

CASE STUDY

GROUP PROJECT

IS5107

PROJECT MANAGEMENT PRACTICUM

**DEPARTMENT OF COMPUTING & INFORMATION
SYSTEM**

FACULTY OF COMPUTING

SABARAGAMUWA UNIVERSITY OF SRI LANKA

Group Details

Group No: 04

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Project Topic :

Augmented Reality Shopping App

Introduction

Project Overview

The integration of augmented reality (AR) into the shopping experience is significantly reshaping the retail landscape by blending the physical and digital worlds in unprecedented ways. As the e-commerce sector continues its rapid expansion, AR technology emerges as a powerful solution to the inherent limitations of traditional online shopping. By enabling consumers to interact with products virtually, AR bridges the gap between the tactile experience of in-store shopping and the convenience of online purchasing. This technological innovation allows shoppers to visualize items within their own environment before making a purchase, thereby reducing the uncertainty and hesitation that often accompany online buying decisions. Through AR, consumers can make more informed choices, fostering greater confidence in their purchases and ultimately driving higher customer satisfaction.

The proposed AR Shopping App is designed with a seamless and intuitive interface that enhances the overall shopping experience by allowing users to browse products and visualize them in real-world settings via their smartphones or tablets. This feature not only elevates customer satisfaction but also provides retailers with a distinct competitive advantage in the increasingly digital marketplace. By effectively bridging the divide between physical stores and online shopping, the app offers a new level of interactivity and engagement that appeals particularly to tech-savvy millennials and Gen Z shoppers. These demographics, known for their preference for innovative and immersive experiences, are likely to be drawn to the app's ability to offer a personalized and dynamic shopping journey that traditional e-commerce platforms cannot match.

Incorporating advanced features such as virtual try-ons, 3D product modeling, and personalized recommendations, the AR Shopping App is poised to revolutionize the online retail experience. By combining cutting-edge technology with a user-centric design and robust e-commerce functionalities, the app not only enhances the shopping experience for consumers but also positions retailers to stay ahead in an evolving digital market. This comprehensive approach ensures that the app becomes an essential tool for both consumers seeking a more informed and interactive shopping experience and retailers looking to innovate and adapt in a competitive landscape. As AR continues to redefine the boundaries of online retail, the app's potential to transform the way people shop underscores the importance of embracing new technologies to meet the ever-changing demands of the modern consumer.

Project Aims & Objectives

Aims

1. Enhance Online Shopping Experience

The primary aim is to create an app that enriches the online shopping experience by integrating AR technology, allowing users to visualize products in their own environment before making a purchase.

2. Increase Customer Engagement and Satisfaction

The app aims to boost customer engagement by providing interactive and personalized shopping experiences, leading to higher satisfaction and reduced return rates.

3. Provide Competitive Advantage for Retailers

To offer retailers a cutting-edge tool that differentiates them from competitors by offering a unique, immersive shopping experience.

4. Reduce Return Rates

Aim to significantly decrease product return rates by allowing customers to make more informed purchasing decisions through AR visualization.

5. Expand Market Reach

Aim to attract new customer segments, particularly tech-savvy younger generations, and those who prefer to shop from home.

6. Promote Sustainability

Aim to reduce the environmental impact of online shopping by minimizing returns and the associated shipping and packaging waste.

Objectives

1. Develop a User-Friendly AR Interface

Create an intuitive and responsive AR interface that allows users to easily browse, select, and visualize products in real time.

2. Implement 3D Modeling and Virtual Try-Ons

Integrate advanced 3D modeling and virtual try-on features that enable users to see how products like clothing, furniture, or accessories would look in their actual space.

3. Incorporate Personalization and Recommendation Algorithms

Develop algorithms that suggest products based on user preferences, behavior, and previous interactions, ensuring a tailored shopping experience.

4. Ensure Cross-Platform Compatibility

Build the app to be compatible across multiple devices and operating systems, ensuring a wide user reach.

5. Integrate Secure Payment and User Authentication Systems

Implement secure and reliable payment gateways and user authentication processes to ensure data privacy and transaction security.

6. Implement Social Shopping Features

Develop features that allow users to share their AR visualizations with friends and family, enabling collaborative decision-making and increasing social engagement.

7. Create an Analytics Dashboard for Retailers Design

A comprehensive analytics system that provides retailers with insights into customer behavior, popular products, and the effectiveness of AR in driving sales.

8. Optimize AR Performance

Ensure fast loading times and smooth performance of AR features across various devices and network conditions to maintain a seamless user experience.

9. Develop a Content Management System (CMS)

Create a user-friendly CMS for retailers to easily upload, manage, and update their product catalog, including 3D models and AR assets.

Pre Development Deliverables

Pre-Development Stage (Weeks 1-12)

Position	Name with Initials	Short Name
Project Manager	J.M.S.U. Bandara / R.K.I.A. Rajapaksha	JMSEB / RKIAR
Business Analyst	H.K.G.S. Prabodhani / T.P. Indunil	HKGSP / TPI
Software Architecture	K.W.A. Chirantha	KWAC
Market Analyst	S.A.G.N. Jayasekara	SAGNJ
Financial Planner	L.V.N. Sachintha / M.N.N. Muhammad	LVNS / MNNM
Risk Manager	C. N. Ranawaka / A.K.I.U. Aththanagoda	CNR / AKIUA

1.0 Understand Client Requirements

1.1 Conduct Meetings

- Assignee: Project Manager - J.M.S.U. Bandara
- Due Date: Week 1-2
- Description: Schedule and lead meetings with the client to gather initial requirements, discuss project goals, and understand their vision. Ensure all client expectations are documented and clarified.

