"MAKE WEIGHTS LIGHTER"



CSE 343 FIRST PROTOTYPE REPORT Company GYMRATS

Product LIGHT WEIGHT

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1. THE COMPANY

1.1. Introduction to Company

GYMRATS is a group of people who



commits themselves to live a healthy life by doing workouts regularly and eating in a proper way. The

group consists of **Umut Can Özay**, **Hümeyra Tuğçe Yavuz**, **Edanur Çanakcı**, **Ali Kaya** and **İlayda Arar**. The name 'GYMRATS' comes from the bodybuilding jargon, which means someone who spends all their time in a gym in muscle building.



1.2. Business Description

Light Weight is an application which guide people who wants to add an exercise routine (mainly on bodybuilding) to their daily life and keep track of their macros (protein, fat and carbs intake) which is crucial in bodybuilding. The name 'Light Weight' comes from the famous bodybuilder oldschool Ronnie Coleman who is the winner of the Mr. Olympia title for eight consecutive years. Whenever he lifted something heavy, he used "Light Weight" catchphrase to motivates himself by saying it aloud.

1.3. Vision and Mission Statement

By completing the Light Weight application project we are aiming to provide help to people who wants to become stronger both physically and mentally.



1.4. Organization

GYMRATS is a group of 5 people which composed of 1 project manager, 1 product owner and 3 developers.

- Umut Can Özay (**Project Manager**)
- Hümeyra Tuğçe Yavuz (**Product Owner**)
- İlayda Arar (**Developer**)
- Ali Kaya (**Developer**)
- Edanur Çanakcı (**Developer**)

1.5. Business Model

The team works on **agile** methodology in which customer is always involved that helps to satisfy expectations and the project management is easier.





2. THE PRODUCT

LIGHT WEIGHT





2.1. User Story

Ege is a person who wishes to start bodybuilding. At first he has limited knowledge about exercises and diets so that he wants to have an application that will assist him through his bodybuilding progress.

When he registers to the application, it will ask him his personal information that includes his age, gender, weight, height and required measurements for calculating fat ratio to determine suitable calorie intake for a day which would maintain his current weight.



If Ege wants to lose weight, the application will offer him less calories (cutting phase). While in contrast if Ege wants to gain weight, this time the

application will offer more calories (bulking phase). After he decides for cutting or bulking, he will choose one of the training programs that the application offers or he can create his own training program. Since all exercises are shown with instructions he won't have a problem about adapting proper form. After he is done with his exercises for the day, the application will show overall results.

During the day he can log and choose the appropriate meal from the he can't find the food that he ate he can also its calorie and macros. He can also enter the water he drank. Application shows overall macros and the remaining calories.

the name of the food shown list. If add it with amount of ratios of

If he wants to buy some supporting supplements and gym accessories he can purchase via links in app's shop category. Also he can check the Q&A section of the application to find answers for questions that beginners may.

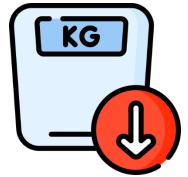


2.2. Scenarios

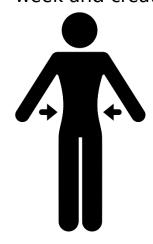
Scenario 1

Initial Assumption: User signs up to application with his/her information (gender, height, weight, body fat) and indicates that he/she

wants to lose weight and grow muscle. Application asks whether user wants made up plan for him/her or he/she creates one. User doesn't want already made up workout plan and selects that he/she wants to create his/her own plan from the pool of workout movements.



Normal: User decides to create his/her own workout plan from the pool. User types how many days he/she wants to workout in a week. Selects a day and starts to create his/her own workout plan. Consequently user selects the leg muscle group and pick leg extension, barbell squat. After that he/she adds lateral raise, lat pulldown for upper back muscles, arnold curl, barbell curl for arm muscles, side plank for lower back and core muscles. When he/she is done he/she picks to another day at the week and creates another.



User logs what he/she ate for breakfast, lunch and dinner. He/she sees that how much calories he has need or how much calories he/she exceed by overeating. Sees how much protein intake he/she needs.



What can go wrong: The user may skip working some part of his/her body (most likely legs) since he/she creates the program as wished. Some reminder that pops up by the application that h e/she didn't add certain muscle groups to his/her workout may be a good solution.

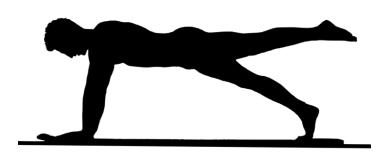


Other activities: User keeps track of how much water he/she consumed and need.

System state on completion: With the information that user provides application calculates how much protein, calories and water the user should intake.

Scenario 2

Initial Assumption: User signs up to application with his/her information (gender, height, weight, body fat) and indicates that he/she wants to gain weight and grow muscle. Application asks whether user wants made up plan for him/her or he/she creates one. User wants already made up workout plan.



Normal: Since user wants made up plan he/she selects whether he/she wants full body or split exercise routine. User selects full body option. User types how many days he/she wants to

workout in a week and application offers to user a couple of workout plan. User selects one.

