

Project Plan

Unlimited Marketplace

Project assignment

Project Context and Objectives

Background: The project, titled MarketplaceX, is aimed at developing an online marketplace platform facilitating interactions between buyers and sellers, offering features like product listings, bidding, and user management.

Project Goals:

- **Integrate User Roles:** Develop distinct functionalities for buyers and sellers to interact within the marketplace effectively.
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- **Implement Bidding System:** Allow buyers to bid on product listings, enhancing the purchasing dynamics.
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- **Enhance User Experience:** Create intuitive and responsive user interfaces to streamline navigation and transactions on the platform.

Scope and preconditions

Inside Scope:

- User authentication and authorization for different roles (buyers, sellers).
- Product listing creation, viewing, and management by sellers.
- Bidding functionality for buyers on product listings.
- Admin panel for managing users, listings, and system settings.
- Documentation updates every sprint.
- Agile sprint meetings: backlog grooming and retrospectives.

Outside Scope:

- Payment processing system.
- Third-party logistics integration for shipping.

Technology Stack:

- **Backend:** Spring Boot (Java) for robust API development.
- **Frontend:** React for dynamic and responsive UI.
- **Database:** MySQL for structured data storage and retrieval.
- **API for Additional Data:** External APIs for additional functionalities if required.
- **Containerization:** Docker for managing microservices-based architecture.

Strategy: Agile with Scrum

- **Flexibility:** Adapting to changing requirements and market demands.
- **Incremental Delivery:** Regularly deliver functional increments to stakeholders.
- **Risk Mitigation:** Early identification and resolution of issues.
- **Continuous Improvement:** Incorporate feedback for ongoing product enhancement.

Phases of the Project

Initiation Phase

- Define project objectives and requirements.
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Planning Phase

- Develop sprint plans with prioritized features and tasks.
- Set up communication plans and tooling (e.g., Slack, Jira).
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Development Phase

- Implement functionalities in bi-weekly sprints.
- Conduct code reviews, unit testing, and integrate feedback.
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Testing and QA Phase

- Perform extensive testing: unit, integration, and user acceptance tests.
- Document and fix any identified bugs or issues.
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Deployment Phase

- Prepare production environment and deploy functionalities.
- Monitor application performance and user feedback.
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Reflection and Wrap-Up Phase

- Conduct project retrospectives to identify lessons learned.
- Archive project documentation and celebrate team achievements.

Testing Strategy

- **Unit Testing:** Validate individual components for reliability.
- **Integration Testing:** Ensure seamless interactions between different parts of the application.
- **System Testing:** Verify overall system performance against requirements.
- **User Acceptance Testing:** Ensure the platform meets user expectations and business needs.

Configuration Management

- Utilize GitHub for source code management with branch policies.
- Implement CI/CD pipelines using GitHub Actions for automated testing and deployment.
- Monitor and review code quality using SonarQube.

Time Plan and Milestones

- **Sprint Length:** 2 weeks (aligning with Agile best practices).
- **Key Milestones:**

- Sprint 1: User authentication and basic interface setup.
- Sprint 3: Product listing functionalities for sellers.
- Sprint 5: Bidding functionalities for buyers.
- Sprint 7: Admin panel and system-wide features.
- Final Sprint: Final testing, deployment, and project wrap-up.

Risk Management

- **Identify potential risks** early in the project, such as technical challenges, resource limitations, or external dependencies.
- **Prioritize risks** based on their likelihood and impact on the project.
- **Develop mitigation strategies** for high-priority risks, such as alternative solutions, additional resources, or contingency plans.
- **Monitor and review risks** regularly throughout the project lifecycle to address and adapt to any changes.

By following this detailed project plan, the MarketplaceX team aims to successfully deliver a comprehensive and robust online marketplace platform that meets the needs and expectations of its users while adhering to the project timeline and quality standards.

Expected End Products

- **Project Documentation:** Detailed records of planning, development, testing, and deployment.
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- **Marketplace Application:** Fully functional web platform with separate buyer and seller interfaces.
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- **Test Reports:** Documentation of testing procedures, results, and resolutions.