ALBUKHARY INTERNATIONAL UNIVERSITY
SCHOOL OF COMPUTING AND INFORMATICS
SEMESTER 1 2023/2024

CCC2143
SOFTWARE ENGINEERING
INDIVIDUAL ASSIGNMENT (20%)

NAME:	**Roua Alimam**
STUDENT ID:	**AIU22102291**
TITLE:	**Eye care service for rural areas**

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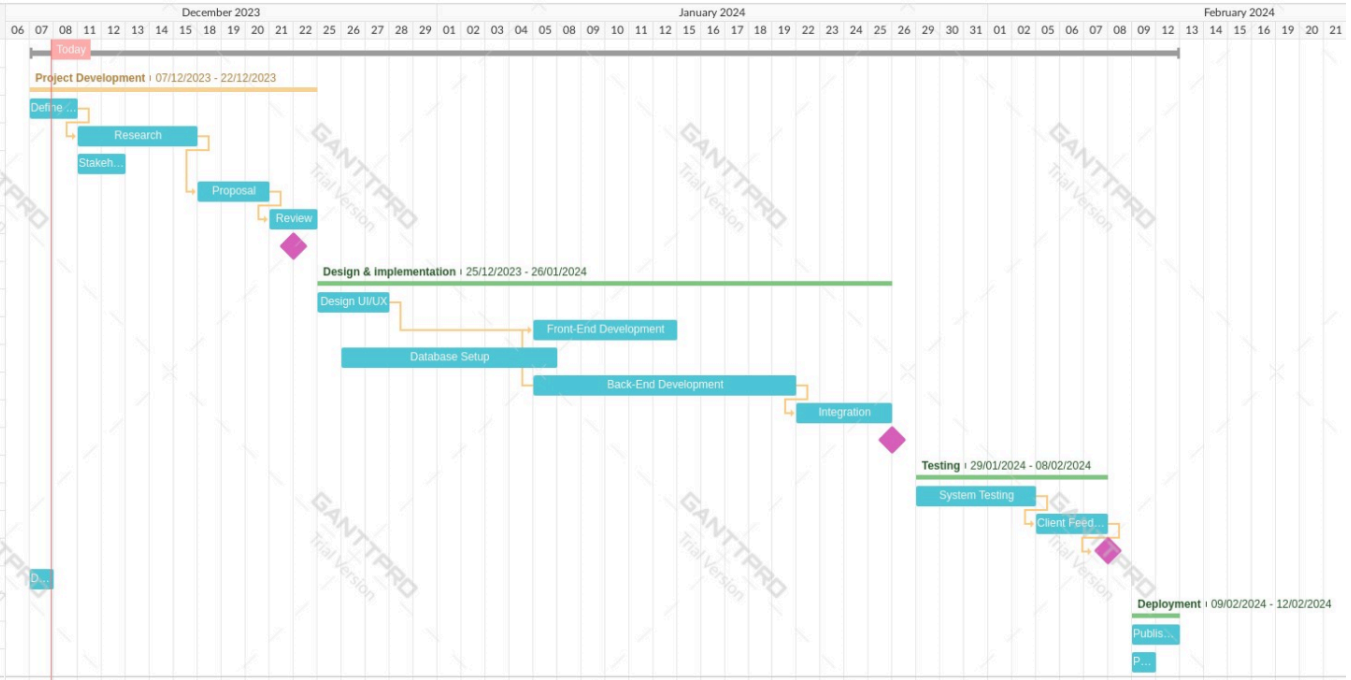
ITEMS	MARKS
GANTT CHART	
REQUIREMENTS REPORT	
USE CASE DIAGRAM	
TOTAL (60)	

Student | Eyecare System

	Task name	Start date	End date	Duration	Status
		07/12/2023	**12/02/2024**	384h	
1	**Project Development**	**07/12/2023**	**22/12/2023**	**96h**	
1.1	Define project scope	07/12/2023	08/12/2023	16h	Open
1.2	Research	11/12/2023	15/12/2023	40h	Open
1.3	Stakeholders	11/12/2023	12/12/2023	16h	Open
1.4	Proposal	18/12/2023	20/12/2023	24h	Open
1.5	Review	21/12/2023	22/12/2023	16h	Open
1.6	Finalize	22/12/2023	22/12/2023		Open
2	**Design & implementation**	**25/12/2023**	**26/01/2024**	**192h**	
2.1	Design UI/UX	25/12/2023	27/12/2023	24h	Open
2.2	Front-End Developme...	05/01/2024	12/01/2024	48h	Open
2.3	Database Setup	26/12/2023	05/01/2024	72h	Open
2.4	Back-End Development	05/01/2024	19/01/2024	88h	Open
2.5	Integration	22/01/2024	25/01/2024	32h	Open
2.6	Finalizing	26/01/2024	26/01/2024		Open
3	**Testing**	**29/01/2024**	**08/02/2024**	**64h**	
3.1	System Testing	29/01/2024	02/02/2024	40h	Open
3.2	Client Feedback and ...	05/02/2024	07/02/2024	24h	Open
3.3	Final Testing and Deb...	08/02/2024	08/02/2024		Open
4	Deployment	07/12/2023	07/12/2023	8h	Open
5	**Deployment**	**09/02/2024**	**12/02/2024**	**16h**	
5.1	Publish the website	09/02/2024	12/02/2024	16h	Open
5.2	Post Support service	09/02/2024	09/02/2024	8h	Open