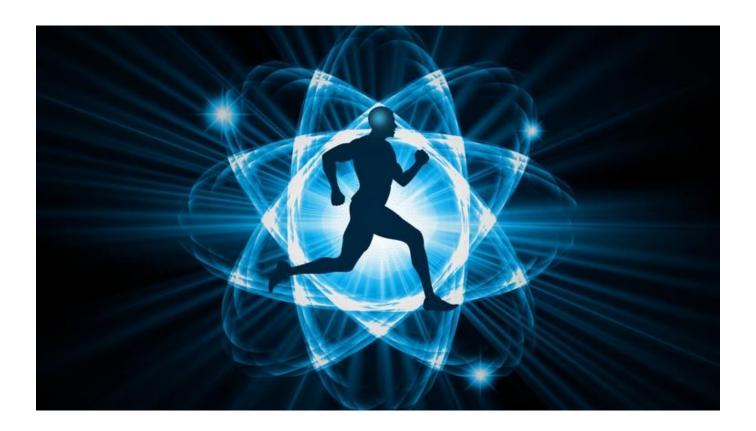


User logs what he/she ate for breakfast, lunch and dinner. He/she sees that how much calories he has need or how much calories he/she exceed by overeating. Sees how much protein intake he/she needs.

What can go wrong: User may struggle to adapt the workout movements and performs those in wrong forms which may end up in inefficient exercise.

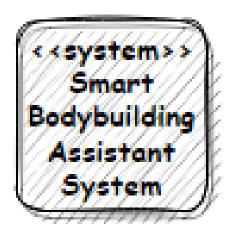
Other activities: User keeps track of how much water he/she consumed and need.

System state on completion: With the information that user provides application calculates how much protein, calories and water the user should intake.



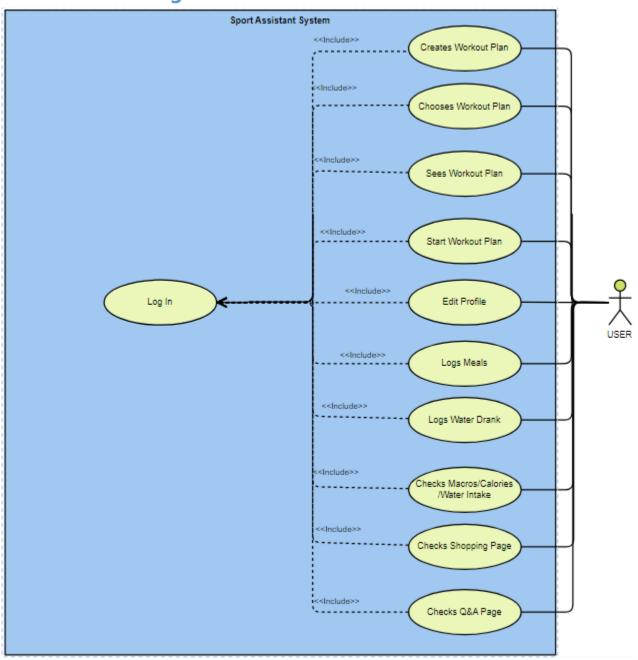


2.3. Context Model





2.4. Use Case Diagram





System	Sport Assistant System
Use Case	Creates Workout Plan
Actors	User
Data	The Data consists of: exercise movements, number of sets, number of repetitions, amount of weight to be used.
Stimulus	The user enters the system and 1.Clicks on the dumbbell icon in the icon bar 2.Clicks Change Program. 3.Chooses Create Plan 4.Adds the exercise moves/sets/reps/weight he/she wants
Response	Workout plan created
Comments	

a .	
System	Sport Assistant System
Use Case	Chooses Workout Plan
Actors	User
Data	The Data consists of Workout Plans.
Stimulus	The user enters the system and
	1.Clicks on the dumbbell icon in the icon bar
	2.Clicks Change Program.
	3.Clicks Choose plan
	4.Chooses a plan that he/she wants
Response	Workout Plan is selected.
Comments	

System	Sport Assistant System
Use Case	Sees Workout Plan
Actors	User
Data	The Data consists of Workout Plans.
Stimulus	The user enters the system and 1.Clicks on the dumbbell icon in the icon bar then user can see current Workout Plan
Response	Current Workout Plan is shown to the user
Comments	

System	Sport Assistant System
Use Case	Start Workout Plan
Actors	User
Data	The Data consists of: current exercise movement, number of sets, number of repetitions, amount of weight to be used.
Stimulus	The user enters the system and 1.Clicks on the dumbbell icon in the icon bar 2.Clicks Start Button.
Response	Current Workout Plan is started.
Comments	

System	Sport Assistant System
Use Case	Edit Profile
Actors	User
Data	The Data consists of: age/gender/weight/height/waist/chest/BMI of the user.
Stimulus	The user enters the system and 1.Clicks on the profile icon in the icon bar 2.Clicks Edit profile button 3.Edits profile information as he/she wants.
Response	The Profile information is edited
Comments	



