Project Management Life Cycle for Developing Fitness Application

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Project Charter			
Project Title	Project Management for Fitness application (software project)		
Project Start Date	1/1/2023	**Project End Date**	1/1/2024
Available resources	Budget: $53,000 Testing environment: iPhone 13 Pro, Samsung Galaxy S22		
Project Manager	Layan Al-mohsen Email: layan@fitnessapp.com Telpohone: +966 741 785 965		
Project Objective	Create a mobile fitness application that connects anyone that cares about their health and wants to have a healthy body and lifestyle by exercising and eating healthy food. Using the app, the clients can book the nearest gym that is available for them in KSA, and choose the best schedule for them. Also, they can talk to nutritionists and make a good diet for their condition. The application also has a different set of exercise videos that can be done at home through different categories such as exercises for Legs, abs, and so on. The app also includes Yoga exercises and Pilates. The customer can chat with the nutritionist or gym coach to answer any questions they might need.		
Main Project Success Creation	The project should by for itself within a year of completion. The number of downloads within the first year is estimated to be 250,000 downloads.		
Approach	• System Requirements Analysis to identify the functionality that is needed by the application in order to satisfy the customer's requirements. • develop a survey to determine what are the required functions in the application. • Brainstorm the first design for the application and test the designed interfaces. • The programming development team start developing the application to meet the required functionalities. • UI/UX design for the application. • Consultation with software experts, and fitness experts. • Testing the application before launching it. • Launch the application.		

Roles and Responsibilities	**Name**	**Position**	**Contact Information**
	Layan	Project Manager	layan@fitnessapp.com
	Shahad	System Analyst	shahad@fitnessapp.com
	Nouf	System Developer	nouf@fitnessapp.com
	Nour	UI/UX Designer	nour@fitnessapp.com
	Shatha	Software Consultant	shatha@fitnessapp.com
	Rania	Advisor	rania@fitnessapp.com
Project Stakeholders	• Gym owners • Fitness trainers • customers • Nutritionists • gym coaches		

Project Management Life Cycle for Developing Fitness Application

Initiation and Planning phase

The aim of the fitness application is to facilitate the process of providing different customers and athletes with an application that organizes sports schedules, gym subscriptions, and nutrition schedules, all project stakeholders will assist the project manager in developing a clear plan to develop the fitness app and finish the project within 3 months and with a budget of $80,000. The action plan will include continuous development and progress according to the development schedule and the human resources allocated for this. This phase includes an analysis of all the needs for the application of the functional and non-functional requirements.

Implementation Phase

At this stage, it is divided into two very basic tasks, the first is designing user interfaces for the application, and the second is resorting to programming the application in the Android and iOS programming languages so that the members of the development and programming team will work as planned for their roles and the design team as planned for their roles and tasks. The application will be designed, developed, and programmed to move later to the testing and examination phase, where progress will be monitored and checked in the event of any problem or error through the application experience before release and launch, and any changes to the plan will be incorporated according to the directions of the test team.

Testing Phase

Now that the application code has been written, it is done in a special environment by a team of programmers specialized in testing, so the team can check for bugs and other errors without being distracted by too many variables. After removing all errors that appear, the application is published. This is when the application is actually put into production and released in the business environment and started to be promoted for customers to use.

Closure Phase - Application Release

Upon closing, the application is completed as it has passed all required tests and customer requirements. In addition, everything related to the project will be documented from planning to development, implementation, release, and document writing.

