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University of Bahrain

College of Information Technology

Department of Computer Science

ITSE 305: Software engineering project  
BSc in Software Engineering

**Balagh System**

**Project – Phase 2**

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# Planning

## 2.1 Introduction

In this phase we will start to plan our project which considered a guide of the execution. To guide execution, we need to make our plan realistic, useful, and executable. However, a fair amount of time and effort should be put in planning since it’s considered the most crucial part in the project management processes. People who knowledgeable about the work need to plan the work. The most important documents to focus on this part are:

* A team contracts.
* A project scope statement.
* A work breakdown structure (WBS), a key part of the scope baseline.
* A project schedule, in the form of a Gantt chart with all dependencies and resources entered.
* A list of prioritized risks (part of a risk register).

All these documents should be available for all team members especially the project manage.

## 2.2 Team contract

Refers to an agreement among team members regarding the rules and standards to be followed during the project process. This contract outlines approaches for teamwork and identifies the channels of communication to be used during execution. Many of the rules and guidelines are determined by the project manager, though opinions and suggestions from all team members are also considered in this contract, along with individual time schedules. It serves as a tool for reviewing our progress throughout all phases of the project.

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| ***Code of conduct:*** as a project team, we will:   * We put possibilities for problems that may occur and develop appropriate solutions to them. * Keeping the work team in constant contact with all project developments. * Selecting the best solutions for the entire project team. |
| ***Participation:*** we will:   * Work honestly and completely during all project activities. * Respect the opinions of others in group work. * Give everyone a chance to participate. * Keep track of all recent developments and think of new ideas. * Have one discussion at a time. * Make the project manager aware if a team member is going to miss a meeting or might have trouble meeting a deadline for a particular task. |
| ***Communication:*** we will:   * We decide as a team on the best way to communicate, which is Microsoft Teams, WhatsApp, and other technologies to help communicate since few team members cannot meet face to face often. * The project manager will hold a meeting via Microsoft Teams and discuss the rest of the tasks in the WhatsApp program. * Hold the meeting together to divide the tasks among the team members, and upon completion of the tasks, the project manager will hold another meeting for discussion every Thursday at 9 pm. * Discussing members' ideas, listening to different opinions, and presenting them clearly and accurately. * Continue to discuss ideas on the right track. |
| ***Problem solving:*** we will   * Encourage everyone to participate in solving problems. * Only use constructive criticism and focus on solving problems, not blaming people. * Strive to build on each other's ideas. * Hold each other accountable for meeting the standers. * Make inquiries to outside resources if needed. |
| ***Meeting guidelines:*** we will:   * Meet more frequently in the first month. * Hold 2-3 other meetings every week. * Record meeting minutes and send them via e-mail within 24 hours of all project meetings, focusing on decisions made and action items from each meeting. |

Table 1.0 Team contract content

## 2.3 Project Scope Management

Scope management in project management involves defining and documenting the project's goals, tasks, deliverables, and deadlines, and is considered a critical part of the planning process. It helps to establish clear boundaries for the project and prevent scope creeps, while also ensuring efficient resource management.

### 2.3.1 Software Process model

After analyzing many system models, we came to the conclusion that the iterative model is the best model for our system. This model enables us to concentrate on continuous development and testing cycles, guaranteeing that we get better with each iteration. Our system is huge and complicated, with changing requirements, therefore the iterative model gives us the flexibility to make adjustments and updates as necessary. With the help of this method, we are able to successfully manage the development of our system.

### 2.3.2 Collecting Requirements

Reviewing comparable systems and gaining client input via surveys has shown to be the most efficient method for gathering requirements and advancing our knowledge in this area. We also seek advice from specialists who may have worked on related projects in order to understand the difficulties they encountered during the early stages of development. Our team members can use the requirements we summarize in documents for system development, design, and management. We may acquire insightful feedback and information using this cutting-edge methodology to direct our project in the right direction.

### 2.3.3 Scope Baseline

The scope baseline is an integral part of the project management plan and encompasses the scope statement and work breakdown structure (WBS). It represents the approved version of these components and can only be modified through formal control procedures. The scope baseline serves as a benchmark for comparison throughout the project lifecycle.