System	Sport Assistant System
Use Case	Logs Meals
Actors	User
Data	The Data consists of: Meals and Grammage of meals.
Stimulus	The user enters the system and 1.Clicks on the food bowl icon in the icon bar 2.Clicks "Enter New Food" 3.Writes the food name 4.Selects from list / creates and adds new meal
Response	Meal entries are made
Comments	

System	Sport Assistant System
Use Case	Logs Water Intake
Actors	User
Data	The Data consists of amount of drinking
	water.
Stimulus	The user enters the system and
	1.Clicks on the food bowl icon in the icon bar
	2.Clicks the glass icon
Response	Water intake entries are made
Comments	

System	Sport Assistant System
Use Case	Checks Macros/Calories /Water Intake
Actors	User
Data	The Data consists of amount of water intake, macros of meals and calories of meals.
Stimulus	The user enters the system and 1.Clicks on the food bowl icon in the icon bar then user can see Macros/Calories/Water Intake
Response	Macros/Calories /Water Intake information is shown to the user.
Comments	

System	Sport Assistant System
Use Case	Checks Shopping Page
Actors	User
Data	The Data consists of: Some Supplementer and some gym equipment shopping links.
Stimulus	The user enters the system and 1.Clicks on the shopping card icon in the icon bar 2. Clicks the link button of the item that he/she wants to purchase.
Response	Shopping Page is shown to the user.
Comments	

System	Sport Assistant System
Use Case	Checks Q&A Page
Actors	User
Data	The Data consists of: some frequently asked questions and their answer links.
Stimulus	The user enters the system and 1.Clicks on the profile icon in the icon bar 2.Clicks Q&A button
Response	Q&A page is shown to the user.
Comments	



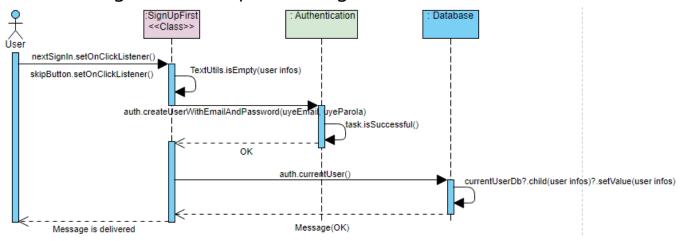
2.5. Class Diagrams



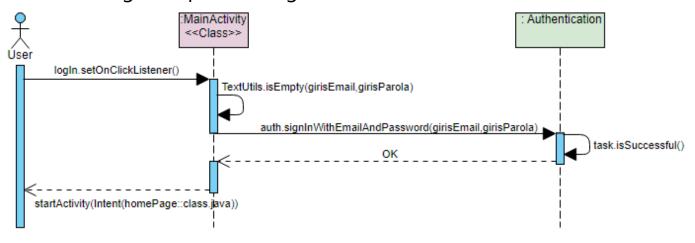


2.6. Sequence Diagrams

2.6.1 User Registration Sequence Diagram

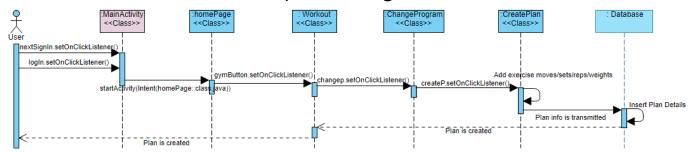


2.6.2 User Login Sequence Diagram

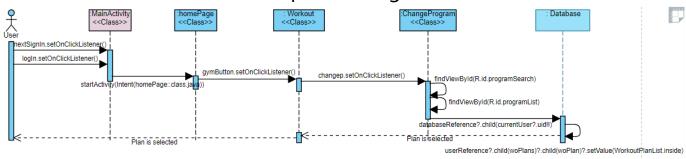




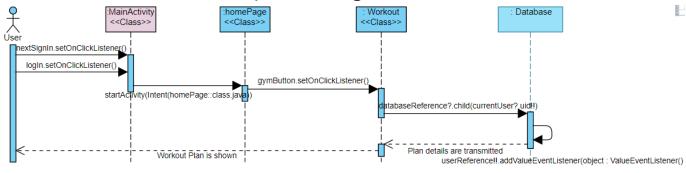
2.6.3 Create Workout Plan Sequence Diagram



2.6.4 Choose Workout Plan Sequence Diagram

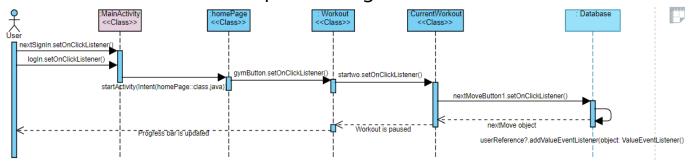


2.6.5 See Workout Plan Sequence Diagram

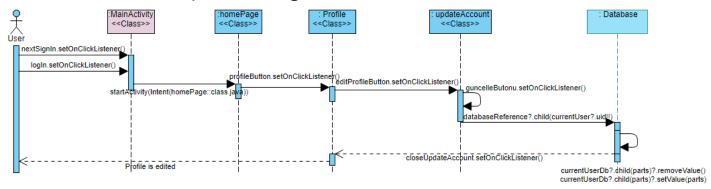




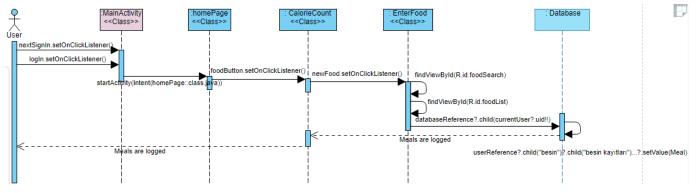
2.6.6 Start Workout Plan Sequence Diagram