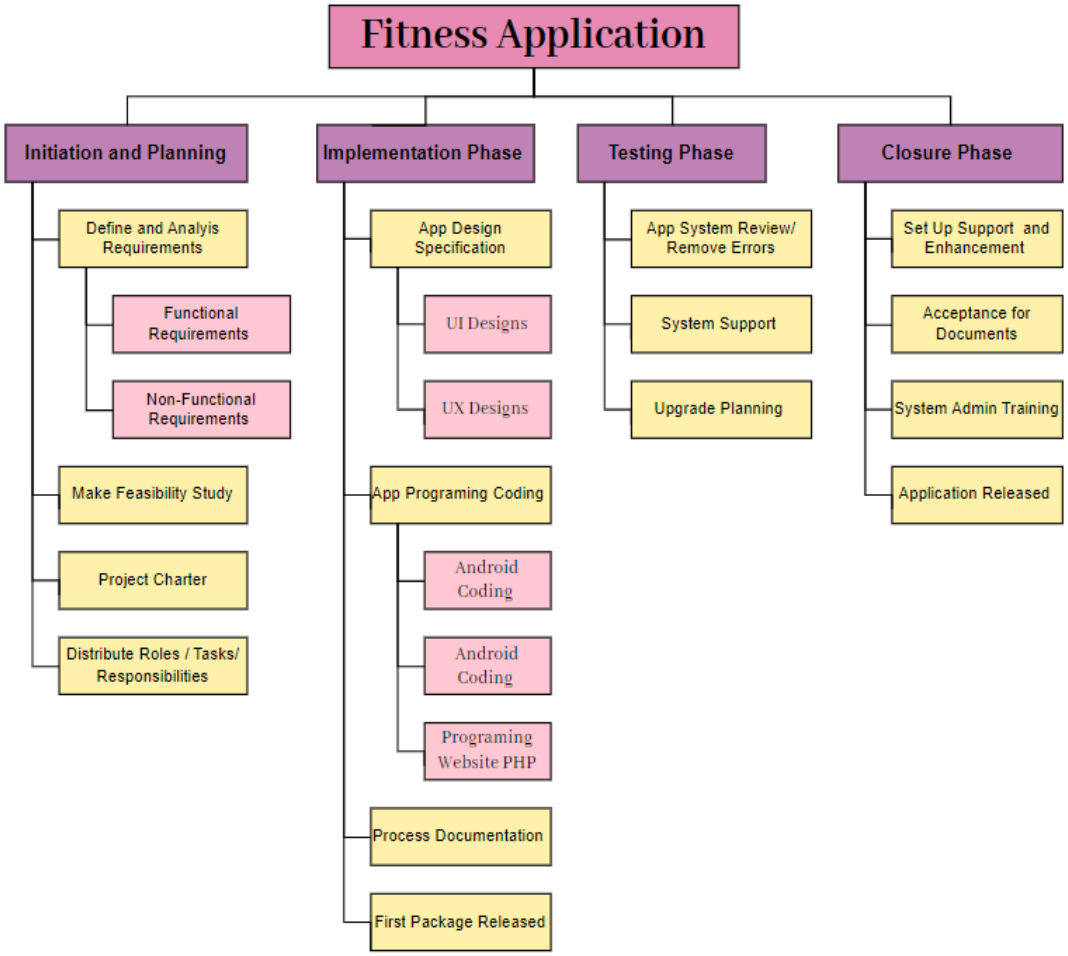
The Project team will the following questions during the closure phase:

- Are the project's completion criteria met?
- Is there a project closure report in progress?
- Have all project artifacts been collected and archived?
- Has a project post-mortem been planned?

Work Break Down Structure For Fitness App Development

	WBS	Task Name	Duration
1	**1**	**Initiation and Planning phase**	**20 days**
2	**1.2**	**Define and Analyis Requirements**	**9 days**
3	1.2.1	Functional Requirements	5 days
4	1.2.2	Non-Functional Requirments	4 days
5	1.3	Make Feasibility Study	6 days
6	1.4	Define Risk Management	3 days
7	1.5	Make project charter/ Roles and Responsibilties	2 days
8	**2**	**Implementation Phase**	**15 days**
9	**2.31**	**App Design Specification**	**15 days**
10	2.31.28	UX Designs	12 days
11	2.31.29	UI Designs	15 days
12	**42**	**App Programing Coding**	**43 days**
13	42.27	Android Coding	40 days
14	42.28	iOS Coding	43 days
15	45	Process Documentation	6 days
16	46	Release First Package	1 day
17	**3**	**Testing Phase**	**20 days**
18	3.1	App System Review/ Remove Errors	6 days
19	3.2	System Support	20 days
20	3.3	Upgrade Planning	12 days
21	**4**	**Closure Phase - Application Release**	**12 days**
22	4.1	Systems Admin Training	7 days
23	4.2	Application Released	0 days
24	4.3	Acceptance for Documents	3 days
25	4.4	Support and Enhancement	12 days