#### 2.3.3.1 Scope Statement

The scope statement provides a comprehensive overview of the project's deliverables, describing the characteristics and requirements of the final product. It also outlines measurable success criteria and provides a summary of the project. A well-crafted scope statement should capture the overall vision of the project in broad terms.

|  |
| --- |
| **Project Title:** Balagh Application  **Project Start Date:** 16 March 2023  **Prepared by:** Maha Alzouba, Project Manager, [Maha@gmail.com](mailto:Maha@gmail.com) |
| **Project Summary and Justification:**  This project has been approved by the CEO of the company because this project will help to assist the company in meeting its strategic goals. Since our client is a well-known client so his satisfaction will attract more clients for us in the future, which will increase the demand. The budget for the project is $100,000. An additional $20,000 will be included in each year for the maintenance and updating after the project is completed. Estimated benefits are $60,000 each year. It is important to focus on the system paying for itself within three years of its completion. Profit should increase by 15% after the stakeholder deploys the app. |
| **Product Characteristics and Requirements:**  • Programming Languages: Java for Android and C# for OS systems.  • Interactive System: Allows users to submit inquiries and suggestions through various channels based on the chosen ministry.  • User Submission: Users can submit their inquiries or suggestions and receive email notifications confirming receipt.  • Tools and Benefits: The system includes a content management system to help employees efficiently handle a large number of inquiries and suggestions.  • Language Support: English and Arabic.  • Daily Links Refresh: All links to the ministry systems are refreshed daily.  • System Monitoring: Main data.  • Ministry Employee Accounts: Ministry employees can create separate accounts tied to their respective ministries.  • User Registration and Login: Users can register and login using their CPRs.  • Complaints, Suggestions, and Inquiries: Users can submit, and track complaints, suggestions, and inquiries based on the relevant ministry.  • Contact Ministry Employees: Users can contact employees from each ministry to follow up on their demands.  • Report Management: Employees have access to a content management system called "Report Management" to manage user complaints, inquiries, and suggestions.  • User-Friendly Interface: The system has an intuitive and easy-to-use interface.  • Ease of Learning: Users can quickly learn and understand all functionalities within 2 hours of training, such as watching a how-to-use video.  • Search Feature: The system allows users to search for the relevant ministry to obtain more information or submit a complaint. |
| **Summary of Project Deliverables:**   * Business case. * Project Charter. * Team contract. * Scope statement. * WBS. * Schedule. * Cost baseline. * Progress reports. * Final project presentation. * Final project report. * Lessons-learned.   Report, and any other documents required to manage the project.  The project deliverables are what you want to get from it. It is the result of objective-focused work completed within the project process, All of these deliverables effect in project details investment appraisal, milestones& key dates, Expected benefits, risks, reasons for the project and solution options considered. to get our stakeholders to agree on why we're doing the project, what's in scope at a high level with the project charter, The WBS then provides an overall plan so that the project manager can see how the project should progress and manage the workflow appropriately. we use cost baseline to compare actual expenses to projected expenses at the same point in the project, and evaluate the overall cost performance, also were using weekly progress reports, Gant charts and network diagram. |
| **Project Success Criteria:**   * Project should complete within 6 months and with budget no more than 100,000 USD. * The project should increase the demand. * Project should pay for his development within 3 years (if only one government bay license). * If the project takes a little longer to complete or costs a little more than planned, the firm will still view it as a success. * System must satisfy the requirements. If the project takes a little longer to complete or costs a little more than planned, the firm will still view it as a success. * System must satisfy the requirements. |

Table 2.0 Scope Statement Content

#### 2.3.3.2 Prepare WBS

Deliverable oriented grouping that works involve defining the total scope. Since the project involves many people and many different deliverables it’s very important to divide the work into logic parts based on how work will be performed. It’s very important because it’s considered as foundation for basis for planning and managing project schedule.