2.6.7 Edit Profile Sequence Diagram

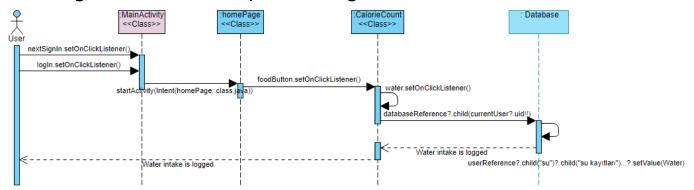


2.6.8 Log Meal Sequence Diagram

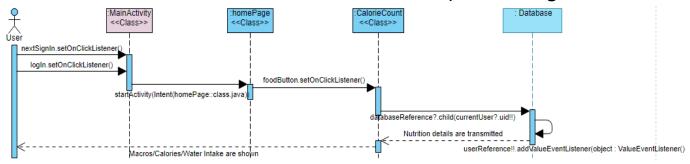




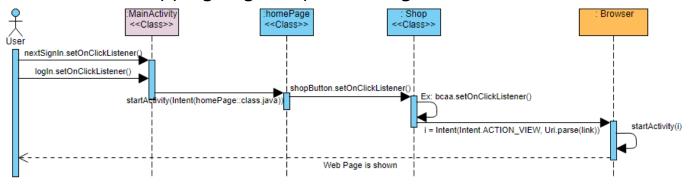
2.6.9 Log Water Intake Sequence Diagram



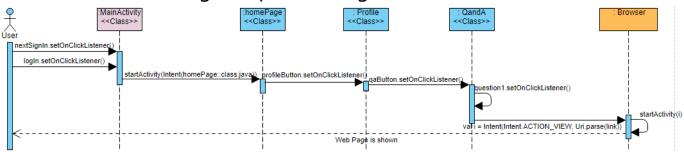
2.6.10 Check Macros/Calories /Water Intake Sequence Diagram