1.2 Conduct Interviews

- Assignee: Business Analyst - M.N.N. Muhammad
- Due Date: Week 1-2
- Description: Interview key stakeholders and end-users to collect detailed insights on project needs, preferences, and objectives. This helps in refining the requirements and ensuring alignment with the client's vision.

1.3 Analyze Scope

- Assignee: Business Analyst - M.N.N. Muhammad
- Due Date: Week 2-3
- Description: Review and analyze the gathered requirements to define the project scope. Ensure that the project boundaries and deliverables are clearly outlined and align with client needs.

1.4 Analyze Functionality

- Assignee: Business Analyst - M.N.N. Muhammad
- Due Date: Week 3-4
- Description: Examine the required functionalities and features of the project. Assess their feasibility and relevance to meet the client's needs and project objectives.

1.5 Prepare SRS Document

- Assignees: Project Manager - J.M.S.U. Bandara & Business Analyst - M.N.N. Muhammad
- Due Date: Week 4-5

- Description: Create the Software Requirements Specification (SRS) document, detailing functional and non-functional requirements, use cases, and project constraints.

2.0 Market Analysis

2.1 Conduct Surveys

- Assignee: Market Analyst - C.N. Ranawaka
- Due Date: Week 2-3
- Description: Design and distribute surveys to gather data on market needs, customer preferences, and current trends. Analyze responses to gain insights into consumer behavior.

2.2 Conduct Industry Research

- Assignee: Market Analyst - C.N. Ranawaka
- Due Date: Week 3-4
- Description: Research industry trends, market opportunities, and challenges. Identify factors influencing the market and potential areas for the app's success.

2.3 Identify Target Audience

- Assignee: Market Analyst - C.N. Ranawaka
- Due Date: Week 4-5
- Description: Define and profile the target audience based on survey data and industry research. Determine their needs, preferences, and purchasing behavior.

2.4 Analyze Market Trends

- Assignee: Market Analyst - C.N. Ranawaka
- Due Date: Week 5-6
- Description: Study recent market trends and technological advancements to ensure the app aligns with current and future industry standards.

2.5 Analyze Competitors

- Assignee: Market Analyst - C.N. Ranawaka
- Due Date: Week 6-7

- Description: Evaluate competitors' products, features, and market positioning. Identify strengths, weaknesses, and opportunities for differentiation.

2.6 Prepare Market Analysis Report

- Assignee: Market Analyst - C.N. Ranawaka
- Due Date: Week 7-8
- Description: Compile findings from surveys, research, and competitive analysis into a comprehensive report. Highlight key insights and recommendations for the project.

3.0 Feasibility Study

3.1 Assess Resource Availability

- Assignee: Project Manager - J.M.S.U. Bandara
- Due Date: Week 4-5
- Description: Evaluate the availability of necessary resources, including team members, technology, and tools, to ensure the project's feasibility.

3.2 Assess Expertise

- Assignee: Software Architect - K.W.A. Chirantha
- Due Date: Week 5
- Description: Review the team's skills and expertise to ensure they have the capabilities required to execute the project successfully.

3.3 Estimate Costs

- Assignee: Financial Planner - A.K.I.U. Aththanagoda
- Due Date: Week 5-6
- Description: Calculate the projected costs for the project, including resources, development, and other expenses. Prepare a detailed budget.

3.4 Align with Budget

- Assignee: Financial Planner - A.K.I.U. Aththanagoda
- Due Date: Week 6-7

- Description: Compare estimated costs with the client's budget. Make adjustments to align the project with the available budget while meeting objectives.

3.5 Fit with Business Processes

- Assignee: Business Analyst - M.N.N. Muhammad
- Due Date: Week 7-8
- Description: Ensure that the project aligns with the client's existing business processes and organizational goals. Adjust scope and objectives as necessary.

4.0 Define Project Scope

4.1 Scope Statement

- Assignee: Business Analyst - M.N.N. Muhammad
- Due Date: Week 7-8
- Description: Draft a clear and detailed scope statement outlining the project's boundaries, deliverables, objectives, and limitations.

4.2 Milestones and Deliverables

- Assignee: Project Manager - J.M.S.U. Bandara
- Due Date: Week 8-9
- Description: Define key project milestones and deliverables. Create a timeline to track progress and ensure timely completion of project phases.

5.0 Create Project Proposal

5.1 Draft Proposal

- Assignee: Project Manager - J.M.S.U. Bandara
- Due Date: Week 8-9
- Description: Prepare a detailed project proposal that includes the project scope, objectives, deliverables, timeline, and budget.

5.2 Client Review

- Assignee: Project Manager - J.M.S.U. Bandara
- Due Date: Week 9-10

- Description: Present the draft proposal to the client. Collect feedback and make necessary revisions based on their input.

5.3 Finalize Proposal

- Assignee: Project Manager - J.M.S.U. Bandara
- Due Date: Week 10
- Description: Make final adjustments to the proposal based on client feedback. Prepare the finalized version for formal approval.

5.4 Client Approval

- Assignee: Project Manager - J.M.S.U. Bandara
- Due Date: Week 11
- Description: Obtain formal approval from the client to proceed with the project. Ensure all contractual and project details are agreed upon.

6.0 Risk Assessment

6.1 Identify Risks

- Assignee: Risk Manager - C.N. Ranawaka
- Due Date: Week 6
- Description: Identify potential risks that could affect the project, including technical, financial, and operational risks.

6.2 Create a Risk Mitigation Plan

- Assignee: Risk Manager - C.N. Ranawaka
- Due Date: Week 7
- Description: Develop strategies and plans to mitigate identified risks. Ensure that risk management procedures are in place to address potential issues.