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| |  | | --- | | 1. **Pre-initiation and initiation**     1. Business Case    2. Stakeholders Register    3. Stakeholders Management    4. Project Charter 2. **Planning**    1. Team Contract    2. **Project Scope Management**       1. Software Process Model and Justification       2. Collecting Requirements Plan       3. **Scope Baseline**          1. Scope Statement          2. Prepare WBS          3. WBS dictionary    3. Statement of Work    4. Project Schedule    5. **Project Time management**       1. Gantt Chart       2. Network Diagram       3. Critical Path Analysis    6. Risk Management Plan    7. Project Communication Management 3. **Execution**    1. **System Requirements**       1. Clarification of Design Purpose       2. Define Quality Attribute Scenarios       3. Define Primarily Functionality       4. List Architectural Concerns       5. Catalog Constraints    2. **Design Process**       1. **Attribute Driven Design**          1. Step 1: Review Input          2. Step 2: Establish The Iteration Goal by Selecting Drives          3. Step 3: Choose One or More Elements of The System to Refine          4. Step 4: Choose One or More Design Concepts That Satisfy the Selected Drivers          5. Step 5: Instantiate Architectural Elements, Allocate Responsibilities, and Define Interfaces          6. Step 6: Sketch Views and Record Design Decisions          7. Step 7: Perform Analysis of Current Design and Review Iteration Goal and Architecture of Design Purpose          8. Iterate    3. **Application Prototype** 4. **Monitoring and Controlling**    1. Progress Report    2. Milestone Report    3. Request for Proposal    4. Team Performance Assessment    5. Change Requests 5. **Closing**     1. Lessons Learned | |

#### 2.3.3.3 WBS dictionary

The WBS dictionary is a detailed document that complements the WBS, providing information about each work package in the project. It is a component of the scope baseline in project management and includes details such as work package ID, name, description, responsible party, dates, resources, dependencies, risks, cost estimates, quality requirements, and acceptance criteria.

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| WBS Dictionary Entry October 26 |
| **Project Title:** Balagh Citizen Management System |
| **WBS Item Number**: 3.3.1 |
| **WBS Item Name:** Interface Design and Development |
| **Description:** interface design and development are a crucial component of our project's Work Breakdown Structure (WBS). In this phase, we prioritize designing the user experience (UX) and user interface (UI) using the powerful Figma tool. With its latest features and functions, we aim to develop a modern and user-friendly interface for our system.  Our design approach follows reputation design principles and consistency, ensuring that the system is visually appealing and easy to use for citizens of different ages. We leverage Figma's collaboration features to facilitate efficient communication and feedback loops during the design and development process. This allows us to create interactive prototypes, conduct usability testing, and iterate on the design until it meets the highest standards of usability and aesthetics.  Our goal is to create an intuitive and efficient user experience that instills trust and confidence in our system. By prioritizing reputation design principles and consistency, we aim to create an interface that is visually appealing, user-friendly, and accessible to all users. With Figma as our tool of choice, we are equipped to design and develop an interface that meets the needs of our diverse user base. |

Table number 3.0 WBS Dictionary for item number 3.3.1

## 2.4 Statement of Work

The statement of work (SOW), which describes a project's scope, goals, deliverables, and deadlines, is an essential document. It acts as a legal contract between the parties involved in the project, supplying a structure for project planning, execution, and monitoring. By setting up shared understanding among stakeholders, managing scope, and outlining clear expectations, a well-written and thorough SOW is crucial for guaranteeing project success. Being clear, succinct, and explicit, employing measurable objectives and deliverables, and outlining roles and duties are all best practices for developing an effective SOW.

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| Statement of Work (SOW)   1. **Scope of Work:** Our solution will be made to work on mobile devices running the iOS and Android operating systems. Java and C# will be used as programming languages. To improve the system's usability and engagement, we will also hire an expert designer. As a result, both ministry employees and regular citizens will use the system. 2. **Location of Work:** Our work will be carried out on desktop computers equipped with the necessary resources for system development, such as an Intel Core i5 CPU or higher. As our system is designed for mobile platforms, we do not require a high-end GPU, and the infrastructure needed for development is not extensive. 3. **Period of Performance:** Our work will be done at the firm facility, which is furnished with all the tools that our developers and designers need. During the following six months, up until October, the weekly work hours will be set at 50, and each team is expected to adhere to its work plan as laid forth in the calendar. 4. **Deliverables Schedule:**  * **Initiation Stage –** complete within 10 days * **Project Scope Management –** complete within two months * **Project Time Management –** complete within two weeks * **Risk Management Plan –** complete within one week * **Project Communication Management –** at the beginning of planning phase  1. **Applicable Standards:**  * Code of Conduct: Staff members are expected to abide by the company's code of conduct, which establishes standards for moral conduct, professionalism, and integrity at work. * Workplace Safety: Workers are required to abide by all corporate safety policies, such as emergency protocols, correct equipment usage, and adherence to occupational health and safety laws. * Data Privacy and Confidentiality: Workers are accountable for maintaining the privacy and confidentiality of client and corporate data, which includes adhering to information security guidelines and data handling practices. * Work Hours and Attendance: Workers must follow the company's work hours, punctuality, and attendance regulations, as well as the processes for requesting time off and taking leave. * Effective communication and collaboration are expected of employees, including the use of company communication tools, professional communication, and teamwork standards.  1. **Acceptance Criteria:** To ensure user satisfaction, several acceptance criteria need to be considered for our system. Firstly, as our system will be used by governments to facilitate application processes for citizens, it must be compatible with different devices and deliver high performance. Additionally, the system must support scalability to accommodate a large number of users, given the high population it will serve. 2. **Special Requirements:** To ensure effective development and avoid potential issues, our team must have a minimum of 5 years of experience in mobile development. Additionally, our team members must have workstations with Windows 10 and at least an Intel Core i5 CPU. These requirements are crucial for the successful development of our system and ensuring that our team has the necessary expertise and resources to deliver a high-quality end product. |

