the checkout process, payment integration, search and filtering functionalities, and reviews and recommendations system. Perform testing on all new and updated features to ensure they meet quality standards.
Transition	Sprint 6	Gather final feedback and make necessary adjustments. Confirm that the product is ready for deployment. Release the final version of the e-commerce website and transition it to the client for deployment.

Iteration Objectives

Milestone (At the end of the phase)	Achievement criteria
Inception	- Reach an agreement on project concepts. - Outline the fundamental product requirements and implementation plan.
Elaboration	- Complete the analysis and design of use-case diagrams.
Construction	- Implement the product successfully with all proposed features.
Transition	- Ensuring the product is ready for deployment, meets quality standards, and is prepared for user adoption

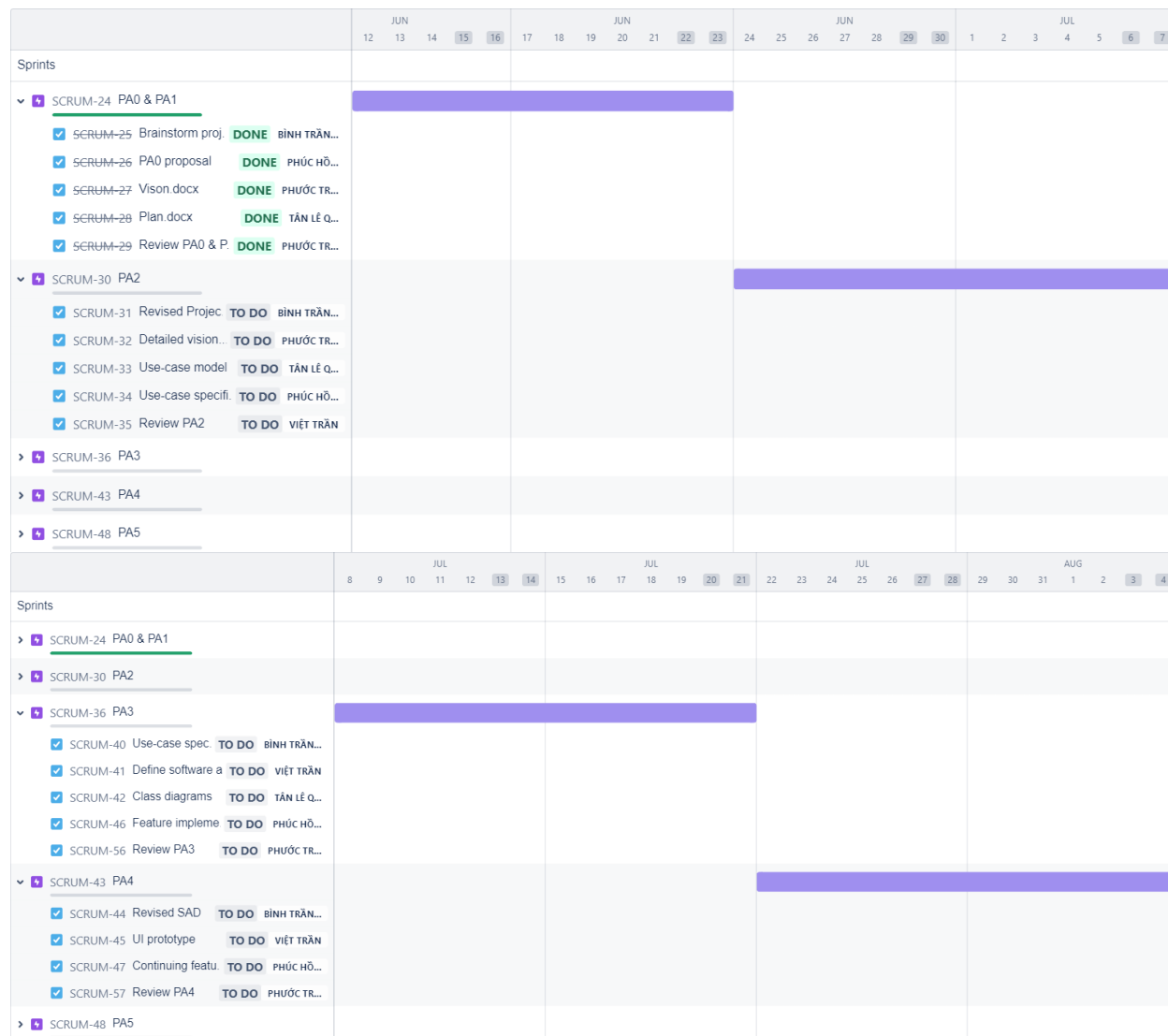
Major milestones

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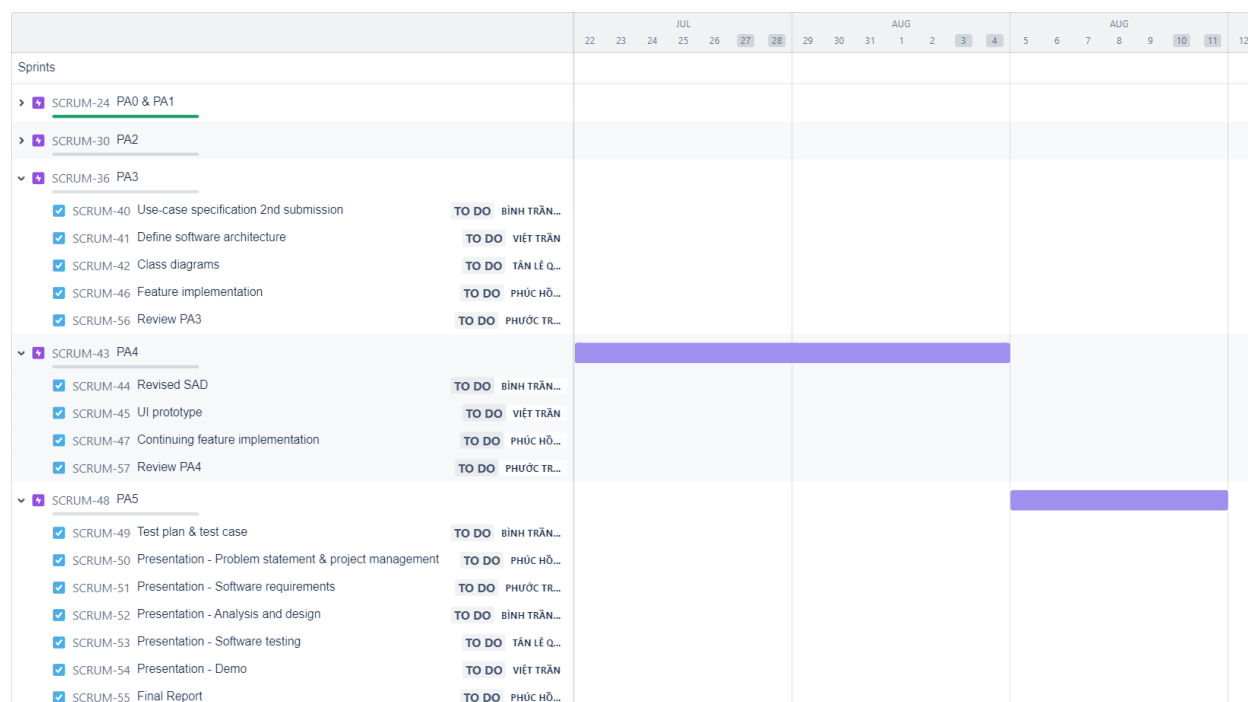
4.2.2 Releases

There will be three releases. The first, a demo version, will be completed at the end of sprint 3. Any issues detected will be fixed so that the full release may be completed to release the beta version at the end of sprint 5. After making necessary adjustments, the final version will be deployed and ready to use.

4.2.3 Project Schedule



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4.3 Project Monitoring and Control

4.3.1 Reporting

Updated cost and schedule estimates, and metrics summary reports, will be generated at the end of each iteration.

The Minimal Set of Metrics, as described in the RUP [Guidelines: Metrics](#), will be gathered on a weekly basis. These include:

- Earned value for completed tasks. This is used to re-estimate the schedule and budget for the remainder of the project, and/or to identify need for scope changes.
- Total defects open and closed – shown as a trend graph. This is used to help estimate the effort remaining to correct defects.
- Acceptance test cases passing – shown as a trend graph. This is used to demonstrate progress to stakeholders.
