

PROJECT QUALITY MANAGEMENT

Memo

Cluster Alignment

1. Quality Management (24 credits)	<ul style="list-style-type: none">• 121905000-KM-06• 121905000-PM-05• 121905000-PM-08
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Assignment Alignment

Quality Management (24 credits)	Assignment 12: 121905000-KM-06 Assignment 13: 121905000-PM-05 Assignment 14: 121905000-PM-08
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Statement of Work (SOW) for the Public Transport Mobile Application Project

1. Objective: Develop a user-friendly mobile application to provide city residents and tourists with real-time information on public transportation, including bus and train schedules, route planning, fare calculation, and a digital ticket purchasing system.

2. Scope:

- User interface and experience design.
- Integration with city's real-time transit database.
- Development of fare calculation algorithm.
- Incorporation of route planning feature.
- Digital ticketing system with secure payment gateway.
- Testing and quality assurance.
- Launch and post-launch support.

3. Timeframe: 8 months from the project initiation to launch.

4. Deliverables:

- Fully functional mobile application.
- User manual.
- Technical documentation.
- Training sessions for city's public transportation staff.

5. Budget: \$250,000

6. Stakeholders: City council, public transportation department, city residents, tourists, mobile app development team.

7. Assumptions: City's real-time transit database is accessible; the application will be developed for both iOS and Android platforms.

Work Breakdown Structure (WBS) for the Public Transport Mobile Application Project

1. Project Management

- Project initiation
- Planning
- Execution
- Monitoring and controlling
- Closing

2. User Interface (UI) & User Experience (UX) Design

- Research & analysis
- Wireframing
- Prototyping
- UI design
- UX testing

3. App Development

- Front-end development
- Back-end development
- Integration with city's transit database
- Development of fare calculation feature
- Development of route planning feature
- Integration of digital ticketing and payment system

4. Testing & Quality Assurance

- Functional testing
- Usability testing
- Performance testing
- Security testing

5. Launch & Support

- App store submission (iOS & Android)
- Post-launch support
- Updates and maintenance

Project Schedule Breakdown

Task	Start Date	End Date	Duration	Dependencies
Project initiation	01/01/2023	07/01/2023	7 days	None
Planning	08/01/2023	21/01/2023	14 days	Project initiation
UI/UX Design	22/01/2023	28/02/2023	5 weeks	Planning
App Development	01/03/2023	31/05/2023	13 weeks	UI/UX Design
Testing & QA	01/06/2023	30/06/2023	4 weeks	App Development
App Store Submission & Launch	01/07/2023	15/07/2023	2 weeks	Testing & QA
Post-launch Support & Maintenance	16/07/2023	Ongoing	-	Launch

Basic Project Budget

Item	Estimated Cost
Project Management	\$20,000
UI/UX Design	\$40,000
App Development	\$100,000
Testing & QA	\$40,000
Launch & Support	\$30,000
Miscellaneous (Contingencies)	\$20,000
Total	\$250,000

Practical Question: PM-05-PS01: Plan Project Quality Management

Background: You have been assigned as the project manager for the development of the city's public transportation mobile application. The mobile application is intended to offer real-time bus and train schedules, fare calculation, route planning, and a digital ticket purchasing feature. With a budget of \$250,000 and a timeline of 8 months, it is crucial to ensure that the quality of the application meets the expectations of both the city council and its users.

Task:

1. **Quality Management Plan** (10 marks):

Based on your understanding of the project requirements, propose a detailed quality management plan. Ensure that the plan:

- Addresses the quality needs of the project, ensuring both functional excellence and a user-friendly interface.
- Details the specific quality management methods, techniques, and tools you intend to utilize.
- Identifies potential risks to the quality and describes preventive actions.
- Clearly states the metrics and standards against which quality will be measured.

Use your knowledge of quality management methods, techniques, and tools to guide the development of your plan.

2. **Identification of Project Management Planning Components** (5 marks):

From the context of the project, identify and elaborate on three key project management planning components that will play a significant role in the successful implementation of your quality management plan. Explain how these components will support and drive quality throughout the project lifecycle.

Instructions:

- Compile your answers in a comprehensive document, using clear headings and sub-headings where necessary.
- While detailing the quality management plan, use bullet points or numbered lists to enhance readability.
- Your document should not exceed five pages in length.
- Ensure that the proposed quality plan is specific to the city's public transportation mobile application project and considers all its unique needs.