2.6.11 Check Shopping Page Sequence Diagram

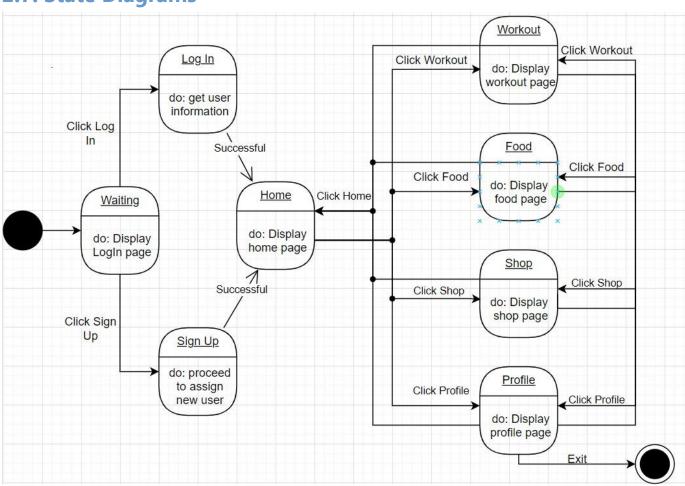


2.6.12 Check Q&A Page Sequence Diagram

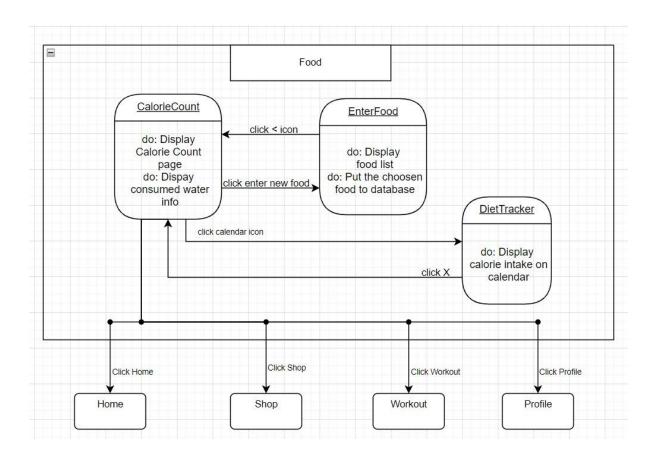


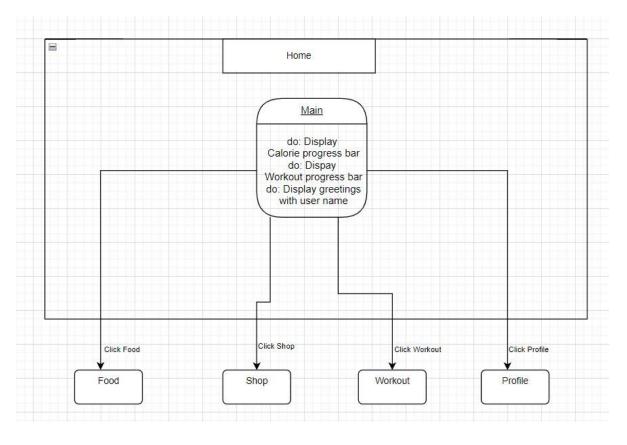


2.7. State Diagrams



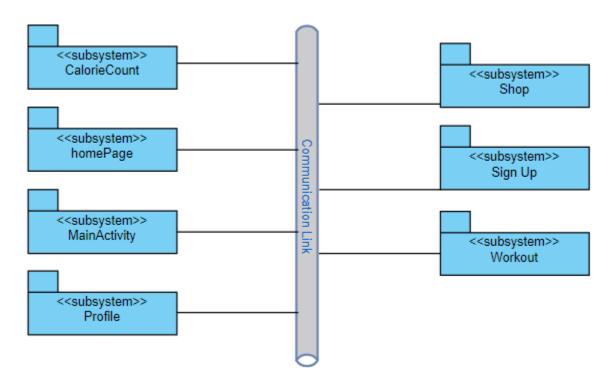


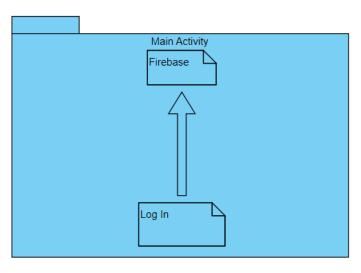




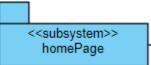


2.8. Simple System Architecture Document



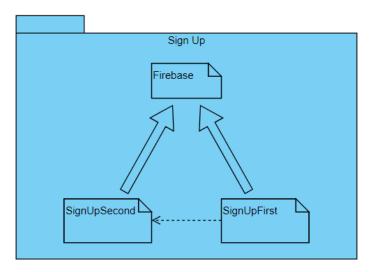


When user clicks to the application icon, sign in page displays. when user enters their e-mail and password to proper places correctly and clicks sign in button, the data will transmit to the firebase and authenticated by the firebase. After that the homepage displays. After all of these the Sign in Process is completed.

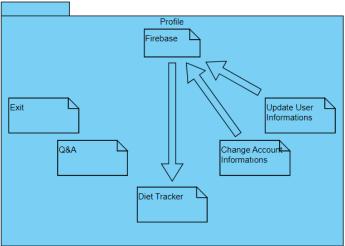


homepage includes summary information data of CalorieCount and Workout pages retrieved from Firebase database.





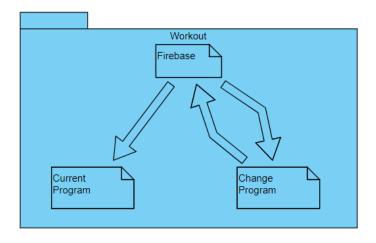
When sign up requested instead of logging in, user clicks to sign up button. Then SignUpFirst page displays, when user enters their informations to proper places and click save, the data will transmit to the firebase. After that the SignUpSecond page displays and the same process happens. After all of these the Sign Up Process is completed.



When user clicks to Profile icon, profile page displays.

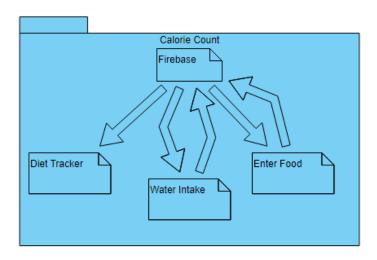
- 1- If user clicks Update user info, Update Info page displays. When user enters the information's that will be updated to proper places and click save, the data will transmit to the firebase.
- 2- If user clicks Change Account Information, the same prosses as the first one happens but in here the changed data is related to the user's account information rather than their physical information.
- 3- If user clicks Diet Tracker, the previous calorie intake information will transfers from database to the application and will be displayed to the user, user can change the record date
- 4- If user clicks Q&A, the Q&A page will be displayed, the page contains the headlines of the commonly asked questions and their links. When user clicks the headline, the application will transfer the according web page.
- 5- User can log out





When user clicks to dumbell icon, workout page displays. This page includes change program button, start program button and current program's movements.

- 1- If user clicks Change program button, Change program page displays. This page includes some exercise plans retrieved from database, user can select one of them. When user select and click one of them current plan updated properly.
- 2- If user clicks start program button current program page displays. This page includes current plan's first movement and next button, when user clicks next button, next movement of current plan is displayed to the user.



