NSBM GREEN UNIVERSITY TOWN

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PROJECT REPORT

CS301.3 IT Project Management
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Batch : 21.1
Prepared By : Group 5

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DESCRIPTION OF THE PROJECT

Human well-being is undeniably linked to leading a healthy lifestyle, yet in the hustle and bustle of today's fast-paced society, many individuals often prioritize their health last due to their demanding schedules.

Recognizing the importance of health and well-being, NSBM Green University has taken proactive steps to prioritize healthcare for its students and staff. To cater to their healthcare needs, the university has established a dedicated medical facility where both students and staff can access free medical advice and receive prescription drugs tailored to their specific health requirements.

However, it is evident that the current operational processes within the medical facility rely heavily on manual procedures, which can be significantly improved to enhance the quality and efficiency of healthcare services. Specifically, the current task of providing medical advice based on undergraduates or employee's specific health issues involves several manual steps. Further NSBM Green University noticed, this inefficiency in service from the medical center is a result of the manual processes, leading to wasted time for the undergraduates.

By considering all above weaknesses, NSBM Green University wants to create computerized those manual system and save the time, effort and minimize the pressure by both parties through using new modern technologies. So, they gave a project for our company (BITBOTS) to develop the Mobile Application for the NSBM Medical Center called Nmedix by providing effective, efficient process.

So here we presented the whole project overlook which we plan to do by using the Agile Methodology including the work breakdown structure, Gantt chart, Product backlog, Sprint breakdown and many more.

SCOPE OF THE PROJECT

After having identified the project requirements through using process discovery methods for the some extends team create the scope by mentioning the in-scope activities and out a scope activity. Here we mentioned what we were considered as an in scope and the out a scope through the project lifecycle.

In-Scope:

- As per customer requirement (NSBM Green University), we develop the project as 3 sprints. (For each sprint include the application phase as well as the related admin phase)
    - **Login & Authentication**
    - **Medical Appointment Booking**
    - **Feedback Sharing**
    - **Integration**
- By considering whole aspects, we confirm to finish the project within 4 months. (16 weeks only – 16/10/2023 to 02/02/2024)
- When we consider our team allocation, we have a team of 8 employees including Project Manager, Business Analysis, 4 Developers, QA Engineer, UIUX Engineer.
  (We hope all members are in average level and available throughout the project)

Outer-Scope:

- By having proper discussion with the stakeholders, we recognized those factors as a outer scope of the project.
    - **Article Sharing**
    - **EC Approvalization**
    - **AI Based Symptoms Detection**

OBJECTIVES OF THE PROJECT

- **Satisfied the stakeholders by providing all requirements and expectations.**

This objective focuses on meeting the needs and expectations of all stakeholders involved in the project, including patients, healthcare professionals, administrators, and investors. Further through agile development (regular feedback), can keep the stakeholders much engaged and informed through the project cycle.

- **Improve the user experience of the app end users.**

Enhancing the user experience involves creating an innovative, user-friendly interface (simple interactive designs, easy-to-understand, and responsive interactions etc) that allows users (Undergraduates and Employees) and administration of medical center to navigate the app effortlessly. A focus on user experience ensures that users can perform tasks efficiently, leading to higher user satisfaction and engagement with the app.

- **Enhance administrative management efficiency and productivity.**

Administrative management efficiency is crucial and very important for managing appointments, patient records, b, and other administrative tasks seamlessly. The app should include features like appointment scheduling, patient data storing functionalities and monitoring tools. Automation of repetitive administrative processes, integration with backend systems, can significantly improve productivity, allowing admins to focus on more strategic tasks.

- **Ensure Data Security**

Data security is more important in medical sector apps to protect sensitive patient information. This objective focuses on implementing security measures, including encryption for data transmission, secure storage practices, and access control mechanisms and ensure the data security and the accuracy.

MOSCOW ANALYSIS

Must Have

Those are the high priority and essential requirements which we recognized in our in-project scope.

- Login & Authentication
- Medical Appointment Booking
- Feedback Sharing

Should Have

According to our decided scope, here we mentioned the highly desirable but It's not absolutely necessary for our initial release.

- Secure the recorded/ stored data.
- Reminder setup for the appointment applicants.
- HCI factors consideration

Could Have

"Could have" requirements are desirable but not critical. We can enhance the project if include the features below but if their absence does not affect to success of the project.

- Provide Online medical Instruction.
- Create a chatbot to app inquiries as well as assistance.
- Provide Health awareness through the articles.

Won't Have

Those are out of scope features and explicitly excluded from the current project scope in the project.

- AI Based symptoms detections.
- Customized user interfaces according to their diagnosis
- Get the health analytics using AI Algorithms

PRODUCT BACKLOG ITEMS

01.Login & Authentication

By implementing this feature, we try to provide secure and easy process to users by providing a login and authentication through the medical mobile application. Users can register, log in, and ensure the protection of their personal health information.

02.Medical Appointment Booking

Here is our second backlog item which is able make appointments by reducing time and effort through the application. To improve convenience and access to healthcare services, users can choose preferred providers, and comfortable appointment dates and times.