7.0 Project Planning

7.1 Create Work Breakdown Structure

- Assignee: Project Manager - J.M.S.U. Bandara
- Due Date: Week 9-10
- Description: Break down the project into smaller, manageable tasks. Develop a Work Breakdown Structure (WBS) to outline all project activities.

7.2 Develop Project Schedule

- Assignee: Project Manager - J.M.S.U. Bandara
- Due Date: Week 10
- Description: Create a detailed project schedule, specifying the timeline for each task, milestone, and deliverable.

7.3 Resource Planning

- Assignee: Project Manager - J.M.S.U. Bandara
- Due Date: Week 10-11
- Description: Allocate resources, including team members, tools, and materials. Ensure that all resources are effectively utilized to meet project goals.

7.4 Client Approval

- Assignee: Project Manager - J.M.S.U. Bandara
- Due Date: Week 11-12
- Description: Present the project plan to the client for final approval. Confirm that all aspects of the plan are acceptable before proceeding.

8.0 Technology Stack Selection

8.1 Evaluate Technology Options

- Assignee: Software Architect - K.W.A. Chirantha
- Due Date: Week 7-8
- Description: Assess various technology options and frameworks to determine the most suitable technology stack for the project.

8.2 Select Frameworks and Tools

- Assignee: Software Architect - K.W.A. Chirantha
- Due Date: Week 8-9
- Description: Choose the frameworks, libraries, and tools that will be used in the project. Ensure they meet project requirements and technical standards.

8.3 Define the Software Architecture

- Assignee: Software Architect - K.W.A. Chirantha
- Due Date: Week 9-10
- Description: Design the overall software architecture, including how different components will interact and integrate within the app.

9.0 Team Formation

9.1 Identify Roles

- Assigned to: Project Manager - J.M.S.U. Bandara
- Due Date: Week 10-11
- Task Explanation: Determine the necessary roles and responsibilities for the project. Identify and outline the specific roles required based on the project's scope and objectives.

9.2 Team Allocation

- Assigned to: Project Manager - J.M.S.U. Bandara
- Due Date: Week 11-12
- Task Explanation: Assign team members to the identified roles based on their skills, expertise, and availability. Ensure that the team is balanced and capable of meeting project requirements.

10.0 Stakeholder Communication Plan

10.1 Establish Communication Methods

- Assigned to: Project Manager - J.M.S.U. Bandara
- Due Date: Week 2
- Task Explanation: Define and set up communication channels and methods for interacting with stakeholders. Ensure that the methods are effective and suitable for all parties involved.

10.2 Schedule Progress Reports

- Assigned to: Project Manager - J.M.S.U. Bandara
- Due Date: Week 3
- Task Explanation: Develop a schedule for regular progress reports to keep stakeholders informed about the project's status. Ensure reports are timely and comprehensive.

10.3 Hold Meetings and Updates

- Assigned to: Project Manager - J.M.S.U. Bandara
- Due Date: Week 4-5
- Task Explanation: Organize and conduct meetings with stakeholders to provide updates, discuss progress, and address any concerns. Ensure that meetings are productive and align with the communication plan.

11.0 Legal and Compliance

11.1 Contracts and Agreements

- Assigned to: Legal Advisor
- Due Date: Week 5-6
- Task Explanation: Draft, review, and finalize all necessary contracts and agreements related to the project. Ensure that all legal aspects are covered and that contracts are signed by relevant parties.

11.2 Compliance

- Assigned to: Compliance Officer
- Due Date: Week 6-7
- Task Explanation: Ensure that the project complies with all relevant regulations, standards, and legal requirements. Conduct audits or reviews to verify compliance.

12.0 Prototype Development

12.1 Brainstorm Ideas

- Assigned to: Development Team
- Due Date: Week 6
- Task Explanation: Conduct brainstorming sessions to generate ideas for the prototype. Focus on creativity and feasibility in alignment with project goals.

12.2 Develop Proof of Concept

- Assigned to: Development Team
- Due Date: Week 7-8
- Task Explanation: Create a proof of concept to demonstrate the core functionalities and feasibility of the project. Use this to validate the approach and gather initial feedback.

12.3 Validate Features and Functionality

- Assigned to: Business Analyst - M.N.N. Muhammad
- Due Date: Week 8-9
- Task Explanation: Review and validate the features and functionality of the prototype to ensure they meet the project requirements and client expectations.

12.4 Create Initial Mockups

- Assigned to: UI/UX Designer - L.V.N Sachintha
- Due Date: Week 9-10
- Task Explanation: Design and create initial mockups of the user interface to visualize the application's look and feel. Ensure that the mockups align with user needs and project requirements.