## 2.5 Project Schedule

In project scheduling we break our project into five phases: pre-initiation, initiation, planning, execution, monitoring and controlling, and finally closing. For each stage we are required to perform some tasks and process in order to manage our project and achieve progress within a given timeframe while we are working on our system. However, for each stage we require some deliverables in order to move for the next phase.

**Pre-initiation**: system idea chosen within this stage of project management we try to use different techniques such as brainstorming session including all teams’ members and project sponsor. on other word, we try to develop a high-level of understanding for the system and conduct a feasibility study.

**Initiation**: a kick-off meeting was conducted with team members and stakeholders. Roles and responsibilities were assigned, and the project charter was developed. Additionally, the stakeholder registry and management were confirmed to ensure proper stakeholder engagement throughout the project.

**Planning**: a team contract was established, and project scope management and time management were defined through the creation of a statement of work and project schedule estimation. Project communication management and risk management plans were developed, and a comprehensive project work plan was formulated.

**Execution**: The system requirements, design process, and application prototype are the three primary stages of this phase. System-level criteria, quality attribute scenarios, core functionality, cataloging limitations, and a clear design goal are all part of the system requirements stage. The design stage is organized into seven steps by the Attribute Driven Design (ADD) methodology. These steps are reviewing inputs, setting iteration goals, selecting system components to improve, choosing design concepts, instantiating architectural elements, assigning responsibilities and defining interfaces, sketching views and recording design decisions, analyzing the current design, and reviewing iteration goals.

**Monitoring and Controlling**: This phase involves tracking progress, comparing actual progress with planned progress, identifying deviations, and taking corrective actions as needed. It also includes monitoring risks, managing changes, and maintaining communication with stakeholders.

**Closing**: This phase involves formalizing project completion, conducting final reviews, documenting lessons learned, and archiving project information. It also includes celebrating project success and conducting post-project evaluations.

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## 2.6 Project Time Management

The project time management process is crucial for tracking time and money, though it can be lengthy. For this project, we utilized MS Project to generate the Gantt Chart and Network Diagram using WBS data. Task durations were determined based on past projects and a team meeting where assignments were discussed and decided upon. The ultimate goal is to provide instructions on how to manage the project schedule throughout its lifecycle.

The team members came together to define and describe the digital tasks that need to be completed, which marked phase one of the process - identifying activities. As the team members are responsible for executing the tasks, it was agreed that all members should be involved in this process. Next, the team organized the tasks in the correct sequence to make the best use of project resources and deliver the project promptly to the sponsor. Finally, the schedule was developed as the last step, with the team integrating risks, scope, and other project-related elements into the schedule.