03.Feedback Sharing

Through this backlog item, we hope to develop and provide the option to leave comments regarding their interactions with the app for the users. Users have the chance to offer comments, ratings, and ideas using this feature, which helps to improve the product's quality and encourage user interaction.

04.Integration

Integration in software development refers to the process of combining context system elements, services, or data sources to operate as a single unit, especially in the context of a mobile application. This procedure tries to make sure that all the various components of the system work together harmoniously, increasing productivity and ensuring data consistency.

SPRINT BRAEKDOWN

According to our project guidelines, we only have to represent the first sprint breakdown through the assignment. So here we mentioned the sprint breakdown to the **"Login & Authentication"** by prioritizing as the first priority by considering whole backlog items and first sprint tasks.

"Login & Authentication"

01. Environment setup

Environment setup is a crucial initial step in the development of our medical mobile application. This task includes configuring the software development environment and installing the required development tools, libraries, and databases, as well as setting up any necessary testing and deployment infrastructure for the Nmedix project.

02. Develop database schema.

This involves developing the database schema with designing the blueprint for how the application stores and manages data, ensuring data integrity, security, and efficient retrieval.

03. Implement user login and admin login

User login (Undergraduates / Employees) ensures that individuals can access their personal medical data, while admin login (Medical Center) provides control over the NMedix application's administrative functions. This task is most importance, as it establishes the foundation for user interactions and data protection in application.

04. Develop user authentication and admin authentication.

User authentication ensures that users can access the right data securely, while admin authentication empowers the administrative functions. By prioritizing this task, we establish a strong foundation for user interactions and data protection, which are paramount in the medical field.

05. Develop password recovery.

It involves designing and implementing a password recovery system that allows users to regain access to their accounts in a secure and user-friendly manner in case they forget their passwords. By prioritizing this task, we enhance the NMedix application's user support and overall security.

06. User and admin profile implementation

It encompasses the development and integration of user (Undergraduate / Employee) and admin profiles (Medical Center), ensuring that the application can distinguish between different user roles and manage their access rights and privileges effectively.

07. Unit testing

Unit testing involves creating and running tests to examine individual components and functionalities of the application in isolation. This ensures that each component works correctly and reliably of the login and authentication process.