Total: 15 marks

Grading Guideline for Public Transportation Mobile Application Project Management Task

1. Quality Management Plan (10 marks)

- **Addressing Quality Needs (3 marks):**
- Comprehensive plan addressing both functional excellence and user-friendliness of the mobile application (1.5 marks).
- Specific mention of how the plan caters to the expectations of the city council and its users (1.5 marks).
- **Quality Management Methods, Techniques, and Tools (3 marks):**
- Detailed description of the specific quality management methods, techniques, and tools to be used in the project (1.5 marks).
- Relevance and applicability of these methods and tools to the mobile application project (1.5 marks).
- **Risk Identification and Preventive Actions (2 marks):**
- Identification of potential risks to the quality of the project and a description of preventive actions (1 mark).
- Effectiveness and feasibility of the proposed preventive actions (1 mark).
- **Metrics and Standards (2 marks):**
- Clear definition of the metrics and standards against which quality will be measured (1 mark).
- Relevance of these metrics and standards to the project objectives (1 mark).

2. Identification of Project Management Planning Components (5 marks)

- **Component Identification (2.5 marks):**
- Identification of three key project management planning components crucial for the project (1.25 marks).
- Explanation of the significance of these components in the project context (1.25 marks).
- **Support and Drive Quality (2.5 marks):**
- Explanation of how these components will support and enhance quality throughout the project lifecycle (1.25 marks).
- Demonstrated understanding of the integration of these components with the overall quality management plan (1.25 marks).

Submission Requirements

- **Document Compilation and Format:** The answers should be compiled into a comprehensive document, not exceeding five pages, with clear headings and sub-headings (1 mark).
- **Readability:** Use of bullet points or numbered lists where appropriate for clarity and readability (1 mark).
- **Project Specificity:** Ensuring that the proposed quality plan is specific to the public transportation mobile application project and considers its unique needs (1 mark).

Total Marks: 15 marks.

Overall Assessment Criteria:

- **Quality and Depth of Content:** Thoroughness and relevance of the quality management plan and identified project management components.
- **Practical Application and Relevance:** Demonstrates a clear understanding of quality management principles and their practical application to the specific project.
- **Integration and Coherence:** The ability to integrate various aspects of quality management into a cohesive plan.
- **Clarity and Organization:** The overall clarity, organization, and presentation of the document.

Note: This Assignment refers to the same Hypothetical Project as Assignment 13.

Practical Question: PM-08-PS01: Gather and Analyze Quality Requirements

Background: You are part of the project management team overseeing the development of a public transportation mobile application aimed at simplifying the commuting process for daily travelers. The application is expected to offer real-time schedule updates, electronic ticketing, route navigation, and service disruption alerts.

Task:

Project Quality Objectives (6 marks):

- a. Detail three specific quality objectives for this mobile application project, ensuring that they reflect the desired outcomes of the project. Each objective should be SMART (Specific, Measurable, Achievable, Relevant, Time-bound).
- b. Briefly explain how each of these objectives aligns with the application's primary goal to simplify and enhance the public transportation experience.

Documented Quality Requirements (7 marks):

- a. Using relevant ISO guidelines and local government regulations related to mobile application development and public transportation, list out five crucial quality requirements for the project.
- b. Choose any two of these quality requirements and describe in detail the methods, techniques, or tools you would employ to ensure these requirements are met throughout the project life cycle.
- c. Assemble the quality objectives and requirements into a structured 'Quality Requirements Document', ensuring the content is accurate and follows a professional format.
- d. Briefly highlight the significance of quality management at different stages in the project life cycle.

Instructions:

- Submit your answers in a structured document with clear headings and sub-headings, where necessary.
- Include any charts, diagrams, or tables that can enhance the presentation of your quality objectives and requirements.
- Your document should not exceed four pages.

Total: 15 marks

Grading Guideline for Public Transportation Mobile Application Project Quality Management Task

1. Project Quality Objectives (6 marks)

• SMART Objectives (3 marks):

- Detailing of three specific quality objectives, ensuring each is SMART: Specific, Measurable, Achievable, Relevant, Time-bound (1 mark per objective).
- Alignment with Application Goals (3 marks):
- Explanation of how each objective aligns with the application's primary goal to simplify and enhance the public transportation experience (1 mark per objective).