When user clicks to Food Bowl, Calorie Count page displays. This page includes Enter Food button, glass icon and macro-calorie-water intake information retrieved from firebase database and calendar icon

- 1- If user clicks enter food button, enter food page displays. This page includes search bar and food information retrieved from database. User can search what food he/she wants or select it from the list. If user select one food and enters the gram info. This food's calorie macro information saved to the database.
- 2- If user clicks glass icon, water intake bar is updated.
- 2- If user clicks calendar icon, user can see their diet history.



2.9. Project Backlog

Summary	Priority	Assignee	Creator	Created
Working on prototype report and studying the use of MySQL as database to our application.	Medium	Umut Can Özay	Umut Can Özay	01/Nov/22 11:25 PM
Working on the database structure to be used in the background, studying the use of spring boot with MySQL.	Medium	Ali Kaya	Umut Can Özay	01/Nov/22 11:23 PM
Continueing designing interfaces and learning how to make them functional.	High	İlayda Arar	Umut Can Özay	01/Nov/22 11:22 PM
Designing pages including calorie tracking and shopping, connecting the activities and learning about interface equipments.	Highest	Hümeyra Tuğçe Yavuz	Umut Can Özay	01/Nov/22 11:21 PM
Practicing Kotlin through working on buttons and listeners on Android Studio.	High	Edanur Çanakcı	Umut Can Özay	01/Nov/22 11:21 PM
Learning how to design pages and finishing Android Studio tutorials, learning how to create a branch.	High	İlayda Arar	Umut Can Özay	24/Oct/22 10:14 PM
Continuing to learn and practice advanced Kotlin through working on buttons and listeners on Android Studio.	High	Edanur Çanakcı	Umut Can Özay	24/Oct/22 10:13 PM
Creating layers/pages and linking them, learning about buttons and activating them.	Highest	Hümeyra Tuğçe Yavuz	Umut Can Özay	24/Oct/22 9:29 PM
Working on creating an SQL based database for holding the data need.	Medium	Ali Kaya	Umut Can Özay	24/Oct/22 9:27 PM
Working on creating an SQL based database for holding the data need.	Medium	Umut Can Özay	Umut Can Özay	24/Oct/22 9:27 PM
Watching Android Studio tutorials through Kotlin to get used to syntax.	Medium	Edanur Çanakcı	Umut Can Özay	19/Oct/22 7:04 PM
Watching Android Studio tutorials through Kotlin to get used to syntax.	Medium	Ali Kaya	Umut Can Özay	19/Oct/22 7:04 PM
Watching Android Studio tutorials through Kotlin to get used to syntax.	Medium	İlayda Arar	Umut Can Özay	19/Oct/22 7:04 PM
Watching Android Studio tutorials through Kotlin to get used to syntax.	Medium	Umut Can Özay	Umut Can Özay	19/Oct/22 7:04 PM
Watching Android Studio tutorials through Kotlin to get used to syntax.	Medium	Hümeyra Tuğçe Yavuz	Umut Can Özay	19/Oct/22 6:56 PM