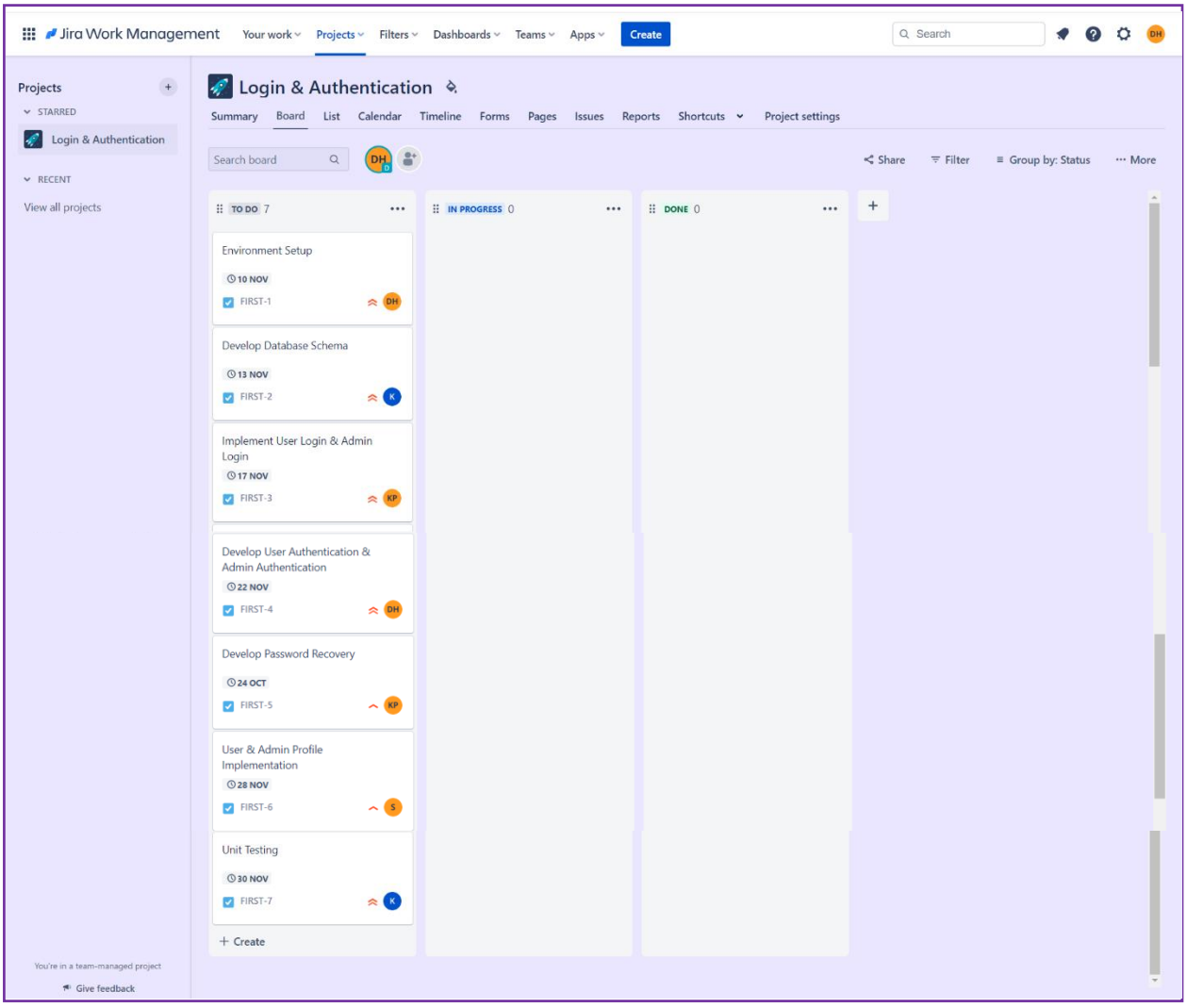
DEADLINE FOR EACH SPRINT

Sprint Item	Start Date	End Date (Deadline)
Login & Authentication (Cycle 1)- 15 days	**2023/11/10**	**2023/11/30**
- Environment setup		**2023/11/10**
- Develop database schema		**2023/11/13**
- Implement user login and admin login		**2023/11/17**
- Develop user authentication and admin authentication.		**2023/11/22**
- Develop password recovery.		**2023/11/24**
- User and admin profile implementation		**2023/11/28**
- Unit Testing		**2023/11/30**
Medical appointment Booking (Cycle 2)- 15 days	**2023/12/01**	**2023/12/21**
Feedback (Cycle 3)-15 days	**2023/12/22**	**2024/01/11**

THE SAMPLE KANBAN BOARD

Google Drive Link: **Click Here**

Kanban Board Link: **Click Here**



DEPENDANCY TABLE & GANTT CHART

Task	predecessors
1. Project Initiate	-
1.1 Access Feasibility	-
1.2 Define the Scope	1.1
2. Requirement Gathering	-
2.1 Meet Stakeholders & gather requirement	1.2
2.2 Analyst requirement	2.1
2.3 Create SRS document	2.2
3. Design	-
3.1 Design ER Diagram	2.3
3.2 Design High-Level Architecture	3.1
3.3 Design UI/UX	2.3,3.2
3.4 Design Prototyping	3.3
4. Development	-
4.1 Login & Authentication (Cycle 1)	-
4.1.1 Environment setup	3.2
4.1.2 Database Schema	3.1, 4.1.1
4.1.3 Implement user login & admin login	3.3,3.4
4.1.4 Develop user authentication & admin authentication	4.1.2, 4.1.3
4.1.5 Password recovery	4.1.4
4.1.6 User & admin Profile implementation	3.3, 4.1.4, 4.1.5
4.1.7 Unit testing	4.1.6
4.2 Medical Appointment Booking (Cycle 2)	4.1.7, 3.3, 3.4
4.3 Feedback (Cycle 3)	4.1.7, 3.3, 3.4
4.4 Integration	4.1.7,4.2,4.3
5. Testing	**-**
5.1 System testing	4.4
5.2 User Acceptance testing	5.1
6. Implementation	-
6.1 Prepare product deployment	5.2
6.2 Upload to Play Store	6.1