Project Organizational Breakdown Structure

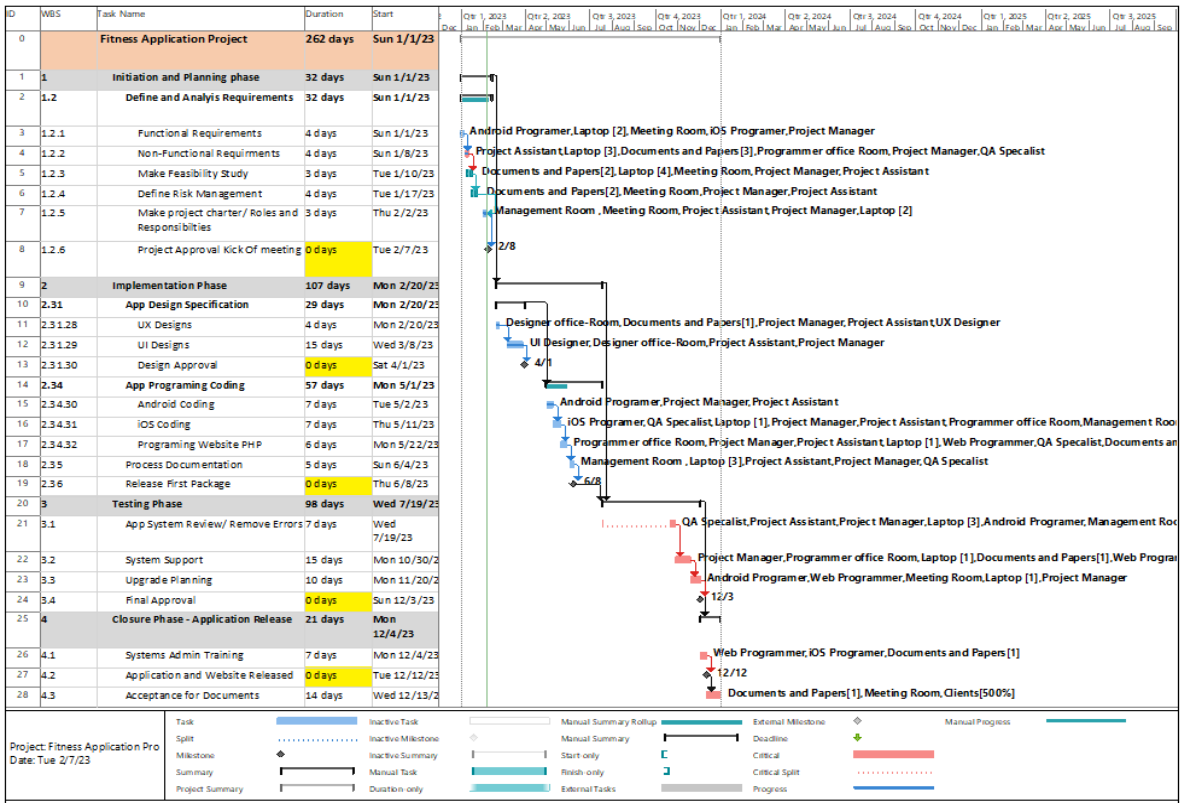


Project Gantt Chart

- By Excel :

