Project Idea

'Develop a smart fitness tracker application by incorporating innovative features to enhance user engagement, personalisation and effectiveness. The application will empower users to track exercises, create personalised workouts, and calculate desired insights for an optimal fitness journey'.

Key Features:

- **Efficient Log In System**:
    - Incorporates the use of Firebase console NoSQL database in order to manually sign in and register users to the fitness tracker application.
    - Thus, the registration process will accumulate a form for a username and password that is saved to the database.
    - The log in page will accept a username and password to authenticate and sign in the user manually
- **Extended Log In Features**:
    - In addition to the Login system, Firebase API including Google Authentication and Apple Authentication services will be provided to ensure a swift login process to enhance user experience (UX)
    - The purpose of Apple Authentication was used to authenticate users through iOS devices and therefore allow for future expansion of the mobile application from primarily Android devices.
    - This ensures secure login sessions and different application sessions started by different users.
- **Workout Tracker Page:**
    - Enables users to personalise and create new workout names to then apply a list of exercises in the specified workout.
        - This has identified the use of class named workout and a class named exercise
    - The use of these classes will then be stored into a Hive backend to explore the differences between the use of Firebase console and Hive databases.
    - Each created workout will be displayed to the user on the same screen to ensure successful creation of the new workout.
        - Thus, allowing the user to interact and edit the exercises stored in the workout via a button interaction for example.
    - The user can produce an exercise after creating the workout.
        - Allowing the user to input an exercise name, reps, sets, time of rest period, weight used, checkbox (indicate if the exercise is complete)
    - **The user should have the ability to remove workouts and exercises from the workout.**
- **About-Us Page:**
    - Display visionaries into the start-up, non-profit application. Explain innovational ideas and core values with producing the application
    - Potential contact information that can be used for collaboration opportunities
- **Profile Page:**
    - Allows users to input profile information that can be used to contact potential users of the system.
    - Personalised statistics can be produced to help drive workout groups e.g., BMI, BMR, Calorie Calculation etc.
    - Allows users to personalise their fitness profile for potential expansion and competition with other users.

- **Development Potential:**
    - Heat Map ability, to highlight what days they have undergone a particular workout and be used to track progress further.
    - View Profiles and Competition ability, view friends profiles and compete with those friends through workout progress and attendance etc.
    - FAQ Page which allows users to ask questions to the developers and team who created the application to allow for changes in features of the application or general questions.
    - Community Event ability to give the application a solid sense of community and funding aspect for particular causes.

Conclusion:

- **Novelty and Originality:**
    - Integration of Firebase Console for user registration, sign-in and personalised workout storage adds originality.
    - Implementation of Google Authentication and Apple Authentication for enhancing UX.
    - Personalised statistics, BMR, BMI and calorie calculations contribute to originality of the fitness tracking experience.
    - Introduction of a Heat Map for tracking workout progress on specific dates and a community event feature for social engagement showcase creativity.
- **Usefulness:**
    - Efficient Log In System ensures a secure and user-friendly registration and authentication process
    - Workout Tracker Page allows users to customise workouts and exercises, enhancing the utility of the application for personalised fitness journeys.
    - Profile Page features, including personalised statistics and potential of a competition platform, add value by tailoring the experience to individual fitness goals.
    - Integration of About-Us Page enhances user engagement and provides a platform for user support.
- **Development Potential:**
    - Incorporation of Firebase Console, Google Authentication, and Apple Authentication establishes a strong foundation for scalability and future expansion.
    - The envisioned Heat Map and View Profiles and Competition features demonstrate significant potential for ongoing development , encouraging user retention and satisfaction.
    - Introduction of a FAQ Page creates an area for user feedback, allowing developers to adapt and enhance features based on user needs.
    - The inclusion of a Community Event aspect fosters a sense of community but also allows for potential collaborations and funding opportunities.
- **Exploration Area:**
    - Integration of Firebase and Hive databases introduces exploration into backend technologies, allowing for a comparison of their strengths and weaknesses.
    - The development of personalised statistica and a Heat Map provides an opportunity to explore data analysis techniques.
    - The community event feature opens exploration into social aspects of app development, emphasising community-building.
    - Incorporation of Apple Authentication anticipates the exploration of cross-platform development, expanding the application’s reach beyond Android devices.