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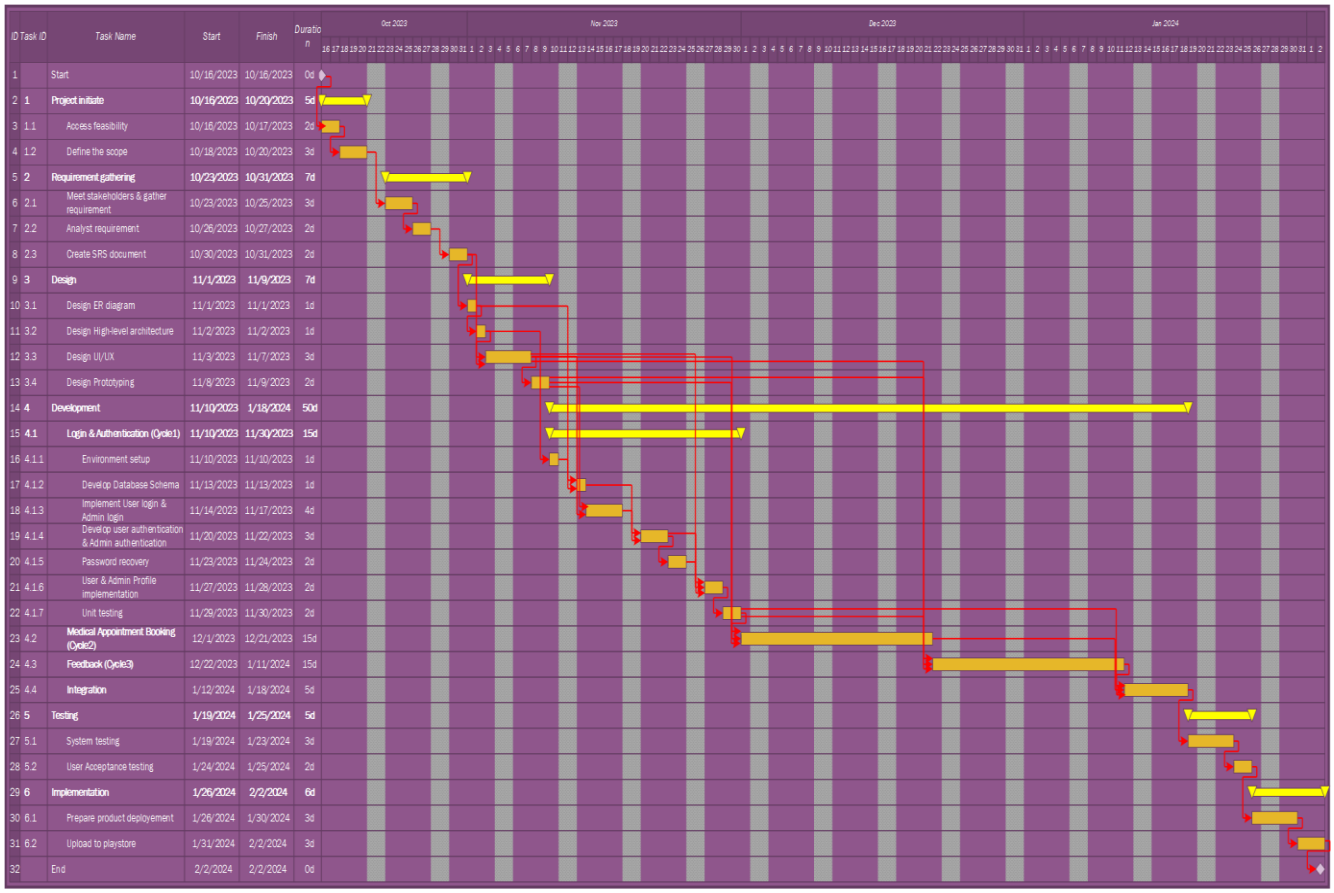

ID	Task ID	Task Name	Start	Finish	Duration
1		Start	10/16/2023	10/16/2023	0d
2	1	**Project initiate**	**10/16/2023**	**10/20/2023**	**5d**
3	1.1	Access feasibility	10/16/2023	10/17/2023	2d
4	1.2	Define the scope	10/18/2023	10/20/2023	3d
5	2	**Requirement gathering**	**10/23/2023**	**10/31/2023**	**7d**
6	2.1	Meet stakeholders & gather requirement	10/23/2023	10/25/2023	3d
7	2.2	Analyst requirement	10/26/2023	10/27/2023	2d
8	2.3	Create SRS document	10/30/2023	10/31/2023	2d
9	3	**Design**	**11/1/2023**	**11/9/2023**	**7d**
10	3.1	Design ER diagram	11/1/2023	11/1/2023	1d
11	3.2	Design High-Level architecture	11/2/2023	11/2/2023	1d
12	3.3	Design UI/UX	11/3/2023	11/7/2023	3d
13	3.4	Design Prototyping	11/8/2023	11/9/2023	2d
14	4	**Development**	**11/10/2023**	**1/18/2024**	**50d**
15	4.1	**Login & Authentication (Cycle1)**	**11/10/2023**	**11/30/2023**	**15d**
16	4.1.1	Environment setup	11/10/2023	11/10/2023	1d
17	4.1.2	Develop Database Schema	11/13/2023	11/13/2023	1d
18	4.1.3	Implement User login & Admin login	11/14/2023	11/17/2023	4d
19	4.1.4	Develop user authentication & Admin authentication	11/20/2023	11/22/2023	3d
20	4.1.5	Password recovery	11/23/2023	11/24/2023	2d
21	4.1.6	User & Admin Profile implementation	11/27/2023	11/28/2023	2d
22	4.1.7	Unit testing	11/29/2023	11/30/2023	2d
23	4.2	**Medical Appointment Booking (Cycle2)**	12/1/2023	12/21/2023	15d
24	4.3	**Feedback (Cycle3)**	12/22/2023	1/11/2024	15d
25	4.4	**Integration**	1/12/2024	1/18/2024	5d
26	5	**Testing**	**1/19/2024**	**1/25/2024**	**5d**
27	5.1	System testing	1/19/2024	1/23/2024	3d
28	5.2	User Acceptance testing	1/24/2024	1/25/2024	2d
29	6	**Implementation**	**1/26/2024**	**2/2/2024**	**6d**
30	6.1	Prepare product deployement	1/26/2024	1/30/2024	3d
31	6.2	Upload to playstore	1/31/2024	2/2/2024	3d
32		End	2/2/2024	2/2/2024	0d