2. Documented Quality Requirements (7 marks)

• Quality Requirements Listing (2 marks):

- Listing of five crucial quality requirements, based on relevant ISO guidelines and local government regulations (1 mark).
- Relevance and specificity of each requirement to mobile application development and public transportation (1 mark).

• Methods for Meeting Requirements (3 marks):

- Detailed description of methods, techniques, or tools to be employed to ensure two chosen quality requirements are met (1.5 marks per requirement).

• Quality Requirements Document (1 mark):

- Assembly of quality objectives and requirements into a structured 'Quality Requirements Document' (0.5 marks).
- Accuracy and professional format of the document (0.5 marks).

• Significance of Quality Management (1 mark):

- Brief highlight of the significance of quality management at different stages in the project life cycle (1 mark).

Submission Requirements

• Document Structure and Presentation (1 mark):

- Submission of answers in a structured document with clear headings and sub-headings (0.5 marks).
- Inclusion of charts, diagrams, or tables for enhanced presentation (0.5 marks).
- Clarity and Length (1 mark):
- Ensuring the document does not exceed four pages and presents information clearly and concisely (1 mark).

Total Marks: 15 marks.

Overall Assessment Criteria:

- Quality and Relevance: The thoroughness, clarity, and relevance of the quality objectives and requirements to the project.
- Practical Application: Demonstrates practical application of quality management principles and alignment with project goals.
- Strategic Alignment: Ability to align quality objectives and requirements with the overall project goals and regulatory standards.
- Clarity and Organization: The overall organization, clarity, and presentation of the document.

Practical Question: PM-08-PS02: Perform Project Quality Assurance

Background: You are part of the quality assurance team for the development of the public transportation mobile application aimed at simplifying the commuting process for daily travelers. The application is currently in its beta-testing phase, and a number of user feedback sessions have been conducted.

Task:

Understanding of Quality Assurance (4 marks):

- a. Define project quality assurance in the context of the mobile application development process and elucidate its significance.
- b. Describe two key components of quality management systems you would recommend implementing for this project. For each component, explain its role and impact on ensuring the application's quality.

Identifying Deviations (6 marks):

- a. With the aid of a hypothetical piece of user feedback, pinpoint a potential quality deviation or exception related to the application's functionality or user interface.
- b. Using relevant quality management techniques, devise a method to systematically identify and document such deviations from multiple feedback sessions.
- c. Propose a corrective action plan for addressing the identified deviation. Ensure your plan includes steps for verifying the effectiveness of the corrective actions taken.

Instructions:

- Submit your answers in a concise document format with clear headings and sub-headings where necessary.
- Ensure to incorporate relevant quality assurance terminologies and concepts.
- Your document should not exceed three pages.

Total: 10 marks

Grading Guideline for Public Transportation Mobile Application Quality Assurance Task

1. Understanding of Quality Assurance (4 marks)

- Definition and Significance (2 marks):
- Accurate definition of project quality assurance in the context of mobile application development (1 mark).
- Elucidation of its significance in ensuring the application's success and user satisfaction (1 mark).
- Key Components of Quality Management Systems (2 marks):
- Description of two key components of quality management systems relevant to the project (1 mark).
- Explanation of the role and impact of each component on ensuring the application's quality (1 mark).

2. Identifying Deviations (6 marks)

- Hypothetical User Feedback (2 marks):
- Creation of a hypothetical piece of user feedback illustrating a potential quality deviation or exception (1 mark).
- Relevance and realism of the hypothetical feedback to the application's functionality or user interface (1 mark).
- Systematic Identification and Documentation (2 marks):
- Description of a method using relevant quality management techniques to identify and document deviations from user feedback (1 mark).
- Clarity and systematic approach of the method ensuring comprehensive coverage of user feedback sessions (1 mark).
- Corrective Action Plan (2 marks):
- Proposal of a detailed corrective action plan for addressing the identified deviation (1 mark).
- Inclusion of steps for verifying the effectiveness of corrective actions taken (1 mark).