### 2.6.1 Gantt Chart

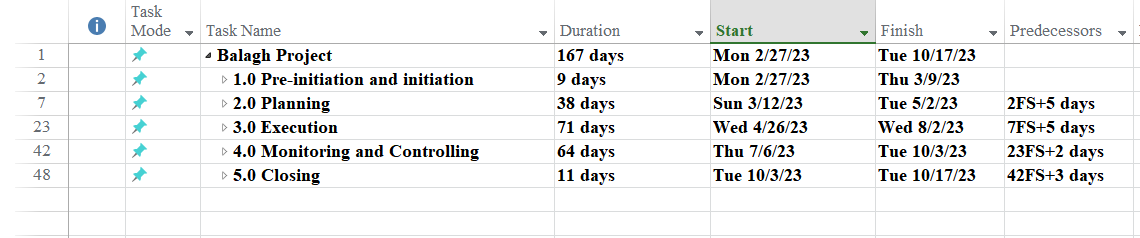
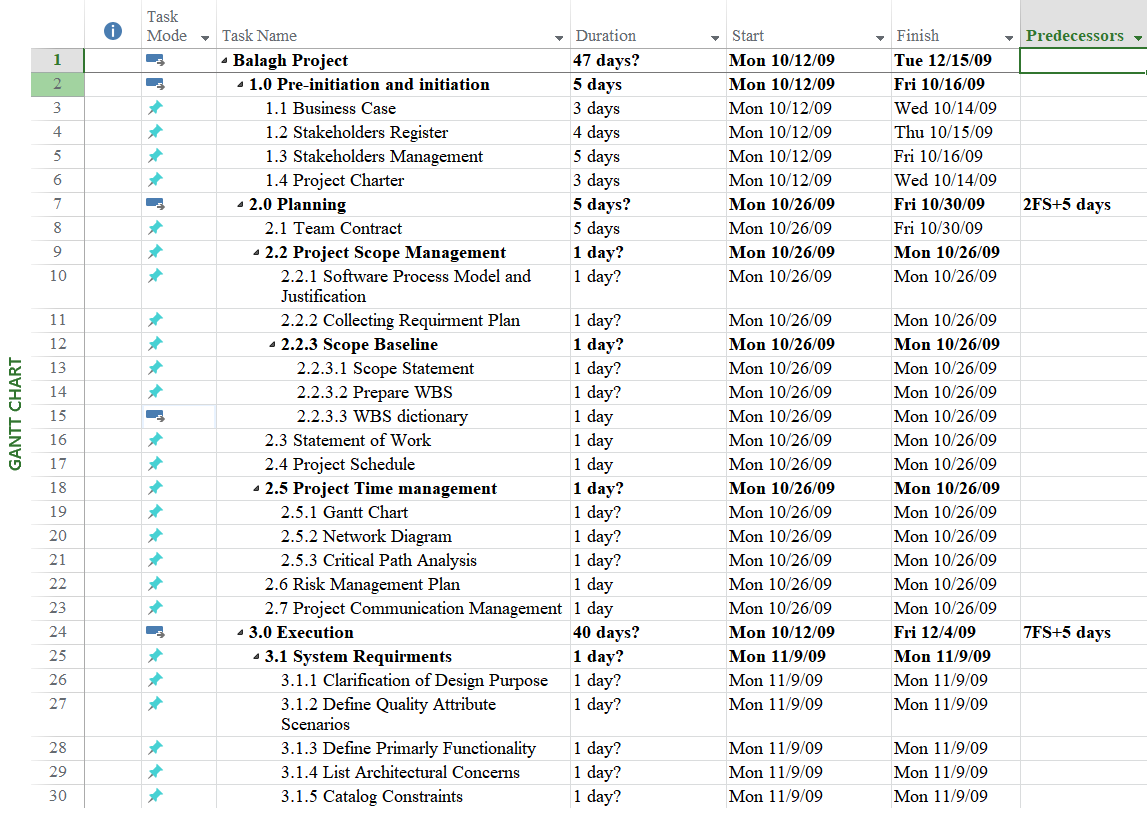


Figure 1 Gantt Chart showing all project phases and some details in general



Table

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Figure 2 Gantt Chart showing all project phases and details

### 2.6.2 Network Diagram

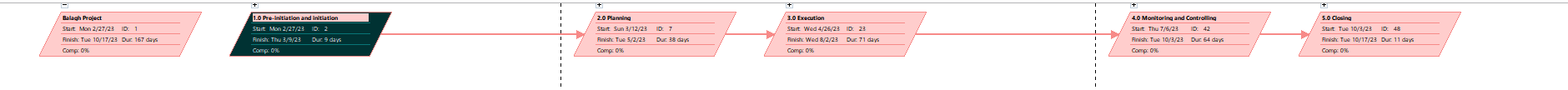


Figure 3 Network Diagram for Balagh System

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Figure 3 Detailed Network Diagram

## 2.7 Risk Management Plan

The main business risk is investing the time and money into this project.