WORK BREAKDOWN STRUCTURE

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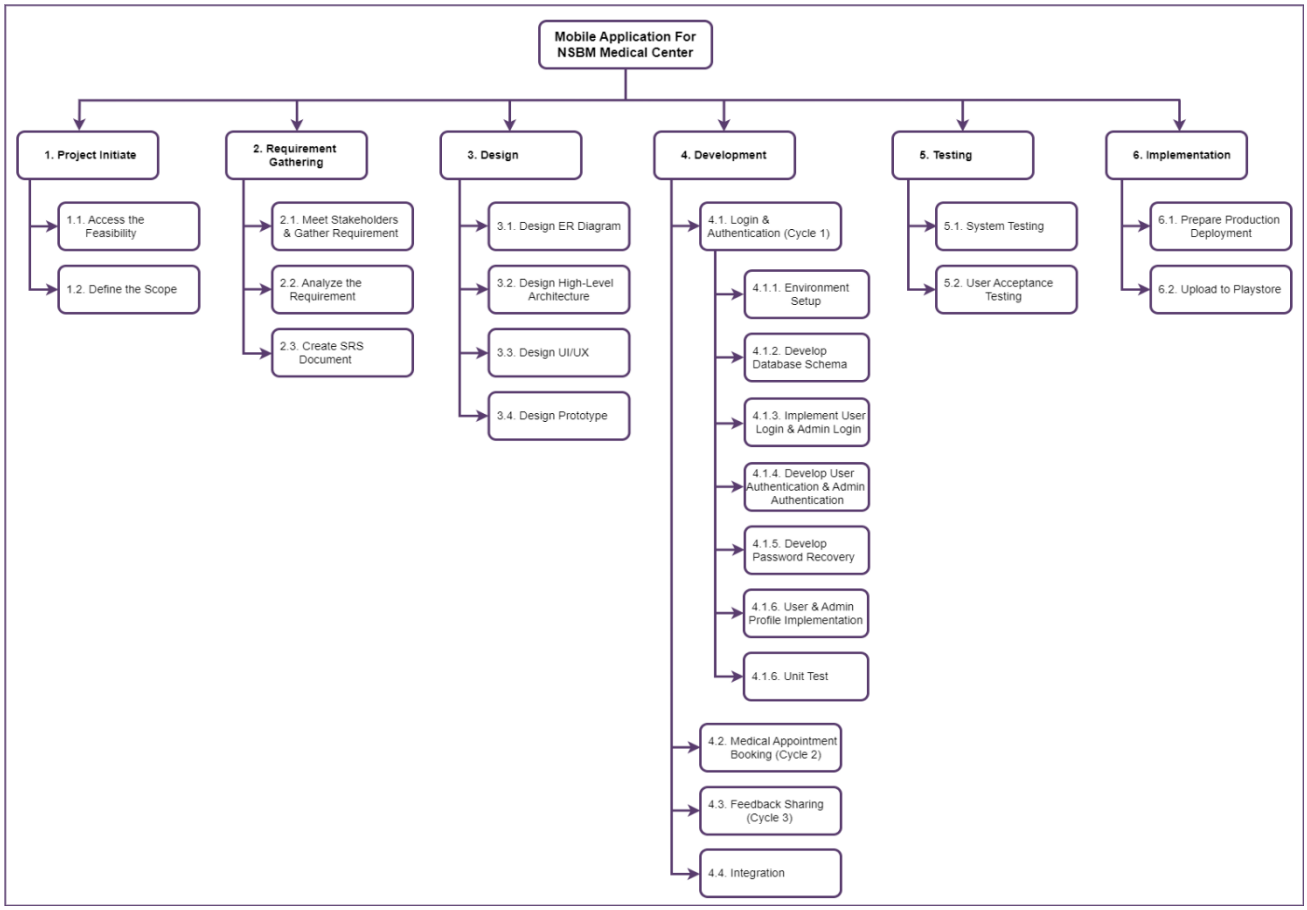

EFFORT ESTIMATION

TASK ID	TASKS	OPTIMISTIC EST.(DAYS)	PESSIMISTIC EST.(DAYS)	MOST LIKE EST.(DAYS)
1	**Project Initiate**	**-**	**-**	**-**
1.1	Access Feasibility	1	3	2
1.2	Define the Scope	2	4	3
2	**Requirement Gathering**	**-**	**-**	**-**
2.1	Meet Stakeholders & gather information	2	4	3
2.2	Analyze the Requirements	1	3	2
2.3	Create SRS Submission	1	3	2
3	**Design**	**-**	**-**	**-**
3.1	ER diagram design	1/2	1 1/2	1
3.2	High Level Architecture diagram design	1/2	1 1/2	1
3.3	UI/UX design	2	4	3
3.4	Phototyping	1	3	2

4	**Development**	**-**	**-**	**-**
4.1	Login & Authentication	-	-	-
4.1.1	Environment Setup	1/2	1 1/2	1
4.1.2	Design database schema	1/2	1 1/2	1
4.1.3	Implement User Login and Admin Login	3	5	4
4.1.4	Develop Admin and User Authentication	2	4	3
4.1.5	Password Recovery	1	3	2
4.1.6	User and admin profile Implementation	1	3	2
4.1.7	Unit Testing	1	3	2
4.2	Medical Appointment Booking	60	90	75
4.3	Feedback	60	90	75
4.4	Integration	12	28	20
5	**Testing**	**-**	**-**	**-**
5.1	System Testing	2	4	3