13.0 Project Kickoff Meeting

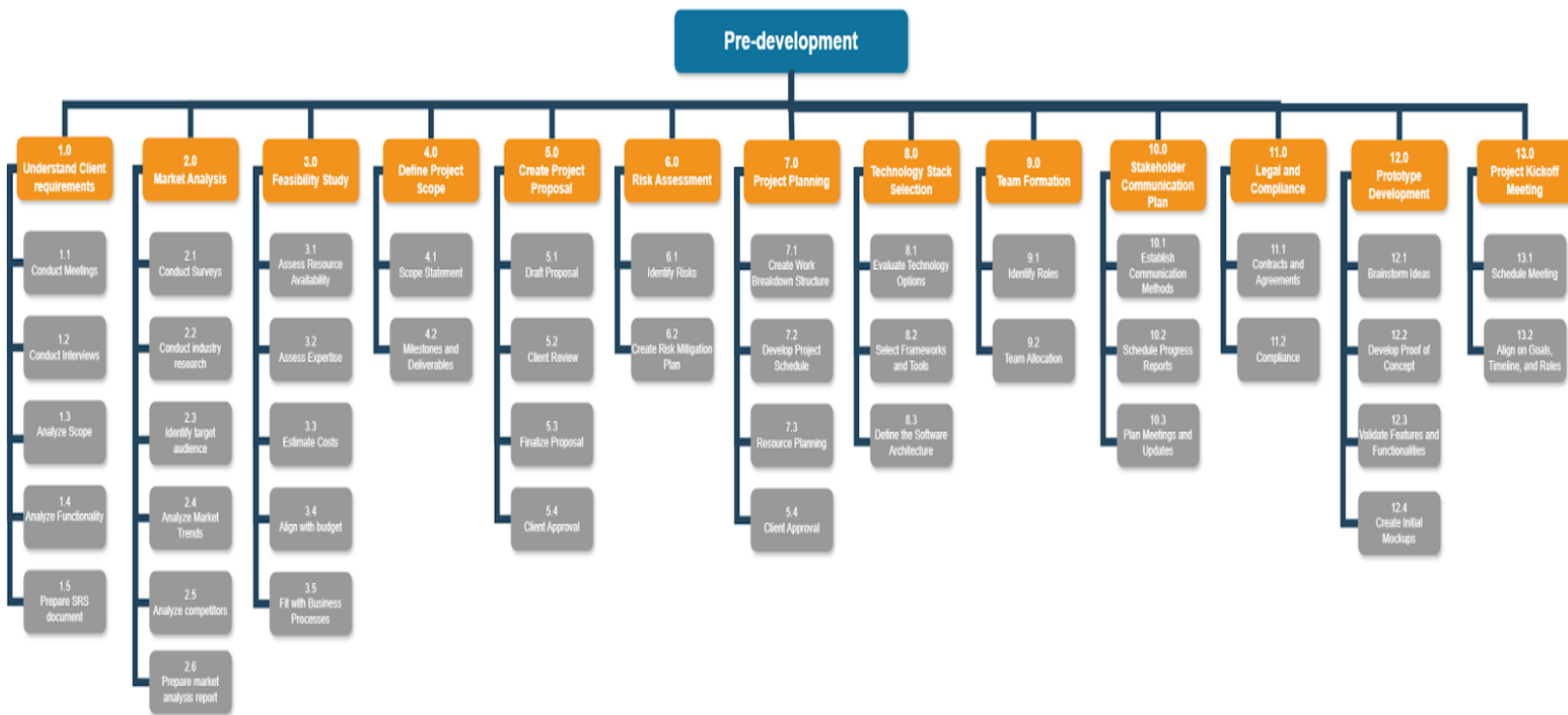
13.1 Schedule Meeting

- Assigned to: Project Manager - J.M.S.U. Bandara
- Due Date: Week 11
- Task Explanation: Organize and schedule the project kickoff meeting with all stakeholders. Ensure that all key participants are available and informed.

13.2 Align on Goals, Timelines, and Roles

- Assigned to: Project Manager - J.M.S.U. Bandara
- Due Date: Week 11-12
- Task Explanation: Conduct the kickoff meeting to align project goals, timelines, and roles. Ensure that all stakeholders have a clear understanding of their responsibilities and the project's objectives.

Work Breakdown Structure for Pre-Development Deliverables



Grant chart

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Development Deliverables

Position	Name with Initials	Short Name
UI/UX Designer	J.M.S.U. Bandara / L.V.N. Sachintha	JMSEB / LVNS
Front-End	H.K.G.S. Prabodhani / C. N. Ranawaka	HKGSP / CNR
Back-End	K.W.A. Chiranth / S.A.G.N. Jayasekara	KWAC / SAGNJ
AR Developer	S.A.G.N. Jayasekara / T.P. Indunil	SAGNJ / TPI
QA Engineer	L.V.N. Sachintha / M.N.N. Muhammad	LVNS / MNNM
Project Manager	R.K.I.A. Rajapaksha	RKIAR

1. Design

1.1 Gather design requirements

- Assignee: UI/UX Designer-L.V.N Sachintha
- Due Date: Week 13
- Explanation: Collect and document design requirements from stakeholders, including user personas, use cases, and design goals.

1.2 Create wireframes and mockups

- Assignee: UI/UX Designer-L.V.N Sachintha
- Due Date: Week 15
- Explanation: Develop initial wireframes and mockups to visualize the app's structure and layout.

1.3 Design user interface (UI)

- Assignee: UI/UX Designer-L.V.N Sachintha
- Due Date: Week 17
- Explanation: Design detailed UI elements, including color schemes, typography, and icons.

1.4 Design user experience (UX)

- Assignee: UI/UX Designer-L.V.N Sachintha
- Due Date: Week 19
- Explanation: Focus on flow and interaction design to ensure a seamless and intuitive user experience.

1.5 Iterate design based on feedback

- Assignee: UI/UX Designer-L.V.N Sachintha
- Due Date: Week 21
- Explanation: Refine designs based on stakeholder and user feedback.

1.6 Finalize design

- Assignee: UI/UX Designer-L.V.N Sachintha
- Due Date: Week 22
- Explanation: Complete and approve final design documents and assets.

2. Front-end Development

2.1 Setup development environment

- Assignee: M.N.N. Muhammad
- Due Date: Week 22
- Explanation: Configure necessary tools and frameworks for front-end development.

