Ahsanullah University of Science & Technology
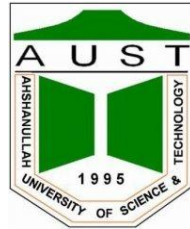# Department of Computer Science and Engineering

Proposal on

"Power Up Gym"

Course Number & Name: CSE 3224 - Information & System Design Lab

Prepared for:

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Project Overview:

Our project is about the gym management system. A gym is a club or large room, usually containing exercise equipment, where people go to do physical exercise and get fit.

This project "Gym Management System" is a solution for fitness centers to manage the members and their data in an easier and more convenient way. The administrator can view all the members and the staffs working under them as well as their details. The administrator can also manage schedules, memberships, facilities and much more anytime, anywhere.

Project implementation tools/ framework:

- Netbeans 8.2
- JAVA Swing
- Microsoft SQLServer 2014
- JDBC Driver: SQLjdbc 4.0

Client Story:

Recently I have set a gym of mine. Now I want some sort of management system, so that I can understand my business and expand it. I want the software to handle the large amount of data that my customer will produce and also give some good statistical analysis. The software should handle those data in a database and enable access to the customers without any cost. Thank you.

As a gym owner/manager:

- I want to enter new equipment, member, staff into the Gym Management System, categorizing them according to-
  - o Equipment - buying dates, maintenance, etc.
  - o Members – buying membership date, expiry date, etc.
  - o Staff – salary, designation, etc.
  - o Trainer – rating, work hour, etc.

  So that those data can be easily managed and organized.

- The system should provide an interface to input new equipment, update, delete and assign them to packages, such as gymnastics, aerobics, cardio etc.
- I should be able to specify package details including name, description, price and duration.
- I want to input customer information into the Gym Management System, so that we can provide personalized service and maintain an up-to-date customer database.
- I should be able to input customer details, including name, contact information, address, and any relevant preferences or notes, as well as update and delete them.
- The system should store the customer information securely for future transactions and loyalty program enrollment.
- Upon successful update, the changes should be reflected in the customer's profile for future interactions and transactions.

As a Gym Member:

- I want the UI to be very user friendly and easy to navigate and accessible.
- The system should have the particular customer data handled very well and provide some statistical dashboards.
- The system should have the option to record constructive feedbacks.

Module Breakdown:

- **User login module:**

  o **For Members:** Allows members to sign-up or login to the application using a username and a password by accessing only his/her own information.
  o **For Owner/Manager:** Allows owner/manager to login to the application and access to the entire software.

- **Member Information Management:**

  o **Add Member:** Enables the input of member details such as name, contact number, joining date, member's weight, exercise type and payment information.
  o **Update Member:** Update all the member details.
  o **Owner/Manager's Accessibility:** Manager can access the details of every member who has an entry in the database. Updating any member detail will automatically update the details shown in the member details window.
  o **Delete Member:** Owner/Manager can delete (if necessary) any member details according to the availability.

- **Equipment Information Management:**

  o **Add Equipment:** Allows owner/manager to input equipment details such as name, buying date, description, price and equipment maintenance date to the system according to their categories.
  o **Update Equipment:** Allows owner/manager to update the gym facilities and any equipment with their details. Updating of any product will automatically update the details shown in the product details window.
  o **Delete Equipment:** Owner/Manager can delete any equipment details according to the requirements.

- **Staff and Trainer Information Management:**

  - o **Add New Staff and Trainer:** Allows owner/manager to add details such as name, work hour, salary, leave date and designation to the system according to their joining-date.
  - o **Update Information:** Allows owner/manager to update the staff and trainer information if needed.

- **Monthly Earnings and Expenditure:**

  - o Shows all the details of the income after joining of the customers. It also shows the expenditure regarding the gym maintenance, buying and maintaining equipment.

- **Log out & System Termination module:**

  - o **Log Out:** Allows the client to log out of the application and shows the login interface.
  - o **Terminating app:** Owner/Manager can terminate or close the whole application if necessary.

RACI Matrix:

Tasks	Farhan Abid Ahmed	Aurprita Mahmood	Yasir Arafah Prince	Sumaiya Shejin	Mehe Sultar
Project Planning & Feature Selection	A	I	R	C	R
Roadmap Creation	C	R	A	R	I
Project Proposal	C	R	A	I	I
Database Design	R	I	A	I	C
UI Design & Implementation	I	C	R	R	R
Login & Authentication	I	R	C	R	A
Customer Profile Design	R	A	C	A	I
Owner Profile design	I	C	R	A	R
Profile Integration	R	I	C	R	R
Debugging	R	R	R	R	R
Testing on Docker	R	I	R	I	C
Final Documentation & Presentation	C	R	C	R	R
Handing Over	R	R	R	R	R
Revision	R	R	R	R	R