5.2	Acceptance Testing (UAT)	1	3	2
6	**Implementation**	**-**	**-**	**-**
6.1	Prepare Production Deployment	2	4	3
6.3	Upload to Play store	2	4	3
7	Managing overall project	15	25	20

CALCULATION OF EFFORT ESTIMATION

01.PROJECT PLANNING

- **Task 1 - Access the Feasibility**

Optimistic Estimation	1 days
Pessimistic Estimation	3 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (1+ 3) / 2 E=Mean= (1+3+2) / 3

M=2 E=2

- **Task 2 - Define the scope**

Optimistic Estimation	2 days
Pessimistic Estimation	4 days

M= (O+P)/2 E= Mean = (O + M + P) / 3

M= (2+ 4) / 2 E=Mean= (2+4+3) / 3

M=3 E=3

02. REQUIREMENT GATHERING

- **Task 3 - Meet the Stakeholders & Gather Information**

Optimistic Estimation	2 days
Pessimistic Estimation	4 days

M= (O+P)/2 E= Mean = (O + M + P) / 3

M= (2+ 4) / 2 E=Mean= (2+4+3) / 3

M=3 E=3

- **Task 4 - Analyze the Requirements**

Optimistic Estimation	1 days
Pessimistic Estimation	3 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (1+ 3) / 2 E=Mean= (1+3+2) / 3

M=2 E=2

- **Task 5 - Create SRS Document**

Optimistic Estimation	1 days
Pessimistic Estimation	3 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (1+ 3) / 2 E=Mean= (1+3+2) / 3

M=2 E=2

03. DESIGN

- **Task 6 - ER Diagram Design**

Optimistic Estimation	1/2 days
Pessimistic Estimation	1 1/2 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (1/2+ 1 ½) / 2 E=Mean= (1/2+ 1 1/2 +1) / 3

M=1 E=1

- **Task 7 - High level Architecture Diagram Design**

Optimistic Estimation	1/2 days
Pessimistic Estimation	1 1/2 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (1/2+ 1 1/2) / 2 E=Mean= (1/2+ 1 1/2 +1) / 3

M=1 E=1

- **Task 8 - UI/UX Design**

Optimistic Estimation	2 days
Pessimistic Estimation	4 days

M= (O+P)/2 E= Mean = (O + M + P) / 3

M= (2+ 4) / 2 E=Mean= (2+4+3) / 3

M=3 E=3

- **Task 9 - Phototype Design**

Optimistic Estimation	1 days
Pessimistic Estimation	3 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (1+ 3) / 2 E=Mean= (1+3+2) / 3

M=2 E=2

04. DEVELOPMENT

➢ Login & Authentication

- **Task 8 - Environment setup**

Optimistic Estimation	1/2 days
Pessimistic Estimation	1 1/2 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (1/2+ 1 1/2) / 2 E=Mean= (1/2+ 1 1/2 +1) / 3

M=1 E=1

- **Task 9 - Database Shema**

Optimistic Estimation	1/2 days
Pessimistic Estimation	1 1/2 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (1/2+ 1 1/2) / 2 E=Mean= (1/2+ 1 1/2 +1) / 3

M=1 E=1

- **Task 10 - Implement user login and admin login**

Optimistic Estimation	3 days
Pessimistic Estimation	5 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (3+ 5) / 2 E=Mean= (3+5+4) / 3

M=4 E=4

- **Task 11 - Develop User and Admin Authentication**

Optimistic Estimation	2 days
Pessimistic Estimation	4 days

M= (O+P)/2 E= Mean = (O + M + P) / 3

M= (2+ 4) / 2 E=Mean= (2+4+3) / 3

M=3 E=3

- **Task 12 - Password Recovery**

Optimistic Estimation	1 days
Pessimistic Estimation	3 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (1+ 3) / 2 E=Mean= (1+3+2) / 3

M=2 E=2

- **Task 13 - User and Admin Profile Implementation**

Optimistic Estimation	1 days
Pessimistic Estimation	3 days

M= (O+P) /2 E = Mean = (O + M + P) / 3

M= (1+ 3) / 2 E=Mean= (1+3+2) / 3

M=2 E=2

- **Task 14 - Unit Testing**

Optimistic Estimation	1 days
Pessimistic Estimation	3 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (1+ 3) / 2 E=Mean= (1+3+2) / 3

M=2 E=2

- **Task 15 - Medical Appointment Booking**

Optimistic Estimation	60 days
Pessimistic Estimation	90 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (60+90) / 2 E=Mean= (60+90+75) / 3

M=75 E=75

- **Task 16 - Feedback Sharing**

Optimistic Estimation	60 days
Pessimistic Estimation	90 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (60+90) / 2 E=Mean= (60+90+75) / 3

M=75 E=75

- **Task 17 - Integration**

Optimistic Estimation	12 days
Pessimistic Estimation	28 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (12+28) / 2 E=Mean= (12+28+20) / 3