Gantt Chart Clarification:

The Gantt chart illustrated above is a suggested plan to implement an Eyecare application for rural areas. The Start date of the project is the 7th of December and the end date is the 9th of February, the whole project is estimated to be completed within 65 days. The main tasks of the project are: **Project Development, Development of application, testing, and deployment.**

1.0Project Development:

1.1 Define project scope: the task will take two days starting from 07th of December till 8th December.

1.2 Researching (dependable on Define project scope): after defining the project scope the researching task starts. This task will take 40 hours of researching around 5 to 6 days.

1.3 Stakeholders (independent): in this task the project owner should be actively looking for stakeholders, whether it's looking for the targeted audience for the eye care system or looking for employers. This task is estimated to take 16 hours.

1.4 Proposal (Dependable on Researching): after doing the research about the system and the applicability of it a proposal about this project should be written. The estimated days for finishing the proposal is 3 days.

1.5 Reviewing and Finalizing (Milestone): in this task the consistency of the project idea and the proposal should be reviewed. Upon finishing the reviewing the first main task has been finalized.

2.0 Design and implementation:

2.1 Design UI/UX (independent): in this task a UX designer should propose an intricate interface design for the application. The task is estimated to take around 3 days or 24 hours.

2.2 Front-end development (Dependable on Design UI/UX): A front end developer will be assigned to develop the front end interface of the application based on the UI/UX design. This task is estimated to take 7 days.

2.3 Database setup (Independent): database specialists are assigned to design and create a good database to store the necessary data and medical records. This task is estimated to take around 11 days.

2.4 Back-end Development (Dependent on Front end): Back-end developers are responsible for creating the inner logic of the application taking in account front-end development specifications. The back-end development is estimated to take around 90 hours.

2.5 Integration (Dependent): Integration is the final task. Back-end developers are assigned to integrate the application with required platforms and features. The task is estimated to take around 4 days.

2.6 Finalizing (Milestone): The application implementation should be reviewed and finalized.

3.0 Testing:

3.1 System testing (Dependent on implementation Finalizing): Software testers should test the application and ensure the functionality of the system. The estimated time for this task is 5 days.

3.1 Client Feedback (Dependent on system testing): stakeholders are encouraged to give feedback on their experience using the system.

3.2 Final testing and debugging (Dependent on Client feedback- Milestone): final modifications should be made after getting the feedback and testing the system.

4.0 Deployment:

4.1 Publishing the website and application

4.2 Post support service

User Requirements

User Authentication and Authorization:

The system should provide the user with a secure and a user_friendly registration page so they can create an account and have access to the application features.

Remote Eye Examination:

The system should provide a complete and accurate remote eye examination that includes visual acuity, color vision, and other vision tests.
The application should provide detailed information and instruction about the usage of the system.

Appointment Scheduling:

The system should provide the user with a calendar that contains the available time for booking a scheduled appointment. Thus, patients can choose the perfect time that is available. Patients also can schedule appointments in the healthcare center as well.

Real-time Communication:

The platform will provide a communication section that connects patients to their healthcare professionals. The patients can get consultations and additional clarification about their test results whether online or offline.

Data Security and privacy:

The system ensures the privacy of the patient by keeping medical information private and only accessible after a strong verification from the user.

Notification System:

The system should notify the patients for upcoming appointments and test results updates.

User Friendly interface:

The user interface should be simple and accessible. Ensuring that users with different levels of technological knowledge are able to use it. Additionally, the vision remote testing is provided with step by step instructions throughout the examination process.

Medical record Access:

Patients should have access to their medical records and historical data, through a secure and user friendly page.

Glasses Shop Access:

The application is connected to an online glasses shop that provides glasses at a reasonable price and provides shipping to homes.

System Requirements

Remote Examination Module:
Develop a module eye examination system that is integrated with advanced algorithms and computer vision technology to provide an accurate vision assessment. This module should also be accessible with a wide range of devices like smartphones, tablets, and computers.

Appointment scheduling Module:
Develop an appointment scheduling module that provides an interactive calendar interface for both the patients and healthcare professionals to ensure that appointments are managed fluently. The system is integrated with a notification system for sending appointment reminders for patients.

Communication Module:

Deploy real-time communication that supports audio, video, and text messages as inputs, and allow communication between the patient and the healthcare professionals.

Database integration:

Implement a scalable and secure database system for storing all the information like the patients information, the examination results, the professionals in the clinic, and medical records.

Security Measures:

Deploy a secure system by utilizing encryption protocols to secure the data transmissions. In addition, implement multi-factor authentication for the users to protect user’s privacy.

Integration with an online glasses shop:

Integrate the system with an existing medical glasses shop by doing a partnership with a shop that is ready to maximize his sales by selling affordable medical glasses.

Scalability and performance:

Design a system that is flexible and scalable to handle a numerous number of new patients everyday. The system should be able to handle a big number of patients even during peak hours.

Use Case Diagram