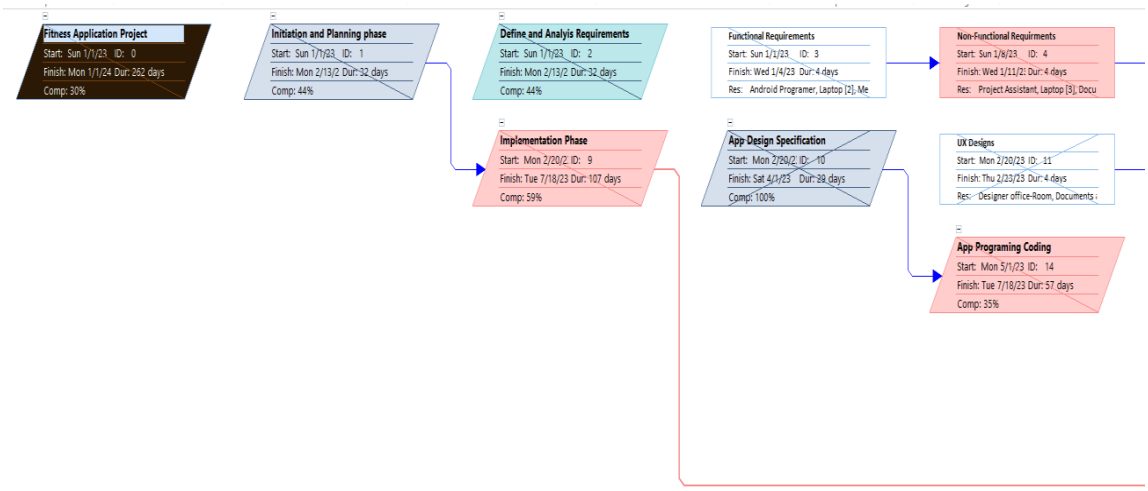
WBS	Task Name	2023											2024
		Jan	Feb	March	April	May	June	July	Aug	Sep	Nov	Dec	Jan
1	**Initiation and Planning phase**												
1.2	**Define and Analyis Requirements**												
1.3	Make Feasibility Study												
1.4	Define Risk Management												
1.5	Make project charter/ Roles and Responsibilties												
1.6	Project Approval Kick Of meeting												
2	**Implementation Phase**												
2.1	**App Design Specification**												
2.1.1	UX Designs												
2.1.2	UI Designs												
2.1.3	Design Approval												
2.2	**App Programing Coding**												
2.2.1	Android Coding												
2.2.2	iOs coding												
2.2.1	Process Documentation												
2.2.2	Release First Package												
3	**Testing Phase**												
3.1	App System Review/ Remove Errors												
3.2	System Support												
3.3	Upgrade Planning												
3.4	Final Approval												
4	**Closure Phase - Application Release**												
4.1	Systems Admin Training												
4.2	Application and Website Released												