M=20 E=20

05. TESTING

- **Task 18 - System Testing**

Optimistic Estimation	2 days
Pessimistic Estimation	4 days

M= (O+P)/2 E= Mean = (O + M + P) / 3

M= (2+ 4) / 2 E=Mean= (2+4+3) / 3

M=3 E=3

- **Task 19 - Acceptance Testing**

Optimistic Estimation	1 days
Pessimistic Estimation	3 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (1+ 3) / 2 E=Mean= (1+3+2) / 3

M=2 E=2

06. IMPLEMENTATION

- **Task 20 - Production Deployment**

Optimistic Estimation	2 days
Pessimistic Estimation	4 days

M= (O+P)/2 E = Mean = (O + M + P) / 3

M= (2+ 4) / 2 E=Mean= (2+4+3) / 3

M=3 E=3

- **Task 21 - Upload to Playstore**

Optimistic Estimation	2 days
Pessimistic Estimation	4 days

M= (O+P)/2 E= Mean = (O + M + P) / 3

M= (2+ 4) / 2 E=Mean= (2+4+3) / 3

M=3 E=3

- **Managing overall project**

Optimistic Estimation	15 days
Pessimistic Estimation	25 days

M= (O+P)/2 E= Mean = (O + M + P) / 3

M= (15+25) / 2 E=Mean=(15+25+20) / 3

M= 20 E=20

REASOURCE ALLOCATION

Here are the resource allocations based on the effort estimations and the tasks.

1. Human Resources

- We are allocating the project requirements to 8 capacities in human resources. (4 developers,1 QA, 1 BA, 1 UI/UX Designer,1PM). Also, all 4 developers and QA will be allocated for 1 sprint and These 4 developers and QA will be assigned the development part for all 3 sprints.

  R1-Business Analyst, **R2**- Project Manager, **R3** -UI/UX Designer, **R4** -Developer1, **R5** -Developer 2, **R6** –Developer 3, **R7-** Developer 4, **R8**- QA Engineer

Here we include some assumptions based on the resource allocation table which we attached below.

- In medical appointment booking sprint and feedback sprint, we allocate 5 team members, and we calculate the estimated number of days based on the workdays contributed by these five members. same as the integration we do that calculation we allocate 4 developers for that task.

- The project manager is involved in the overall project, dedicating 25% of their work effort to our project. While the project manager doesn't participate in every task, they monitor the entire project, that’s why their specific tasks are not listed on the Gantt chart.

Task	Duration	Human Resource
1. Project Initiate		
1.1 Access Feasibility	2 d	R1
1.2 Define the Scope	3 d	R1
2. Requirement Gathering		
2.1 Meet Stakeholders & gather requirement	3 d	R1
2.2 Analyst requirement	2 d	R1
2.3 Create SRS document	2 d	R1
3. Design		
3.1 Design ER Diagram	1 d	R3
3.2 Design High-Level Architecture	1 d	R3
3.3 Design UI/UX	3 d	R3
3.4 Design Prototyping	2 d	R3
4. Development		
4.1 Login & Authentication (Cycle 1)		
4.1.1 Environment setup	1 d	R4
4.1.2 Database Schema	1 d	R5
4.1.3Implement user login & admin login	4 d	R4
4.1.4 Develop user authentication & admin authentication	3 d	R5
4.1.5 Password recovery	2 d	R6
4.1.6 User & admin Profile implementation	2 d	R7
4.1.7 Unit testing	2 d	R8
4.2 Medical Appointment Booking (Cycle 2)	15 d	R4, R5, R6, R7, R8
4.3 Feedback (Cycle 3)	15 d	R4, R5, R6 R7, R8
4.4 Integration	5 d	R4, R5, R6, R7
5. Testing		
5.1 System testing	3 d	R8
5.2 User Acceptance testing	2 d	R8
6. Implementation		
6.1 Prepare product deployment	3 d	R 6
6.2 Upload to Play Store	3 d	R7
Managing whole project	**80*100/25=20 days**	**R2**

TOTAL COST OF THE PROJECT

COST ALLOCATION:

