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| Chapter | Description |
| Preface | Our fitness application aim to help user in improving their health status. Our app is continously improve overtime by taking feedback of our user, from the beta app version with only contain some simple functions with lots of limitations, to a more complete version with friendly user interface, more functions to help create motivate when using our app. We continue to improve more future update to meet the requirement of a good fitness app. |
| Introduction | The reason why our group choose to do fitness application is to impove people’s health when the state of obesity is becoming common and severe.  Our application guide users keep and improve their fits through ideal exercises and useful functions. Our model application can be applied to nowadays general business or strategic objectives of the organization commissioning the software because of low cost and user friendly. The app can be easily run on several environment (ios, android,…), which lead to an amount of organises being attracted by our product. |
| Glossary | Macronutrient (Macro): macronutrients are most often defined to be the chemical compounds that humans consume in large quantities that provide bulk energy. Specifically, they refer to carbohydrates, proteins, and fats  Body Mass Index (BMI): Body Mass Index is a simple calculation using a person’s height and weight. The formula is BMI = kg/m2 where kg is a person’s weight in kilograms and m2 is their height in metres squared |
| User requirement  Defenition | Login: User can log in their account into the system based on database by inputing their username/email and password in login form  Signup: User can create a new account into the system by inputing some basic information of them in sign up form  Exercise: User can choose a type of exercise (abs, biceps, legs) to improve their fitness and muscle  Macro Calculator: User input some information(gender, weight,…) to calculate  Timer: User can set time for their exercise and schedule their routine for keeping fit  Calculate BMI: User input their weight,height,… by choosing type of input(standard and metric)  Routine Schedule: User can schedule their routine and make plan for their goal  Schedule Reminder: User can be reminded by the system in order to do their plan  Challenge: Set challenges for some exercise for high level users  Achievement: Unlock medals for completing challenges  Friendlist: To add friends for online competion  Leaderboard(online function): Ranking users for more motivation  Duel: Compete with other user (1 vs 1)  My favorite: List all of user’s favorite exercises to save time when using system  Sound and Music: User can relax and avoid being boring during doing exercises |
| System Architecture |  |

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| Chapter | Discription |
| System requirements specification | \***Functional requirements**:  - Adminstrator requirements: has all the rights of maintaining all the record of application. Admin will be responsible for editing and updating the information of the app.  - Client requirements: has all the privileges on exercise seeker and the exercise seeker details. Client cannot make any change to the systems except register and add to my favorite.  - Business requirement:  +Login: An UI appears for the user to input their username and password(String). Based on the database, the system will check the input and then go to the home pase if the given information is correct  +Signup: An UI apppears for user to input their basic information in order to regist to the system. The system will check that the username is not already in the database and then save the new user into the system  + Exercise: An UI apppears for user to choose the given exercise in order to add to their current routine.  + Macro Calculator: An UI apppears for user to input their basic information in order to regist to the system. The system will check that the username is not already in the database and then save the new user into the system  + Timer: An UI apppears for user to set time for their exercise and schedule their routine for keeping fit. The user must set time for exercise for more effective execise and schedule their time for that.  + Calculate BMI: An UI apppears for user to input their weight, height,… by choosing type of input(standard and metric). The user must choose inputing type (standard(inches, pounds) and metric (cm, kg)) and input their height and weight  + Routine Schedule: An UI apppears for user to schedule their routine and make plan for their goal. The user may schedule for themselves by inputing their routine and make a plan to keep fit in their leisure time.  + Schedule Reminder: An UI apppears for user to be reminded by the system in order to do their plan, The user may set time for each milestone and the schedule reminder will work as clock assistant to remind user to doing exercise  + Challenge: An UI apppears for user to set challenges for some exercise for high level users. The high level user may input some challenge for their own exercise for not only more effective result but also more motivation.  + Achievement: An UI apppears for user to unlock medals for completing challenges. The user can get one medal after they accomplish an achievement and can share their achiement with friends or other users  + Friendlist: An UI apppears for user to add friends for online competion. The user can addfriend in order to share experience and create motivation when competing with your friend.  + Leaderboard(online function): An UI apppears for user to know the ranking of them for more motivation. The admin update the new list monthly for user follow. User can base on that list and compete with each other to get higher rank.  + Duel: An UI apppears for user to compete with other user (1 vs 1). The list of exercise and challenge for both user to do and to compare after finish  + My favorite: An UI apppears for user to see the list of their favorite exercises to save time when using system. User can choose some specific exercise to do frequently in order to save time instead of confusing which one they should do.  + Sound and Music: An UI apppears for user to relax and avoid being boring during doing exercises owing to listen to music. The user can add some music to their list in order to listen during doing exercise.  - Sytem requirement:  + Environment  + Simulation  + Automation  + Authentication  + Backup/restore  - **Non-functional requirement:**  + User-related:  . resilence: Update routine, update listfriend (the user can change the number of friends/exercises in their private list)  . usability: the app should be convenient, comfortable and intuitive.  . efficency: Speed of performing must be optimal. The timer calculation must be accurate. The routine/exercise should be effective.  . compatibility: allows insert new song/exercises from an existing Excel file |
| System models |  |
| System evolution | *Our proposed “Smart Gym System” is for those who runs a gym business. Before doinganything we did a decent research on major difficulties for gym owners. We examined carefullyabout how to make a huge registering system without failure as well as different functions fordifferent kind of user depending on their privilege.*  **Adidas Mi-Coach**: This app has a GPS based tracker for running. It also gives a score for individual's daily performance. It is a more robust and a well-designed app, but doesn't have features of conveying related videos of exercises and the diet plan.  **Seven-7 Minute Workout Challenge**: This app has universal and scientifically approved exercises for maintaining the muscle. But the app has only 15 activities for 7 minutes, and the scoring is just based on them. As mentioned earlier, this too doesn't have the suggestion of videos and diet planner. Further, this app doesn't have the tracking feature too. |
| Appendices |  |
| Index | Several indexes to the document may be included. As well as a normal alphabetic index, there may be an index of diagrams, an index of function, and so on (read this in final report file) |