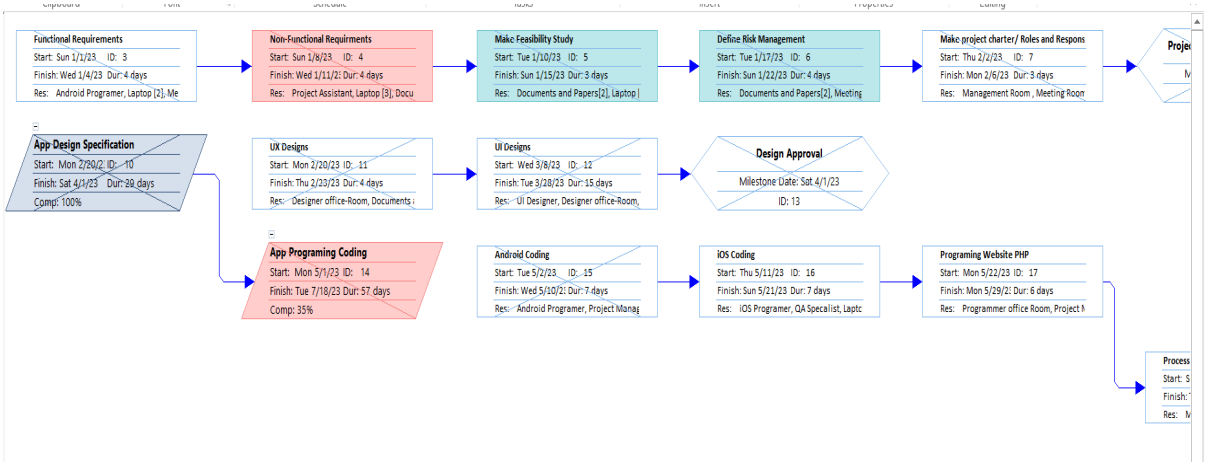
- By MS Project

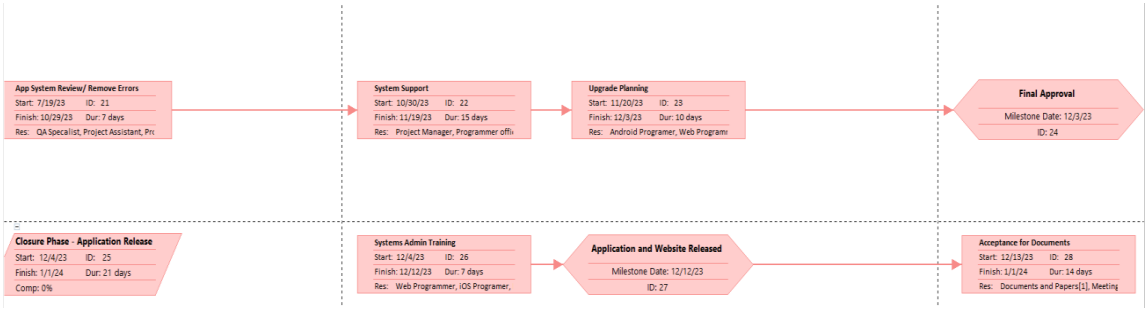


Networks Diagram

All diagrams are clear described in Ms Project file , here some screenshots







Fitness Application Project Priorities

1. Scope

The project covers the Kingdom of Saudi Arabia and is specialized in the field of fitness and sports, and includes all gyms in the Kingdom of Saudi Arabia.

2. Cost

The estimated budget required to develop the application for Android and iPhone is $53,000

3. Time

Completing and developing the application within 4 months, starting from January 2023 to April 2023.

4. Performance

The developed application should reach great quality and be user-friendly with excellent performance, customer expectations are continuously getting higher, therefore performance has to be enhanced.

Priority Matrix

	Time	Cost	Scope	Performance
Constraints				
Enhance				
Accept				

Project Risk Management

Due to the variety of serious potential issues that can emerge, the majority of software engineering projects are risky. Risks to project success can be contained and reduced with the help of risk management. To reduce the risk's effect on the project, we must first identify it, plan for it, and then be prepared to take action when it comes to pass. Technical, programmatic, and process risks are identified and categorized as part of software risk management, which then forms the basis of a plan that connects each to a mitigation approach.The project manager monitors risk during the project. If any materialize, a specific owner implements a mitigating action. To avoid any possible danger that threatens our project, the fitness application, we take the following steps

1. Risk identification:

Where we will define a list of risks that the application can face, which is a group of risks that occur constantly in general in software projects and to identify and Manage Software Development Risks we have to

- Identify risk factors.
- Assess risk probabilities and effects on the project.
- Develop strategies to mitigate risks.
- Risk factor monitoring.
- Have a contingency plan.

2. Risk Assessment

Once we identify the risks, we analyze them and define the scope of the risks. The risks must be classified and prioritized. So that the risks that may cause some in convenience are classified as low, and the risks that can lead to catastrophic loss are classified as the highest.