- In addition, overall costs will be monitored against the project budget.

4.3.2 Risk Management

Risk ID	Risk Description	Probability	Impact	Risk Exposure	Priority	Mitigation Strategy or Contingency Plan
1	Server Downtime	4	5	20	High	Regular server maintenance schedule, backup servers, quick response protocol in case of downtime.
2	Cybersecurity Breach	3	4	12	Medium	Implement strong encryption, regular security audits, employee training on cybersecurity best practices.

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3	Payment Gateway Failure	2	4	8	Low	Redundant payment gateways, real-time monitoring, alternative payment methods for customers.
4	Inventory Stockouts	3	3	9	Medium	Inventory forecasting, safety stock, agile supply chain management.
5	Website Performance Issues	2	3	6	Low	Content delivery network (CDN), optimize website code, regular performance testing.
6	Data Loss	3	5	15	High	Regular data backups, secure data storage protocols, employee training on data handling procedures.
7	Customer Service Bottleneck	2	3	6	Low	Implement chatbots for basic queries, expand customer service team during peak hours.
8	Supplier Disruption	3	4	12	Medium	Diversify suppliers, maintain good relationships with multiple suppliers, emergency response plan for supplier disruptions.
9	Member's health problem	3	5	20	High	Prepare a backup time Reorganize team so that there is more overlap of work and people therefore understand each other's jobs
10	Legal/Regulatory Compliance	2	4	8	Low	Regular legal compliance audits, stay updated on regulatory changes, legal consultation when necessary.

4.3.3 Configuration Management

Appropriate tools will be selected which provide a database of Change Requests and a controlled versioned repository of project artifacts.

All source code, test scripts, and data files are included in baselines. Documentation related to the source code is also included in the baseline, such as design documentation. All customer deliverable artifacts are included in the final baseline of the iteration, including executables.