Functional Requirements:

1. User Account Management
   - USR_01: User can register with an email,password and other personal information
   - USR_02:User can login with email and password
   - USR_03:Users can update their profile and account information(password,weight,height,etc.)
   - USR_04:Users can delete their account.
   - USR_05:User can upload a profile picture
   - USR_06:User can fill in a contact form for support and clarification, which sends an email to the admin.
2. User Nutrition Tracking
   - NTR_01:Users can log their daily calorie intake and the system can suggest a daily calorie goal.
   - NTR_02:Users can track their macronutrient intake(protein,carbs,fats)
   - NTR_03:Users can browse and view calories and macronutrients of specific foods and add them to their daily calorie intake.
   - NTR_04:Users can log their daily hydration intake.
   - NTR_05:Users can log their sleep, and get recommendation.
3. Exercise Management
   - EXR_01:Users can access and view an exercises library with details, instructions and gif illustrations.
   - EXR_02:Users can search and filter exercises based on target body parts.
4. User Workout Management
   - WRK_01:Users can browse and filter pre-made workouts created by admins.
   - WRK_02:Users can view workouts created by other users, but cannot modify them.
   - WRK_03:Users can create,save and edit custom workouts for themselves.
   - WRK_04:Users can log and track workout sessions.
   - WRK_05:Users can favorite workouts for quick access.
5. Badge and Gamification System
   - BDG_01:User can earn badges on predefined criteria(e.g., workout streaks,achieving goals)
6. User Progress Tracking
   - PRG_01:Users can view progress charts.
   - PGR_02:Users can update personal goals(e.g., target weight) and track progress towards them.
   - PRG_03:Users can export their progress data as a PDF file.
6. Notification System
   - NOS_01:Users can receive general and motivational notifications.
   - NOS_02:Users can receive notifications about new pre-made workouts.
   - NOS_03:Users can view a weekly summary about their progress.

7. User Experience Level and Goals
   - UXP_01:Users will be introduced to a questionnaire when creating their account, gathering essential information about them and their fitness health goals.
   - UXP_02:Users can choose their preferred units(metric,imperial).
   - UXP_03:Users can select the app's theme(light/dark mode).

8. Admin Management
   - ADM_01:Admins can send notifications to users

- ADM_02:Admins can create new workouts with a name,level,times per week,exercises etc.
- ADM_03:Admins can update or delete existing workouts
- ADM_04:Admins can view a list of all users.
- ADM_05:Admins can delete user accounts.
- ADM_06:Admins can promote users to admin.
- ADM_07:Admins can view FAQs.
- ADM_08:Admins can view a dashboard with important statistics.

10.Search and Filter(Admin)

- SRCH_ADM_01:Admins can search for users by email or name and filter them by experience level, goals etc.

11. Monetization

- MON_01:User can pay a subscription to get access to extra features.
- MON_02:User will receive a notification message on his phone after paying a subscription

12. Mobile Responsiveness

- MOB_01:The web-app is fully mobile responsive.

Non Functional Requirements

1. Performance:
   - The app must load pages within 2-3 seconds under normal load.
   - Performing Lazy Loading to ensure smooth experience.

2. Security:
   - Data access is only possible with security strategies(JWT,OAuth).
   - User passwords must be stored as hashed values using a secure hashing algorithm (e.g., bcrypt).
   - The app must use HTTP for all data transmissions.
   - The app must implement role-based access control to restrict admin actions based on permissions.

3. Scalability:
   - The app should scale horizontally to accommodate an increasing number of users.
   - The database should support efficient querying for large datasets (e.g., nutrition logs, workout history).

4 Compatibility:
   - Support Chrome, Firefox, Safari, and mobile browsers.

5. Maintainability:
   - The codebase should follow a modular architecture for easy updates and maintenance.
   - The app should include detailed documentation for developers to understand the ERD and system design.
   - The app should use a version control system to track changes.

6. Data integrity.

   - The app should enforce data validation (e.g., email format, non-negative values for weight, height, calories).
   - The app should ensure referential integrity between entities.

7 Error Handling:
   - Display user-friendly error messages with resolution steps.

8. Localization:
   - Support date/time formats and units (metric/imperial).

9. Third-Party Integration:
   - Validate external API responses to prevent data corruption.

UI/UX Design Link
https://www.figma.com/design/mkpEVggixxi1SRKKMKrRZU/goldfit_diet_ui_ux?node-id=0-1&t=lg6GJ1oaSrdNkr8n-1