2.2 Develop core UI components

- Assignee: M.N.N. Muhammad
- Due Date: Week 28
- Explanation: Create reusable UI components based on the finalized design.

2.3 Integrate with back-end setup

- Assignee: M.N.N. Muhammad
- Due Date: Week 34
- Explanation: Establish connections between front-end and back-end systems.

2.4 Integrate with AR components

- Assignee: M.N.N. Muhammad
- Due Date: Week 36
- Explanation: Incorporate AR functionality into the front-end interface.

2.5 Perform continuous testing and debugging

- Assignee: M.N.N. Muhammad
- Due Date: Ongoing throughout the phase
- Explanation: Regularly test and fix issues in the front-end code.

2.6 Optimize performance and responsiveness

- Assignee: M.N.N. Muhammad
- Due Date: Week 33
- Explanation: Enhance the speed and responsiveness of the front-end application.

2.7 Refine UI/UX based on testing and feedback

- Assignee: M.N.N. Muhammad
- Due Date: Week 35
- Explanation: Make iterative improvements based on user testing results.

2.8 Finalize front-end codebase

- Assignee: M.N.N. Muhammad
- Due Date: Week 38
- Explanation: Complete and polish all front-end code for deployment.

3. Back-end Development

3.1 Set up server and database infrastructure

- Assignee: R.K.I.A. Rajapaksha
- Due Date: Week 28
- Explanation: Configure servers and set up the database structure.

3.2 Develop core back-end logic and APIs

- Assignee: R.K.I.A. Rajapaksha
- Due Date: Week 30
- Explanation: Create the main server-side logic and API endpoints.

3.3 Implement data storage and retrieval mechanisms

- Assignee: R.K.I.A. Rajapaksha
- Due Date: Week 32
- Explanation: Develop efficient methods for storing and accessing data.

3.4 Integrate with front-end

- Assignee: R.K.I.A. Rajapaksha
- Due Date: Week 34
- Explanation: Ensure smooth communication between back-end, and front-end systems.

3.5 Optimize server and database performance

- Assignee: R.K.I.A. Rajapaksha
- Due Date: Week 36
- Explanation: Improve the speed and efficiency of server operations and database queries.

3.6 Perform continuous testing and debugging

- Assignee: R.K.I.A. Rajapaksha
- Due Date: Ongoing
- Explanation: Regularly test and fix issues in the back-end code.

3.7 Refine back-end systems based on testing and feedback

- Assignee: R.K.I.A. Rajapaksha
- Due Date: Week 38
- Explanation: Make iterative improvements based on performance testing and user feedback.

3.8 Finalize back-end codebase

- Assignee: R.K.I.A. Rajapaksha
- Due Date: Week 40
- Explanation: Complete and polish all back-end code for deployment.

4. AR Component Development

4.1 Setup AR development environment

- Assignee: T.P. Indunil (TPI)
- Due Date: Week 32
- Explanation: Configure tools and frameworks specific to AR development.

4.2 Develop AR components

- Assignee: T.P. Indunil (TPI)
- Due Date: Week 36
- Explanation: Create core AR functionalities and features.

4.3 Implement full AR functionality and features

- Assignee: T.P. Indunil (TPI)
- Due Date: Week 38
- Explanation: Complete all planned AR capabilities for the application.

4.4 Integrate with front-end and back-end setups

- Assignee: T.P. Indunil (TPI)
- Due Date: Week 36
- Explanation: Ensure AR components work seamlessly with other parts of the application.

4.5 Perform continuous testing and debugging

- Assignee: T.P. Indunil (TPI)
- Due Date: Ongoing
- Explanation: Regularly test and fix issues in the AR components.

4.6 Optimize AR performance and responsiveness

- Assignee: T.P. Indunil (TPI)
- Due Date: Week 42
- Explanation: Improve the speed and efficiency of AR features.

4.7 Refine AR components based on testing and feedback

- Assignee: T.P. Indunil (TPI)
- Due Date: Week 43
- Explanation: Make iterative improvements based on user testing and feedback.

4.8 Finalize AR codebase

- Assignee: T.P. Indunil (TPI)
- Due Date: Week 47
- Explanation: Complete and polish all AR-related code for deployment And ensure AR-related back-end code is complete and optimized.

4.9 Prepare for final integration and testing

- Assignee: R.K.I.A. Rajapaksha
- Due Date: Week 48
- Explanation: Ready the back-end systems for final integration with other components.

5. Testing and Quality Assurance

5.1 Create a comprehensive testing plan

- Assignee: A.K.I.U. Aththanagoda (AKIUA)
- Due Date: Week 48
- Explanation: Develop a detailed plan for testing all aspects of the application.

5.2 Design test scenarios and cases

- Assignee: A.K.I.U. Aththanagoda (AKIUA)
- Due Date: Week 50
- Explanation: Create specific test cases covering all functionalities.

5.3 Conduct unit testing

- Assignee: M.N.N. Muhammad, R.K.I.A. Rajapaksha, T.P. Indunil (TPI)
- Due Date: Week 51
- Explanation: Test individual components of the application.

5.4 Conduct integration testing

- Assignee: M.N.N. Muhammad, R.K.I.A. Rajapaksha, T.P. Indunil (TPI)
- Due Date: Week 52
- Explanation: Test how different parts of the application work together.

5.5 Conduct system testing

- Assignee: A.K.I.U. Aththanagoda (AKIUA)
- Due Date: Week 54
- Explanation: Test the entire application as a complete system.

5.6 Conduct initial User Acceptance Testing

- Assignee: A.K.I.U. Aththanagoda (AKIUA)
- Due Date: Week 56
- Explanation: Have end-users test the application to ensure it meets their needs.