Submission Requirements

- Document Structure and Presentation (1 mark):
- Concise document format with clear headings and sub-headings (0.5 marks).
- Incorporation of relevant quality assurance terminologies and concepts (0.5 marks).
- Clarity and Length (1 mark):
- Ensuring the document does not exceed three pages and presents information clearly and concisely (1 mark).

Total Marks: 10 marks.

Overall Assessment Criteria:

- Quality and Relevance: The thoroughness, accuracy, and relevance of the understanding of quality assurance, identification of deviations, and corrective action planning.
- Practical Application: Demonstrates a practical application of quality management principles and techniques in addressing user feedback.
- Strategic Impact: Understanding of how quality assurance components and corrective actions impact the overall quality of the mobile application.
- Clarity and Organization: The overall organization, clarity, and presentation of the document.

Practical Question: PM-08-PS03: Control Project Quality

Background: The public transportation mobile application is now live and has been downloaded by thousands of users. Feedback is continually rolling in through user reviews, and it's essential to maintain the quality of the application while addressing any concerns raised by users.

Task:

Understanding of Quality Control (3 marks):

- a. Define project quality control in relation to the live operation of the mobile application. Highlight its relevance in sustaining user satisfaction and maintaining the application's reputation.
- b. Illustrate the difference between quality assurance and quality control in the context of the mobile application.

Measuring Project Quality (4 marks):

- a. Identify two quality control measurement tools suitable for monitoring the application's performance and user satisfaction. Elucidate the significance of each tool in ensuring optimal app quality.
- b. Using one of the identified tools, design a hypothetical scenario where the tool is applied to measure a specific quality aspect of the application.

Managing Non-Conformance (3 marks):

- a. Describe a plausible non-conformance issue that might arise from the application, post-launch.
- b. Recommend a strategy, using known methods or techniques, to manage and rectify this non-conformance, ensuring minimal disruption to the user experience.

Instructions:

- Craft your responses in a structured document format, making use of clear headings and subheadings where needed.
- Incorporate relevant quality control terminologies and methodologies.
- The document should not exceed three pages in length.

Total: 10 marks

Grading Guideline for Public Transportation Mobile Application Quality Control Task

1. Understanding of Quality Control (3 marks)

- **Definition and Relevance (1.5 marks):**
- Accurate definition of project quality control in the context of the live operation of the mobile application (0.75 marks).
- Explanation of its relevance in sustaining user satisfaction and maintaining the application's reputation (0.75 marks).
- **Difference Between Quality Assurance and Quality Control (1.5 marks):**
- Clear illustration of the difference between quality assurance and quality control, specifically in the context of the mobile application (1.5 marks).

2. Measuring Project Quality (4 marks)

- **Quality Control Measurement Tools Identification (2 marks):**
- Identification of two suitable quality control measurement tools for monitoring the application's performance and user satisfaction (1 mark).
- Elucidation of the significance of each tool in ensuring optimal app quality (1 mark).
- **Hypothetical Application Scenario (2 marks):**
- Design of a hypothetical scenario applying one of the identified tools to measure a specific quality aspect of the application (2 marks).

3. Managing Non-Conformance (3 marks)

- **Non-Conformance Issue Description (1.5 marks):**
- Description of a plausible non-conformance issue that might arise from the application post-launch (1.5 marks).
- **Non-Conformance Management Strategy (1.5 marks):**
- Recommendation of a strategy using known methods or techniques to manage and rectify the non-conformance, ensuring minimal disruption to the user experience (1.5 marks).

Submission Requirements

- **Document Structure and Presentation (1 mark):**
- Structured document format with clear headings and subheadings (0.5 marks).
- Incorporation of relevant quality control terminologies and methodologies (0.5 marks).
- **Clarity and Length (1 mark):**
- Ensuring the document does not exceed three pages and presents information clearly and concisely (1 mark).

Total Marks: 10 marks.

Overall Assessment Criteria:

- **Quality and Relevance:** The thoroughness, accuracy, and relevance of the understanding of quality control, quality measurement tools, and non-conformance management.
- **Practical Application:** Demonstrates practical application of quality control principles and tools in the context of the mobile application.
- **Strategic Impact:** Understanding of the strategic importance of quality control in maintaining user satisfaction and the application's reputation.
- **Clarity and Organization:** The overall organization, clarity, and presentation of the document.