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| **Ranking** | **Potential risk** |
| 1 | Can’t realizing the required profit. |
| 2 | Security of new system |
| 3 | Unclear requirements. |
| 4 | Cannot deliver the product within the approved delivery date. |
| 5 | Technical risks. |
| 6 | Scope creep. |
| 7 | Providing an efficient taking picture feature |
| 8 | Realizing the benefits of the new system within three years |

Table number 4.0 potential project risks

A risk management plan defines how the project's risk management process will be executed. That includes the funds, tools and approaches that will be used to perform risk identification, assessment, mitigation and monitoring activities.

**Methodology**  
Risk management will be implemented by monitoring the details of the project's production, where small mistakes are screened to avoid any adverse impact on the project implementation process, Perform tests on a continuous basis for each execution process, and periodically set times for doing this process, Reporting progress to the project director and other team leaders in status report meetings, Maintaining the official project documentation using SWOT analysis, Probability and Impact Matrix and brainstorming.

**Roles and responsibilities**

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| **Role** | **responsibilities** |
| Project Manager | Ultimately responsible for overseeing all aspects of the project, including risk management. Moreover, he is creating and maintaining risk management plan and tracking its progress. |
| Risk Manager | Responsible about identifying, analyzing, evaluating different risks may occurs during the development progress by putting strategies and monitor risk events. |
| Project Team Members | Team members who are assigned specific tasks related to risk management are responsible for implementing those tasks and providing deliverables. |

Table number 4.1 roles and responsibilities

**Budget and schedule**

The level of importance for each risk varies, the budget for each risk will be estimated according to its level, The budget determines the expected cost of the risk management operations and the related risk response plans, including contingency reserves, The scheduling outlines how frequently and when within the project timeline risk management operations will be carried out.

**Risk categories**

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| **Typical Risk Categories** | **Description** |
| Technical | Technology, quality requirement, performance. |
| Organizational | Project duration, cost. |
| External | Citizen interest or involvement |
| Environmental | Environmental laws, licenses, and permits |

Table number 4.2 risk categories

**Risk probability and impact**

Probability and impact are independent variables, Methods for recording quantitative and qualitative risk analyses to avoid personal bias, establishing a common standard for determining different levels of risk likelihood and impact, and analyzing and responding objectively to risks should be predetermined, Risk impact is the effect on project objectives if the risk event occurs, This helps determine which risk events should be managed most aggressively, and the level of effort and investment that is justified, Using probability and impact matrix technique simplifies applying different policies (and hence effort and resources) according to the level of the risk's RS. For example, risks rated as "red" may require review at every weekly status meeting, while "green" risks may be reviewed only monthly, or on a less frequent, rotating basis.

**Revised stakeholders’ tolerances**

Stakeholders may be willing to revise their tolerance for risk when a windfall opportunity presents itself. By temporarily suspending normal risk thresholds, the organization will have the agility to respond. Such variances from the normal thresholds should be clearly decided and communicated.

**Tracking**

1. Communicating risks to all affected [Stakeholders](http://acqnotes.com/acqNote/stakeholdersprogram-manager),
2. Monitoring risk mitigation plans,
3. Reviewing regular status updates,
4. Displaying risk management dynamics
5. Tracking risk status within the [Risk Reporting Matrix](http://acqnotes.com/acqNote/risk-reporting-matrix)

The goal of the documentation is to make sure management has access to all the information it needs to make timely and informed choices. It includes all plans and reports for the PM, decision authority, and reporting forms that may be internal to the program. This enables resource allocation, consistent, disciplined strategy, and action coordination by the risk team.