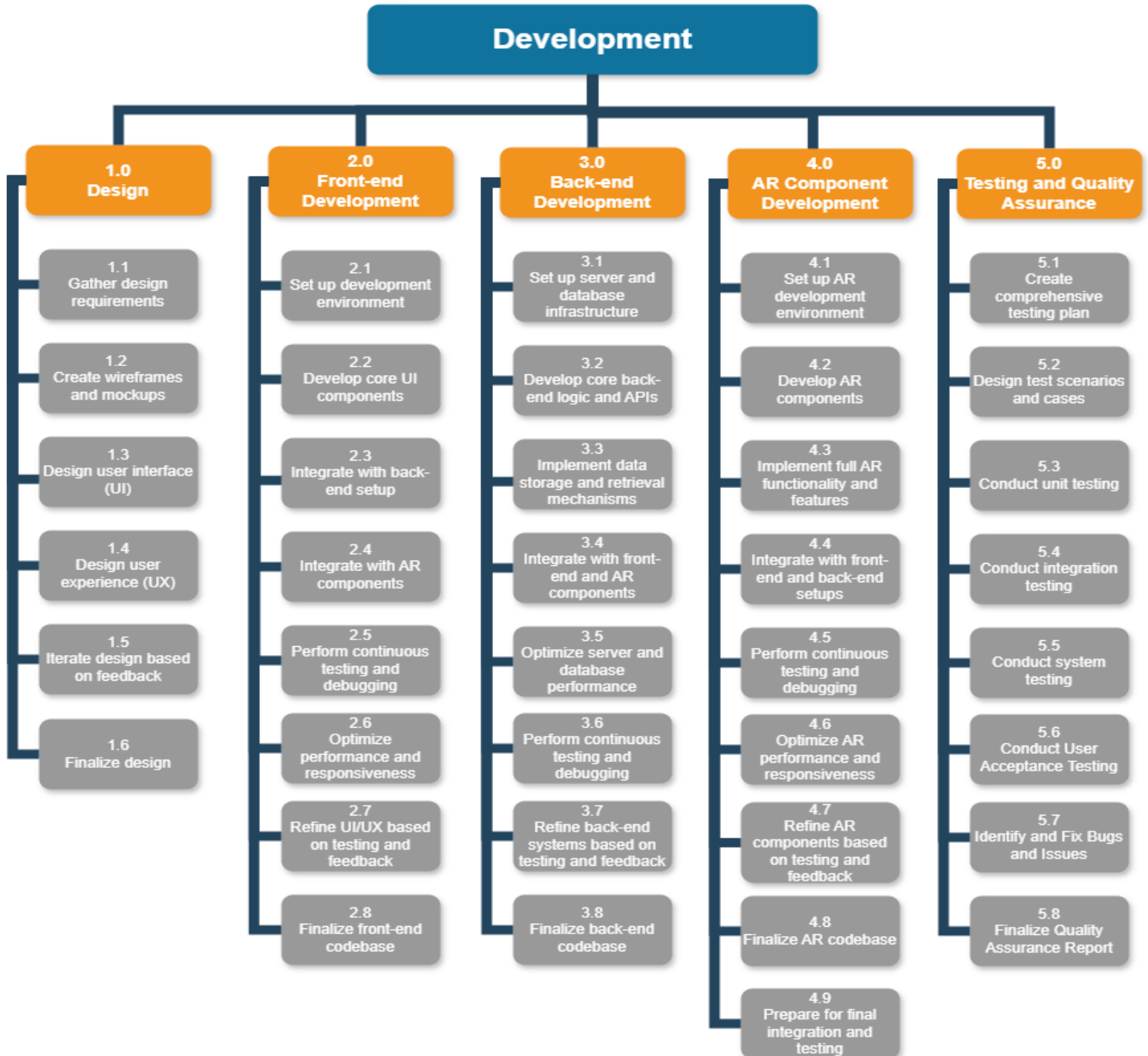
5.7 Identify and Fix Bugs and Issues

- Assignee: M.N.N. Muhammad, R.K.I.A. Rajapaksha, T.P. Indunil (TPI)
- Due Date: Week 59
- Explanation: Address and resolve all identified problems.

5.8 Finalize Quality Assurance Report

- Assignee: A.K.I.U. Aththanagoda (AKIUA)
- Due Date: Week 62
- Explanation: Compile a comprehensive report on the testing process and results.

Work Breakdown Structure for Development Deliverables



Gantt Chart for development phase

Phase	Week									
	13- 17	18- 22	23- 27	28 - 32	33- 37	38 - 42	43 - 47	48 - 52	53 - 57	58 - 62
Design Phase										
Front-End Development										
Back-End Development										
AR Development										
Testing and Quality Assurance										

Post Development Deliverables

Position	Name with Initials	Short Name
QA Lead	H.K.G.S. Prabodhani	HKGSP
Development Lead	M.N.N. Muhammad	MNNM
Development Engineer	S.A.G.N. Jayasekara	SAGNJ
Marketing Lead	K.W.A. Chiranth	KWAC
Support Lead	V.N. Sachintha	LVNS
Customer Support Lead	A.K.I.U. Aththanagoda	AKIUA
Operations Lead	C. N. Ranawaka	CNR
Development Lead	T.P. Indunil	TPI
Business Development	R.K.I.A. Rajapaksha	RKIAR
Documentation Lead	C. N. Ranawaka	CNR
Project Manager	J.M.S.U. Bandara	JMSEB

1.0 Testing and Quality Assurance

1.1 User Acceptance Testing (Final)

- Assigned: H.K.G.S. Prabodhani (QA Lead)
- Due Date: Week 62-64
- Task Explanation: Conduct User Acceptance Testing (UAT) to validate that the application meets users' needs in a real-world environment. Feedback from this phase will be crucial for making final adjustments before deployment.