R1 = $10,

R2 = $20

R3 = $12

R4, R5, R6, R7 = $08

R8 =$15

01.PROJECT PLANNING

- Access the Feasibility

Cost= Resource (R1) * Duration of each task

Cost=$10*2d

Cost= **$20**

- Define the scope

Cost= Resource(R1) * Duration of each task

Cost=$10*3d

Cost= **$30**

02. REQUIREMENT GATHERING

- Meet the Stakeholders & gather Information

Cost= Resource(R1) * Duration of each task

Cost=$10*3d

Cost= **$30**

- Analyze the Requirements

Cost= Resource(R1) * Duration of each task

Cost=$10*2d

Cost= **$20**

- Create SRS Document

Cost= Resource(R1) * Duration of each task

Cost=$10*2d

Cost= **$20**

03. DESIGN

- ER Diagram Design

Cost= Resource(R3) * Duration of each task

Cost=$12*1d

Cost= **$12**

- High level Architecture Diagram Design

Cost= Resource(R3) * Duration of each task

Cost=$12*1d

Cost= **$12**

- UI/UX Design

Cost= Resource(R3) * Duration of each task

Cost=$12*3d

Cost= **$36**

- Phototype Design

Cost= Resource(R3) * Duration of each task

Cost=$12*2d

Cost= **$24**

04. DEVELOPMENT

- Login & Authentication

- **Environment setup**

Cost= Resource(R4) * Duration of each task

Cost=$8*1d

Cost= **$8**

- **Database Shema**

Cost= Resource(R5) * Duration of each task

Cost=$8*1d

Cost= **$8**

- **Implement user login and admin login**

Cost= Resource(R4) * Duration of each task

Cost=$8*4d

Cost= **$32**

- **Develop User and Admin Authentication**

Cost= Resource(R5) * Duration of each task

Cost=$8*3d

Cost= **$24**

- **Password Recovery**

Cost= Resource(R6) * Duration of each task

Cost=$8*2d

Cost= **$16**

- **User, Admin Profile Implementation**

Cost= Resource (R7) * Duration of each task

Cost=$8*2d

Cost= **$16**

- **Unit Testing**

Cost= Resource(R8) * Duration of each task

Cost=$15*2d

Cost= **$30**

- Medical Appointment Booking (Cycle 02)

Cost= Resource (R4, R5, R6, R7)* Duration of each task + Resource(R8)*duration of each task

Cost= ($8*4*12) + ($15*1*3)

Cost=$384+$45

Cost= **$429**

- Feedback Sharing (Cycle 3)

Cost= Resource (R4, R5, R6, R7)* Duration of each task + Resource(R8)*duration of each task

Cost= ($8*4*12) + ($15*1*3)

Cost=$384+$45

Cost= **$429**

- Integration

Cost= Resource(R6)* Duration of each task

Cost=$8*3d

Cost= Resource (R4, R5, R6, R7)* Duration of each task

Cost=$8*5*4

Cost= **$160**

05. TESTING

- **System Testing**

Cost= Resource(R8) * Duration of each task

Cost=$15*3d

Cost= **$45**

- Acceptance Testing

Cost= Resource(R8) * Duration of each task

Cost=$15*2d

Cost= **$30**

06. IMPLEMENTATION

- Production Deployment

Cost= Resource(R6) * Duration of each task

Cost=$8*3d

Cost= **$24**

- Upload to Play Store

Cost= Resource(R7) * Duration of each task

Cost=$8*3d

Cost= **$24**

- Managing overall project

Cost= Resource(R2) * Duration of each task

Cost=$20*20d

Cost= **$400**

Other Costs Estimations:

- Software tools-$5 per month*4) - $20
- 2 PCs - $300
- 1 printer - $60
- 1 smartphone - $150
- Electricity bill – $3 per month*4 = $12
- Office supplies – $3 per month*4 =$12
- Internet bill (Fiber connection) – $3 per month *4 = $12

Total Cost = Cost for each task + Other costs

($20+$30+$30+$20+$20+$12+$12+$36+$24+$8+$8+$32+$24+$16+$160+$30+$429+$429+$40+$45+$30+$24+$24+$20+$300+$60+$150+$12+$12+$12)

= $2045

[Direct Cost $2009 + Indirect Cost $36]

Here Below mention the indirect and direct cost categorization.

DIRECT & INDIRECT COST CATEGORIZATIAON

Direct Costs	
- Employee resource cost (Total Cost for Employee =Total Days for an employee * Employee Recourse cost)	
R1 (12 * $10)	$120
R2 (20 * $20)	$400
R3 (7 * $12)	$84
R4 (40 * $8)	$320
R5 (39 * $8)	$312
R6 (40 * $8)	$320
R7 (40 * $8)	$320
R8 (13 * $15)	$195
- Software tools ($5 per month*4)	$20
- 2 PCs	$300
- 1 printer	$60
- 1 smartphone	$150
TOTAL DIRECT COST	**$2009**
Indirect Costs	
- Electricity bill ($3 per month*4)	$12
- Office supplies ($3 per month*4) Ex: QA (Selenium for automated testing, Jira for bug tracking) UI/UX Designer (Adobe XD)	$12
- Internet Bill (Fiber connection) ($3 per month*4)	$12
TOTAL INDIRECT COST	**$36**
TOTAL COST ESTIMATION **[Direct Cost $2009 + Indirect Cost $36]**	**$2045**

Direct cost percentage = 98.23%

Indirect cost percentage = 1.76%

CONCLUSION

Certainly, Effective management of both clients and employees is essential for project success. As a team, we hope to involve seamless coordination and communication between these entities by proceeding with the above-mentioned tasks by using modern techniques like Jira, Microsoft Teams, Git version control etc.

As a project Manager, we consider above the potential risks which we will wants to face through the project lifecycle and try to mitigate with those risks by effective alternatives or solutions. In dealing with negative risks, strategies such as avoidance, transfer, and mitigation are employed and enhanced, exploiting positive risks. So, through our project life cycle we also identify the risks which are having to face through this process in correct manner and analyze them using risk breakdowns, analogs.

So finally, as a team our responsibility is to deliver the customer (NSBM Medical Center) expected final product (NMedix Mobile Application) according to their requirement and the expectations by following above plan through the agile methodology.

END.