**Risk documentation**

* Risk breakdown structure
* Risk register
* Templates

**Risk Register**

**• No.:** R1

**• Rank:** 1

**• Risk:** Required profit

**• Description:** The required profit was not achieved when completing the project

**• Category:** Organizational (Cost Management)

**• Root cause:** In the planning cost they didn’t estimate well

**• Triggers:** Lack of the cash flow.

**• Potential responses:** Borrowing to pay off the fiscal deficit and pay it within three months.

**• Risk owner:** Project manager

**• Probability:** Low

**• Impact:** High

**• Status:** Mitigated since it may occurrence due to lack of buyers that may choose our system.

**• No.:** R2

**• Rank:** 2

**• Risk:** Protect Security

**• Description:** The new system will be insecure for user data

**• Category:** Security

**• Root cause:** Personal usage on the system due to the unauthorized access to GUI

**• Triggers:** Lack of awareness of users and security information’s.

**• Potential responses:** perform some conferences to leverage the understand of the important of security and how you protect your information.

**• Risk owner:** Project manager

**• Probability:** Medium

**• Impact:** High

**• Status:** Depending on the user, if he has a enough information about security he will be secure.

**• No.:** R3

**• Rank:** 3

**• Risk:** Requirement.

**• Description:** Lack of clarity in requirements.

**• Category:** Technical.

**• Root cause:** Poor communication skills with the customer.

**• Triggers:** Due to the difficulty of communicating with the customer, it was difficult to collect and analyze the requirements, which led to unclear requirements and misunderstandings.

**• Potential responses:** Discussing the project manager to communicate with the client and arranging another meeting with him and discussing his requirements again in a clearer way and analyzing them.

**• Risk owner:** Project manager.

**• Probability:** Medium.

**• Impact:** High.

**• Status:** Mitigated since the project manager does not start working on the project until he is sure of the client's requirements.

**• No.:** R4

**• Rank:** 4

**• Risk:** Approval date.

**• Description:** The expected time for the project has expired without being completed.

**• Category:** Organizational (Time Management).

**• Root cause:** planning process.

**• Triggers:** There may be a problem in one of the phases of project management, such as a change in requirements, a problem in executing the project plan, a problem with one of the important team members, etc. Which will lead to a delay in delivering the project on time.

**• Potential responses:** The project manager holds a meeting with the client to discuss the delivery of the project and give the team additional time to complete the project and deliver it. Also, the project manager holds another meeting with the team members to divide the remaining tasks intensively among the team members to complete the project as soon as possible.

**• Risk owner:** Project manager and team members.

**• Probability:** Low.

**• Impact:** High.

**• Status:** Closed, as this risk is considered one of the biggest and most important risks that may occur. Therefore, the project manager and team members plan the project plan very accurately to deliver it on time and meet the needs of the client.

**• No.:** R5

**• Rank:** 5

**• Risk:** Resource constrain.

**• Description:** limited availability of skilled resources.

**• Category:** Human Resource

**• Root cause:** low qualified staff, lack of experience

**• Triggers:** Project team members leaving the project, resource unavailability.

**• Potential responses:** resource allocation planning, give training courses for new employees to keep up with new technologies.

**• Risk owner:** Project manager

**• Probability:** High

**• Impact:** High

**• Status:** The risk is currently happened and require solving in fastest way as possible since it will affect the due date of the overall project or may change the time completion.

## 

## 2.8 Project Communication Management

One of the critical plans that must be developed during the project's planning phase is a communication management plan. The primary goal of this plan is to define the frequency and the way to communicate among project stakeholders. It is critical to maintain a direct communication with the project's sponsor every two weeks. The purpose of these meetings is to keep track of the project procedure, review the project status, and discuss any potential issues to ensure that the project meets the specified requirements and needs. Besides that, weekly meetings among project members are required to distribute tasks among the entire group members to continue working on the remaining phases of the project and avoid any potential delays.

1. **Stakeholder communications requirements:**

Effective stakeholder communication and requirements gathering are essential for the success of our project. After negotiating with our stakeholders, we discovered that they prefer to use MS Teams as the communication tool due to its user-friendly interface and ease of use. Additionally, MS Teams requires minimal resources, making it a practical choice for our project. For informal communication, we have chosen WhatsApp as the platform, while official work and meetings will be conducted on MS Teams. This strategic choice allows us to efficiently communicate with stakeholders, gather requirements, and ensure smooth collaboration throughout the project, while also providing a user-friendly experience for all involved parties.

1. **Communications summary:**

* Microsoft Teams for formal communication, WhatsApp for informal communication
* Stakeholder feedback and glossary for reference
* Revision procedures and version control in place
* Project manager overseeing communication and escalation procedures.