1.2 Check Quality Standards and Requirements

- Assigned to: H.K.G.S. Prabodhani (QA Lead)
- Due Date: Week 66
- Task Explanation: Review the application to ensure it meets all quality standards and requirements, verifying that all features function correctly, the app is stable, and it adheres to regulatory or industry standards.

2.0 Deployment and Launch

2.1 Set up Production Environment

- Assigned to: M.N.N. Muhammad (DevOps Lead)
- Due Date: Week 66
- Task Explanation: Prepare the production environment, including configuring servers, setting up databases, and ensuring security protocols are in place for deployment.

2.2 Deploy Application to Production Servers

- Assigned to: S.A.G. Nimtharu Jayasekara (DevOps Engineer)
- Due Date: Week 70
- Task Explanation: Deploy the final build of the application to the production servers, transferring application files, configuring settings, and ensuring readiness for going live.

2.3 Conduct Final System Check

- Assigned to: H.K.G.S. Prabodhani (QA Lead)
- Due Date: Week 71
- Task Explanation: Perform a final system check post-deployment to ensure the application runs smoothly, testing functionalities and checking for performance issues.

2.4 Launch Marketing and Promotional Campaigns

- Assigned to: K.W.A. Chirantha (Marketing Lead)
- Due Date: Week 73
- Task Explanation: Launch promotional campaigns to market the app, prepare materials, coordinate with advertising channels, and make sure the target audience is informed about the app's release.

2.5 Monitor Launch and Address Any Issues

- Assigned to: L.V.N Sachintha (Support Lead)
- Due Date: Week 74
- Task Explanation: Monitor the application after launch, addressing any issues such as bugs and user troubleshooting, and ensuring optimal performance during initial user engagement.

3.0 Post-Launch Operations

3.1 Provide Customer Support

- Assigned to: A.K.I.U. Aththanagoda (Customer Support Lead)
- Due Date: Week 70-74
- Task Explanation: Manage customer support to assist users with issues, set up support channels, train staff, and ensure a high level of service.

3.2 Monitor Application Performance

- Assigned to: C.N. Ranawaka (Operations Lead)
- Due Date: Week 72
- Task Explanation: Track performance metrics such as response times, uptime, and user engagement to identify and address performance bottlenecks.

3.3 Implement Updates and Improvements

- Assigned to: T.P. Indunil (Development Lead)
- Due Date: Week 74
- Task Explanation: Release updates or patches to address post-launch issues, and work on improvements based on user feedback and performance data.

3.4 Address Any Post-Launch Issues

- Assigned to: L.V.N Sachintha (Support Lead)
- Due Date: Week 76
- Task Explanation: Continue resolving any remaining or new issues reported by users, ensuring the application remains stable and functional.

3.5 Finalize All Project Documentation

- Assigned to: C.N. Ranawaka (Documentation Lead)
- Due Date: Week 78
- Task Explanation: Complete and archive all project documentation, including user manuals, technical documentation, and reports.

4.0 Maintenance and Support

4.1 Set Up a Maintenance Plan

- Assigned to: H.K.G.S. Prabodhani (Maintenance Lead)
- Due Date: Week 70-72
- Task Explanation: Create a maintenance plan for ongoing application upkeep, scheduling regular updates, setting up monitoring tools, and planning for long-term support.

4.2 Establish a Support System to Assist Users

- Assigned to: L.V.N Sachintha (Support Lead)
- Due Date: Week 73
- Task Explanation: Establish a system to assist users with issues post-launch, including setting up help desks, online support portals, and FAQs.

5.0 Growth and Scaling

5.1 Analyze Market Response

- Assigned to: K.W.A. Chiranth (Marketing Lead)
- Due Date: Week 74-78
- Task Explanation: Analyze the market's response to the app, gathering data on user adoption, feedback, and trends to evaluate performance.

5.2 Identify Opportunities for Growth

- Assigned to: R.K.I.A. Rajapaksha (Business Development Lead)
- Due Date: Week 80
- Task Explanation: Explore opportunities for expanding the app's user base, adding features, or entering new markets based on market analysis.

5.3 Implement Scaling Strategies

- Assigned to: T.P. Indunil (Development Lead)
- Due Date: Week 82
- Task Explanation: Work on scaling the application to handle increased usage or enhance capabilities, optimizing the backend, adding features, or improving infrastructure.

6.0 Project Closure

6.1 Officially Close the Project

- Assigned to: J.M.S.U. Bandara (Project Manager)
- Due Date: Week 82
- Task Explanation: Oversee the official closure of the project, ensuring all tasks are completed, deliverables met, and outstanding issues resolved.

6.2 Release Project Resources

- Assigned to: J.M.S.U. Bandara (Project Manager)
- Due Date: Week 83
- Task Explanation: Release project resources such as personnel, equipment, and budget allocations, marking the end of the project's resource utilization.