2.10 Simulated Graphical Interface

Sign In Page



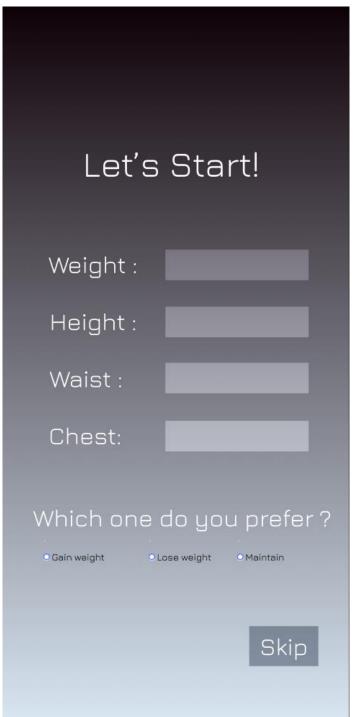
Sign Up Page





Sign Up Page 2

age 2 Home Page



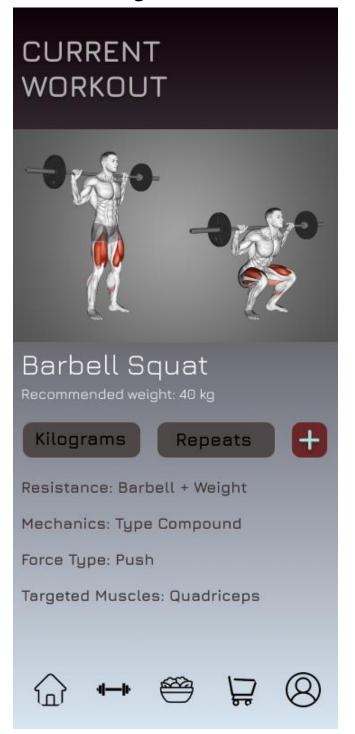




Workout Page 1



Workout Page 2

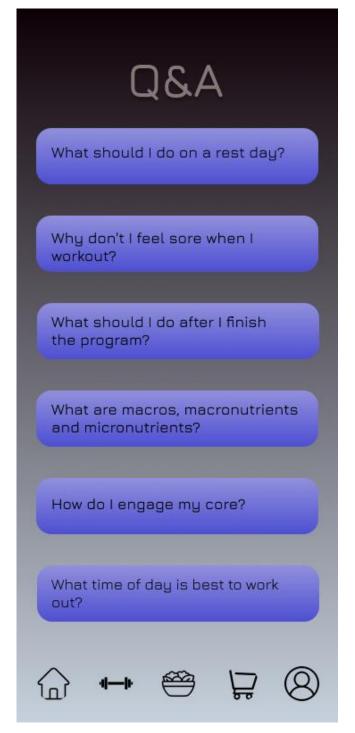




Diet Page

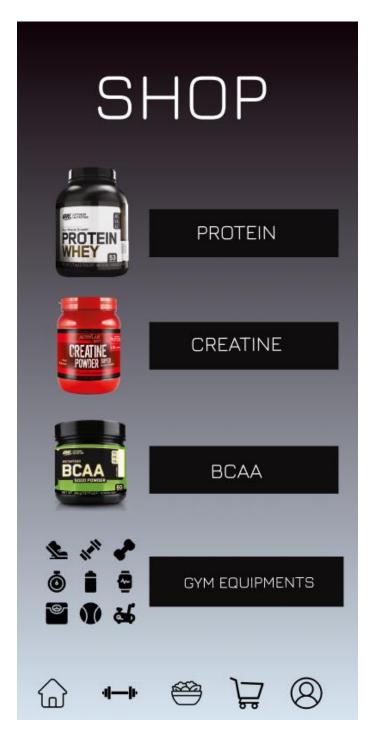


Q&A

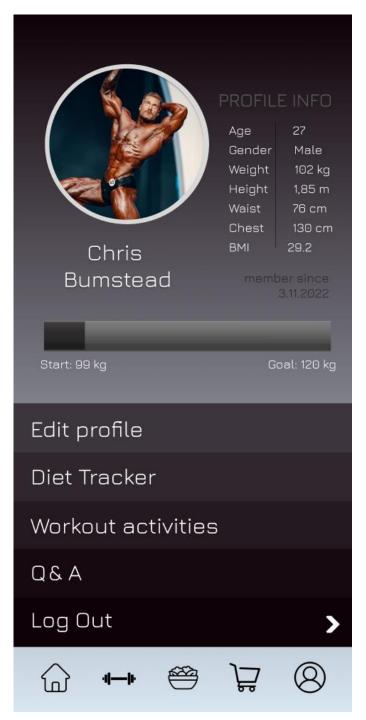




Shop Page



Profile Page





2.11 Working Firebase Database Services

- ▶— Kullanıcılar
- ▶ WorkoutMoves
- ▶ workout plans
- > yemekler
- ▼ Kullanıcılar
 - ▼ 3fmx1Nc9GfROXigwt97jqM9uXZ33
 - BMI: "21.26"
 - --- BMR: "1418"
 - Bel: "68"
 - Boy: "168"
 - Boyun: "32"
 - Cinsiyet: "Kadın"
 - --- Email: "leanbeef@gmail.com"
 - Hareket seviyesi: "Az"
 - --- Hedef: "58"
 - Kalori ihtiyacı: "1302"
 - --- Kalça: "93"
 - Kilo: "60"
 - Parola: "leanbeef123"
 - Tercih: "Kilo ver"
 - Yağ oranı: "21.97"
 - --- Yaş: "26"
 - besin
 - İlk kilo: "63"
 - İsim-soyisim: "Lean beef"



- -- Kilo: "60"
- Parola: "leanbeef123"
- Tercih: "Kilo ver"
- Yağ oranı: "21.97"
- Yaş: "26"
- → besin
 - ▼ besin kayıtları
 - - ▼ Haşlanmış Yumurta
 - kalori: "78"
 - karbonhidrat: "0.56"
 - protein: "6.29"
 - --- yağ: "5.3"
 - → Tahinli Pekmez
 - → kalori kayıtları
 - ▼ 2022-12-05
 - Alınan kalori: 512
 - Kalan kalori: 790
- İlk kilo: "63"
- İsim-soyisim: "Lean beef"
- → WorkoutMoves
 - → Bulgarian Split Squat
 - ağırlık: "20"
 - set: "3"
 - tekrar: "5"
 - Chest Press
 - ▶ Deadlift
 - → Hammer Curl
 - (Lateral Raises
 - ▶— Leg Extension
 - ▶ Overhead Triceps Extencion
 - ▶ Squat