Risk No	Problem	Probability of occurrence of problem	Impact of problem	Risk exposure	Priority
R1	Issue of incorrect password	2	2	4	10
R2	Testing reveals a lot of defects	1	9	9	7
R3	Design is not robust	2	7	14	5
R4	Lack of Developer	1	7	12	8
R5	Code issues	3	6	12	7

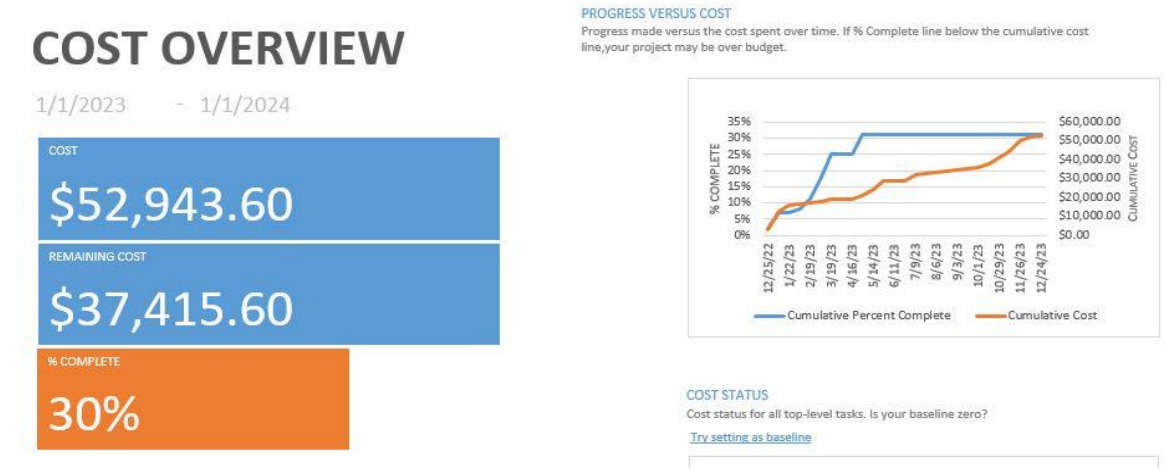
3. Risk Response Development

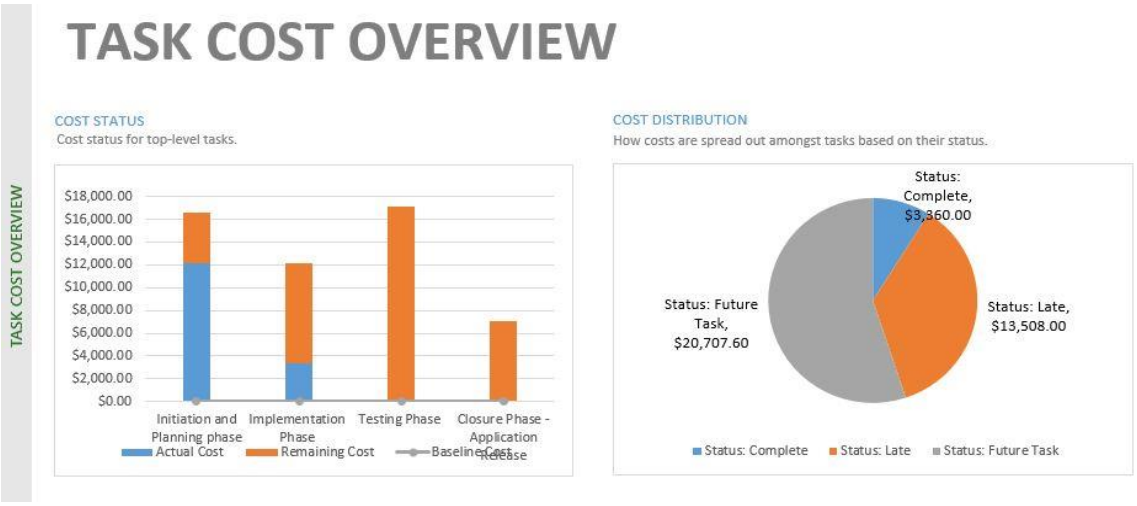
Risk #	Action
R1	Avoid
R2	Mitigate
R3	Avoid
R4	Transfer
R5	Mitigate

4. Risk Response Control

After the risks that occurred are recorded and registered as mentioned in the three steps above, it is the role of the project management team to control the risks and implement the risk response strategy by monitoring the causative events and starting to make contingency plans in addition to establishing a change management system and assigning a specialized person from the work team to assign and document the responsibility for risk management for the project.

Screens from Ms Project





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