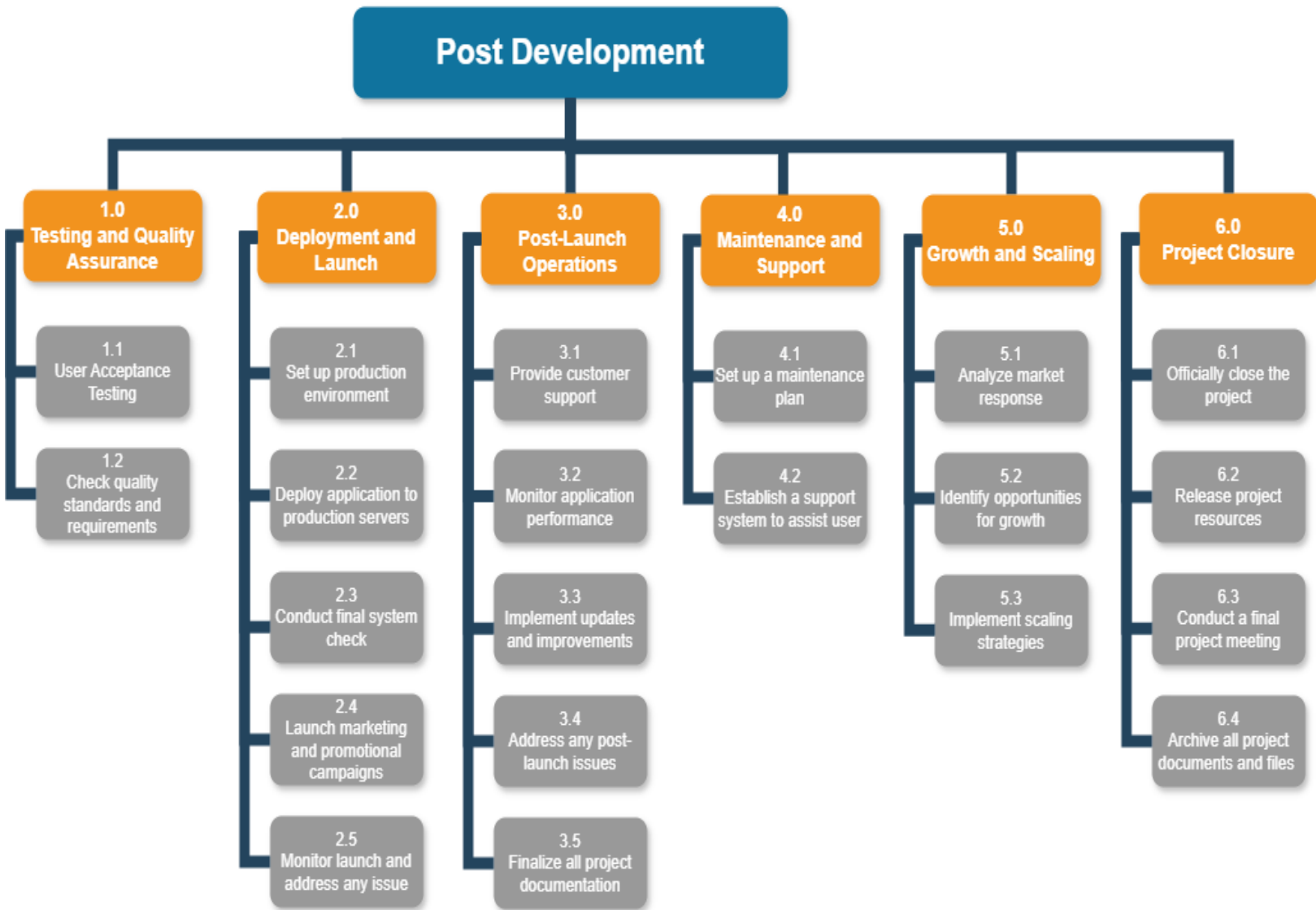
6.3 Conduct a Final Project Meeting

- Assigned to: J.M.S.U. Bandara (Project Manager)
- Due Date: Week 84
- Task Explanation: Hold a final meeting with stakeholders to review project outcomes, discuss lessons learned, and celebrate success.

6.4 Archive All Project Documents and Files

- Assigned to: C.N. Ranawaka (Documentation Lead)
- Due Date: Week 86
- Task Explanation: Archive all project-related documents, files, and records, preserving important information for future reference or audits.

Work Breakdown Structure for Post-Development Deliverables



Gantt Chart for Post development phase

Phase	Week							
	62 - 64	65 - 67	68 - 70	71 - 73	74 - 77	78 - 80	81 - 83	84 - 87
Testing and QA								
Deployment and launch								
Post-Launch Operations								
Maintenance and support								
Growth and Scaling								
Project Closure								

Conclusion

The development of the Augmented Reality Shopping App marks a transformative step in enhancing the online shopping experience by bridging the gap between physical and digital retail environments. This innovative app allows customers to visualize products in their real-world environment before making a purchase, thereby addressing one of the most significant limitations of traditional online shopping—the inability to physically interact with products.

Throughout the project, a rigorous approach was taken to ensure the app not only meets but exceeds user expectations. From initial planning and design through development and testing, each phase was executed with a focus on user experience, technical excellence, and market relevance. The integration of augmented reality technology into the shopping process has provided users with a unique, immersive experience that enhances decision-making and boosts confidence in their purchases.

The successful deployment of the app demonstrates the effectiveness of combining cutting-edge technology with thoughtful design and robust development practices. By allowing users to interact with products in a virtual space, the app not only enhances customer engagement but also opens new avenues for retailers to showcase their products in innovative ways.

Looking ahead, the app is well-positioned to adapt to future advancements in AR technology, ensuring it remains at the forefront of the evolving digital shopping landscape. Continuous updates and improvements will be essential to maintaining the app's competitive edge and meeting the ever-changing demands of consumers.

In summary, this case study illustrates the potential of augmented reality to revolutionize the retail industry. The Augmented Reality Shopping App is a prime example of how technology can be leveraged to create value for both consumers and businesses, setting a new standard for the online shopping experience.