- → workout plans
 - → plan1
 - ▼ Bulgarian Split Squat
 - ağırlık: "20"
 - set: "3"
 - tekrar: "5"
 - → Deadlift
 - ()- Hammer Curl
 - ▶ Overhead Triceps Extencion
 - → plan2
 - ()- Chest Press
 - ▼ Lateral Raises
 - ağırlık: "7"
 - -- set: "4"
 - tekrar: "12"
 - ▶ Leg Extension
 - → Squat
- → yemekler
 - ▼ Beyaz Ekmek
 - Kalori: 266
 - Karbonhidrat: 50.61
 - --- Protein: 7.64
 - Yağ: 3.29
 - ▶ Beyaz Peynir
 - ▶ Haşlanmış Patates
 - ▶ Haşlanmış Yumurta
 - ▶ Kaşar Peynir
 - ▶ Krem Peynir
 - ▶ Labne Peynir
 - Muz
 - ▶ Patates Kızartması
 - Piliç Salam
 - ▶ Tahinli Pekmez
 - ▶ Tereyağ
 - Yoğurt
 - → Yulaf Ezmesi
 - Çiçek Balı



```
opAfQ67P0XMX7cULYF3EhSD9BJ63
       BMI: "19.98"
      BMR: "1298"
       Bel: "65"
       Boy: "155"
       Boyun: "30"
       Cinsiyet: "Kadın"
       Email: "ty@gmail.com"
       Hareket seviyesi: "Orta"
      Hedef: "45"
      Kalori ihtiyacı: "1287"
      Kalça: "86"
      Kilo: "48"
      Parola: "tugce0"
      Tercih: "Kilo ver"
      Yağ oranı: "21.07"
      Yaş: "22"
  besin
  workout plans
      İsim-soyisim: "tue yavuz"
 --- Yaş: "22"
(▶)— besin
 ▼ — plan2
        - 0
             — ağırlık: "20"
             - id: "Chest Press"
             set: "4"
             - tekrar: "12"
         v - 1
             — ağırlık: "7"
             - id: "Lateral Raises"
             -- set: "4"
             tekrar: "12"
        (▶) − 2
        (F)- 3
   İsim-soyisim: "tue yavuz"
```



2.12. Generated Unit Tests

TEST CASE ID	TEST SCENARIO	TEST STEPS	TEST DATA	EXPECTED RESULTS	ACTUAL RESULTS	PASS /FAIL
LW01	Checking registering with previously unregistered user information.	1.Open application 2.Enter information for registration 3.Try register	Full Name: Chris Bumstead Email: cbum@gmail.com Password: chris3 Date of Birth: 27.02.1995 Gender: Male	User should register successfull y.	User register succesfully	PASS
LW02	Checking registering with already taken information	1.Open application 2.Enter information for registration 3.Try register	Ful Name: Chris Bumstead Email: defne@gmail.com Password: chris3 Date of Birth: 27.02.1995 Gender: Male	Program should warn the user that this information s in use.	Program warns the user	PASS
LW03	Checking logging into the system with valid data	1.Open application 2.Enter email 3.Enter password 4.Try login	Email: cbum@gmail.com Password:chris3	User should login to the application	User logins to the application	PASS
LW04	Checking logining to the system with invalid data	1.Open application 2.Enter email 3.Enter password 4.Try login	Email: cbum@gmail.com Password:chris2	User should not login to the application	User cannot login to the application	PASS



LW05	Checking user can create a Workout Plan	1.Login 2.Click on the dumbbell icon in the icon bar 3.Click Change Program. 4.Choose Create Plan 5.Add the exercise moves you want to your plan	User should create a Workout Plan.	User can create a Workout Plan.	PASS
LW06	Checking user can choose a Workout Plan	1.Login 2.Click on the dumbbell icon in the icon bar 3.Click Change Program. 4.Click Choose plan 5.Choose a plan that you want	User should choose a Workout Plan.	User can choose a Workout Plan.	PASS
LW07	Checking user can see current Workout Plan	1.Login 2.Click on the dumbbell icon in the icon bar	User should see current Workout Plan.	User can see current Workout Plan.	PASS



LW08	Checking user can start current Workout Plan	1.Login 2.Click on the dumbbell icon in the icon bar 3.Click Change Program. 4.Click start plan	User should start current Workout Plan.	User can start current Workout Plan.	PASS
LW09	Checking user can log meals	1.Login 2.Click on the food bowl icon in the icon bar 3.Click "Enter New Food" 4.Write the food name 5.Select from list / create and add new meal	User should log meals.	User can log meals.	PASS
LW10	Checking user can log water intake	1.Login 2.Click on the food bowl icon in the icon bar 3.Click the glass icon	User should log drank water.	User can log drank water	PASS



LW11	Checking user can check Macros/ Calories/Water intake	1.Login 2.Click on the food bowl icon in the icon bar	User should check Macros/ Calories/ Water Intake.	User can check Macros/ Calories/ Water Intake.	PASS
LW12	Checking user can edit profile.	1.Login 2.Click on the profile icon in the icon bar 3.Click Edit profile button 4.Edit profile information as you want	User should edit profile.	User can edit profile.	PASS
LW13	Checking user can see shopping stuff.	1.Login 2.Click on the shopping card icon in the icon bar 3. Choose item to purchase	User should buy stuff.	User can buy stuff.	PASS
LW14	Checking user can see Q&A.	1.Login 2.Click on the profile icon in the icon bar 3.Click Q&A button	User should see Q&A.	User can see Q&A.	PASS



LW15	Checking user see diet and workout history	1.Login 2.Click on the profile icon in the icon bar 3.Click Diet Tracker/Workout Activities button		User should see diet and workout history.	User can see diet and workout history.	PASS
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