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| **Communication Goal** | **Communication Tool** | **Audience** | **Frequency** | **Owner** |
| Review the application development plan | In-person meeting | Project team sponsor, project team member and project manager | Every two weeks | Project manager |
| Team Standup | Virtual meeting (MS Teams) | Project team member, and project manager | Daily | Project manager |
| Project review | Email/call | Project team sponsor, project manager, and stakeholders | Monthly | Project manager |
| Project completion | In-person meeting | Project team sponsor, project manager, and stakeholders | Monthly | Project manager |

Table 5.0 Communication methods and tools

1. **Comments/Guidelines:**

* Official communication for the project will be conducted through MS Teams, which offers a user-friendly interface and efficient resource utilization.
* For informal updates and quick communication, we will use WhatsApp as the preferred platform.
* All stakeholders are encouraged to actively participate in communication channels and provide feedback to ensure smooth collaboration.
* Regular project updates, progress reports, and meeting agendas will be shared via email and MS Teams.
* Timely responses to communication threads and emails are expected to maintain effective communication flow.
* All stakeholders must contribute to the communication process to achieve project deliverables.

1. **Escalation procedures for resolving issues:**

* In case of any communication issues or conflicts, the parties involved should attempt to resolve them through direct communication and collaboration in a professional and respectful manner.
* If an issue cannot be resolved through direct communication, it should be escalated to the respective team leads or project manager for intervention.
* The project manager will review the issue, gather relevant information, and facilitate discussions among the stakeholders to find a resolution.
* If the issue remains unresolved at the team level, it will be escalated to the project sponsor or other relevant stakeholders for further assistance.
* If necessary, the project sponsor or senior management will provide guidance and take appropriate actions to resolve the issue in a timely manner.
* Regular follow-up and communication will be maintained until the issue is resolved, and all parties are satisfied with the outcome.
* Documentation of the issue, escalation, and resolution process will be maintained for future reference and improvement of communication practices.

1. **Revision procedures for this document:**

* This document on project communication will be reviewed and updated periodically to ensure its accuracy and relevance.
* The project manager or designated team member will be responsible for initiating and overseeing the revision process.
* Any feedback, suggestions, or comments from stakeholders regarding the document's content, clarity, or effectiveness are welcome and should be communicated to the project manager.
* The project manager will review the feedback and assess the need for revisions based on the project's evolving requirements, communication challenges, or stakeholder inputs.
* The revised document will be circulated to all relevant stakeholders for review and feedback.
* Any approved changes to the document will be documented and implemented promptly, and the updated version will be shared with all stakeholders.
* The project manager will ensure that all team members are aware of the revised procedures and comply with the updated guidelines in their communication practices.
* Documentation of revision history and version control will be maintained for reference and audit purposes.

1. **Glossary of common terminology:**

**Stakeholders**: Individuals or groups who have an interest or stake in the project, including sponsors, clients, team members, and other relevant parties.

**MS Teams**: Microsoft Teams, a collaboration platform used for online communication, file sharing, and virtual meetings.

WhatsApp: A popular instant messaging application used for informal communication and quick updates.

**Communication Channels**: The various methods and tools used for communication within the project, such as email, messaging apps, meetings, and documentation.

**Escalation**: The process of raising an issue to a higher authority or management level for resolution when it cannot be resolved at the team level.

**Project Manager**: The individual responsible for planning, executing, and controlling the project, including communication management.

**Revision**: The process of reviewing, updating, and modifying the document to ensure its accuracy and relevance.

**Version Control**: The practice of tracking and managing changes to a document to maintain a history of revisions and ensure the use of the latest version.

**Documentation**: Written records, reports, and other written materials related to the project, including communication logs, meeting minutes, and progress reports.

**Guidelines**: The set of rules, instructions, or recommendations that govern the project communication practices, ensuring consistency and effectiveness.

## 2.9 Summary

During this project phase, the team has accomplished several key tasks. A team contract was established to define roles, responsibilities, and expectations. Project scope was effectively managed, ensuring that project objectives were met. Time management was implemented, including scheduling and tracking of project activities. A comprehensive risk management plan was developed to identify and mitigate potential risks. Project communication was managed through established channels and guidelines, promoting effective communication among team members and stakeholders. These accomplishments have laid the foundation for a successful project execution, with a focus on collaboration, efficiency, and risk mitigation.