

System Modules Outline

* Additional Features are highlighted in green

<p><u>1. Authentication & User Management</u></p> <p>PIC: Rowan</p> <ul style="list-style-type: none">• Roles: Admin, Trainer & Client• Login & Logout• Password Hashing• Password Recovery (Email)• Account Registration (Client)• Profile Management• Admin User Control• CRUD Operations (Admin)• Account Blocking• Role-Specific Fields (Trainer)• Folder Organization	<p><u>6. Membership & Billing</u></p> <p>PIC: Yong</p> <ul style="list-style-type: none">• Purchase Membership• Payment Processing• Auto-Renewal (Subscriptions)• Smart Upgrades (Upgrade benefits)• Scheduled Downgrades• Cancellation Logic (No immediate cutoff)
<p><u>2. Admin Interface</u></p> <p>PIC: Rowan</p> <ul style="list-style-type: none">• Dashboard & Analytics• User Management (CRUD):<ul style="list-style-type: none">◦ Manage Admins, Trainers, and Clients.◦ Reset passwords and update profiles.• Activity Management:<ul style="list-style-type: none">◦ Create, update, and delete class types◦ Set difficulty levels, duration, and capacity• Session Scheduling:<ul style="list-style-type: none">◦ Schedule specific class sessions◦ Calendar view of all gym activities• Reporting Module:<ul style="list-style-type: none">◦ Generate Attendance Report (CSV/PDF)◦ View Class Popularity and Revenue Reports• Real-Time Dashboard• System Configuration:<ul style="list-style-type: none">◦ Manage global settings	<p><u>7. Class & Session Management</u></p> <p>PIC: Ian</p> <ul style="list-style-type: none">• Schedule Sessions• Calendar View• Session CRUD• Smart Trainer Selection• Auto-Status Automation• Time & Room Conflict Detection
	<p><u>8. Reservation (Booking)</u></p> <p>PIC: Yong</p> <ul style="list-style-type: none">• Book Class• Cancel Booking• Capacity Management• Recurring Bookings• Refund Policy Engine• 8-Class Limit (Membership)• Rating System (Rate & review 1-5 stars)
	<p><u>9. Attendance</u></p> <p>PIC: Ian</p> <ul style="list-style-type: none">• Trainer Dashboard• Mark Attendance• View History• Live Session Code• Check-In Status
	<p><u>10. AI Workout Planner</u></p> <p>PIC: Yong</p> <ul style="list-style-type: none">• Generate Plan

<p>3. Trainer Interface</p> <p>PIC: Ian</p> <ul style="list-style-type: none"> ● Trainer Dashboard: <ul style="list-style-type: none"> ○ Quick view of “Today’s Classes” & “Upcoming Sessions” ○ Summary stats ● My Schedule: <ul style="list-style-type: none"> ○ Personalized calendar view of assigned classes ○ Filter by date/month ● Attendance Management: <ul style="list-style-type: none"> ○ View list of registered clients for a specific session ○ Mark clients as Present/Absent ● My Profile: <ul style="list-style-type: none"> ○ Update bio & contact details ○ Change password <p>PIC: Yong</p> <ul style="list-style-type: none"> ● Notifications: <ul style="list-style-type: none"> ○ Receive alerts for new class assignments ● Trainer AI Assistant (Private) <p>4. Client Interface</p> <p>PIC: Yong</p> <ul style="list-style-type: none"> ● Client Dashboard: <ul style="list-style-type: none"> ○ Welcome summary with “Next Upcoming Class” ○ Quick stats ● Class Booking System: <ul style="list-style-type: none"> ○ Browse available classes by category ○ Book/Reserve a slot in real-time ○ Cancel existing reservations ● Membership Management: <ul style="list-style-type: none"> ○ View current plan details & expiry ○ Purchase new membership/subscription ○ View payment history ● AI Workout Planner: <ul style="list-style-type: none"> ○ Generate personalized workout plans based on goals/BMI 	<ul style="list-style-type: none"> ● Save/Delete Plans (CRUD) ● Algorithmic Engine ● Tiered Access ● Progressive Overload Tips <p>11. Notification</p> <p>PIC: Yong</p> <ul style="list-style-type: none"> ● System Alerts ● Mark Read ● Contextual Triggers, For: <ul style="list-style-type: none"> ○ Booking ○ Confirmations/Cancellations ○ Membership ○ Upgrades/Expirations ○ New Ratings (for Trainers) ○ Refund Processing <p>12. System Monitoring & Logs</p> <p>PIC: Rowan</p> <ul style="list-style-type: none"> ● Activity Feed ● Real-Time Dashboard ● Live Updates ● Graph Visuals <p>13. Chatbot / AI Assistant</p> <p>PIC: Yong</p> <ul style="list-style-type: none"> ● Floating Chat Widget ● Q&A ● Keyword Recognition ● Responsive Triggers ● Role-Aware (Client vs Trainer) ● Homepage Chatbot (Public): <ul style="list-style-type: none"> ○ Rule-Based Logic ○ Smart Navigation ○ Schedule Awareness ● Client AI Assistant (Private): <ul style="list-style-type: none"> ○ AI-Powered (Llama 3.1) ○ Personalized Context ○ Actionable Responses ● Trainer AI Assistant (Private): <ul style="list-style-type: none"> ○ Schedule Intelligence ○ Attendee Insights ○ Class Planning ○ Gym Context
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<ul style="list-style-type: none"> o Save and view generated plans ● Notification: <ul style="list-style-type: none"> o Alerts for successful bookings or cancellations ● Profile Settings: <ul style="list-style-type: none"> o Update personal health metrics ● Client AI Assistant (Private) <p>5. Reporting & Analytics</p> <p>PIC: Rowan</p> <ul style="list-style-type: none"> ● Financial Reports ● Membership Distribution ● Export (Download reports as PDF or CSV) ● Interactive Heatmap ● KPI Tracking ● Period Filtering 	<p>14. Index (Homepage)</p> <p>PIC: Ian</p> <ul style="list-style-type: none"> ● Hero Landing Section: <ul style="list-style-type: none"> o Dynamic brand messaging o Call-to-Action (CTA) buttons ● Service Showcases: <ul style="list-style-type: none"> o Visual grid displaying core fitness categories ● Membership Presentation: <ul style="list-style-type: none"> o Tiered pricing cards o Highlighting “Most Popular” & “Huge Savings” plans o Feature comparison lists for each plans ● About & Community: <ul style="list-style-type: none"> o “Our Story” section outlining gym mission & vision o “Expert Team” grid featuring trainers & their specializations ● Interactive Partner Marquee: <ul style="list-style-type: none"> o Animated scrolling display of corporate partners/equipment brands ● Responsive Footer: <ul style="list-style-type: none"> o Quick Links, contact information, & social media integrations <p>PIC: Yong</p> <ul style="list-style-type: none"> ● Public Chatbot Access: <ul style="list-style-type: none"> o Floating chat widget for instant visitor inquiries.
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Each proposed system must include the following **core functional requirements**:

- **User login and authentication module**
- **Data entry and retrieval module**
- **Data storage using a database**
- **Report generation or data summary feature**
- **Basic input validation and user interface**

*****Each student is compulsory to handle at least one (1) module.**

Sample Output Expectations

- Login screen for admin/user
- Data entry forms (e.g., add, edit, delete records)
- Database tables created and linked properly
- Functional reports or data summaries
- Test cases with screenshots and results