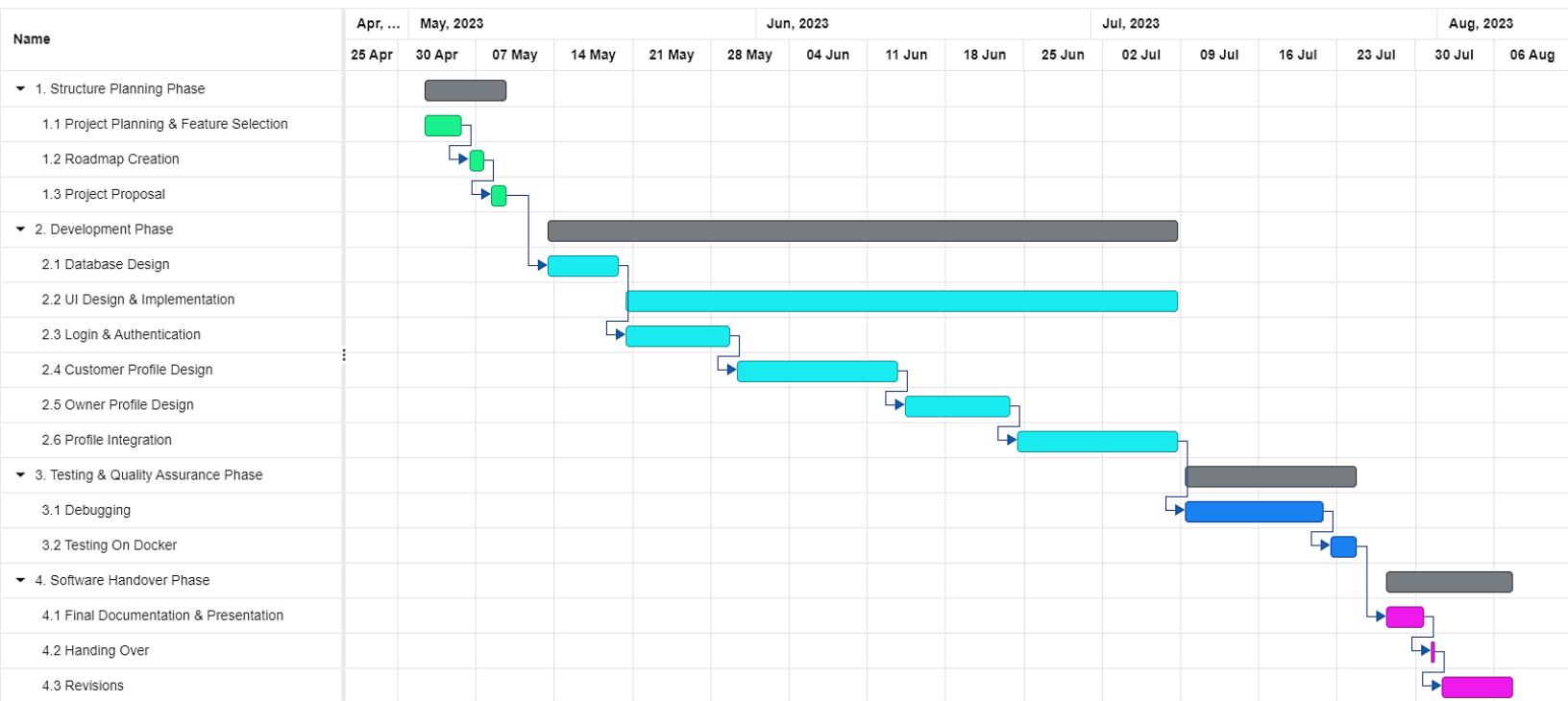**Here, R** denotes *Responsible for the task*

A denotes *Accountable for the execution*

C denotes *Consulted in the process*

I denotes *Informed about the task completion*

Gantt Chart:

This chart is to showcase the timeline and development of the above-mentioned modules throughout the development process of the project, **Power Up Gym**.

Name	Apr, ...	May, 2023				Jun, 2023					Jul, 2023					Aug, 2023	
	25 Apr	30 Apr	07 May	14 May	21 May	28 May	04 Jun	11 Jun	18 Jun	25 Jun	02 Jul	09 Jul	16 Jul	23 Jul	30 Jul	06 Aug
▼ 1. Structure Planning Phase																
1.1 Project Planning & Feature Selection																
1.2 Roadmap Creation																
1.3 Project Proposal																
▼ 2. Development Phase																
2.1 Database Design																
2.2 UI Design & Implementation																
2.3 Login & Authentication																
2.4 Customer Profile Design																
2.5 Owner Profile Design																
2.6 Profile Integration																
▼ 3. Testing & Quality Assurance Phase																
3.1 Debugging																
3.2 Testing On Docker																
▼ 4. Software Handover Phase																
4.1 Final Documentation & Presentation																
4.2 Handing Over																
4.3 Revisions																

Conclusion:

The **Power Up Gym** project, upon its completion, will provide a comprehensive solution for a fitness center, automating procedures and reducing workload for management. The system will meet all basic requirements while offering flexibility for future modifications. With its user-friendly interface and efficient functionalities, it will streamline operations, enhances customer experience, and optimizes revenue generation.