NJIT

Ying Wu College of Computing

# 2022

# Health Track

## Fitness APP


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# Product Backlog (PBL)

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# Overview of Fitness APP

| ID/# | Actor | Activity /User Story | Value | Notes | Rank | Estimate [Story Points or Ideal Hours] |
|---|---|---|---|---|---|---|
| | *As…* | *I want functions like…* | *So that…* | 1sp=3ideal hour | | sum = [94sp]=282h |
| 1 | Customer | Customer information collection (weight loss goal, age, weight, height, etc) - put into database | | 1 | 1 | 3sp |
| 2 | | Track calories of food items - put into database | | | 4 | 15 sp |
| 3 | | Community features: forum, challenges | | | 5 | 17 sp |
| 4 | | Reward system - award badges for achieving goals | | | 3 | 7 sp |
| 5 | | Recommendation system - custom meal and exercise plans | | | 2 | 22 sp |
| 6 | | reminder system - notify customers to finish their daily goals | | | 6 | 10 sp |
| 7 | | Back-end data analysis system | | | 7 | 20 sp |
| | | | | | | |

Testing extra: 20% * 282 = [19sp]57h

Total: sum+extra = [113sp]339h

# Sprint 1: Customer Information collection (Vinoothna)

| ID/# | Actor | Activity /User Story Use case 4 | Value | Notes | Rank | Estimate [Story Points or Ideal Hours] |
|---|---|---|---|---|---|---|
| | *As…* | *I want functions like…* | *So that…* | 1sp = 3 ideal hours | | sum = 9sp |
| 1 | Customer | information collection (goal, age, weight, height, etc) - table | | | | 2 sp |
| 2 | | Calculating maximum daily calorie intake | | | | 2sp |
| 3 | | Provide custom Workout Routine based on Body type | | | | 3sp |
| 4 | | Measuring physical activities for Rewards | | | | 2sp |

# Sprint 1: Back-end data analysis system(Longchao Da)

| ID/# | Actor | Activity /User Story | Value | Notes | Rank | Estimate [Story Points or Ideal Hours] |
|---|---|---|---|---|---|---|
| | *As…* | *I want functions like…* | *So that…* | | | Sum=20sp |
| 1 | Customer | User distribution analysis(gender, location) | | | | 2 sp |
| 2 | | User amount incremental analysis(register, subscribe) | | | | 1 sp = 3 ideal hours |
| 3 | | User demand/goal understanding | | | | 1 sp |
| 4 | | Data Mining on the recommending dependencies | | | | 3 sp |
| 5 | | Visualization of user distributed map | | | | 3 sp |
| 6 | | Access to manage the users (add/delete/lock) | | | | 2 sp |
| 7 | | Violation information detection function (text/audio/avatar) | | | | 4 sp |
| 8 | | Abnormal account alert (fraud/stolen account) | | | | 4 sp |

# Sprint 2: Track User Calories (Khushali)

| ID/# | Actor | Activity /User Story | Use case 2 | Value | Notes | Rank | Estimate [Story Points or Ideal Hours] |
|---|---|---|---|---|---|---|---|
| | *As…* | *I want functions like…* | | *So that…* | 1sp =3 hours | | Sum=9sp |
| 1 | Customer | Home page that contains calories summary | | | | | 3 sp |
| 2 | | Journal page - log food calorie information | | | | | 3sp |
| 3 | | Barcode scan feature to enter calories and manual calorie entry feature | | | | | 3sp |

# Sprint 3: Community[motivation, activities](Rohan)

| ID/# | Actor | Activity /User Story | Use Case 6 | Value | Notes | Rank | Estimate [Story Points or Ideal Hours] |
|---|---|---|---|---|---|---|---|
| | *As…* | *I want functions like…* | | *So that…* | 1sp = 3 ideal hours | | Sum:16sp |
| 1 | Customer | Forum page functions - posting, commenting, upvoting, post history | | | | 1 | 5 sp |
| | | Transformation Stories - users can post their transformation pictures in FORUM PAGE | | | | | |
| 2 | | Host challenges ( pushups, pullups, squats, and so on rewarded with FitCoins to be used for shopping) | | | | 6 | 4 sp |
| 3 | | Informational Posts by Experts on wellbeing (nutrition, workout, mental health and so on) with filters based on your goals and interests - in FORUM PAGE | | | | 4 | 3 sp |
| 5 | | Q/A and Discussion in FORUM PAGE | | | | 3 | 2 sp |
| 6 | | Recipes in FORUM PAGE | | | | 2 | 2 sp |

# Sprint 4: Reward system(Winona)

| ID/# | Actor | Activity /User Story | Use Case 3 | Value | Notes | Rank | Estimate [Story Points or Ideal Hours] |
|---|---|---|---|---|---|---|---|
| | *As…* | *I want functions like…* | | *So that…* | | | Sum=9sp |
| 1 | Customer | Badge design | | | | | 3sp |
| 2 | | What should the rewards be for? Most cal burned, longest workout, etc | | | | | 1 sp |
| 3 | | Badges for special events | | | | | 2 sp |
| 4 | | Leaderboard board for specific badge types (ex: most cals burned in a running workout) | | | | | 3 sp |

# Sprint 5: Recommendation system(Hao Mei)

| ID/# | Actor | Activity /User Story | Use case 7 | Value | Notes | Rank | Estimate [Story Points or Ideal Hours] |
|---|---|---|---|---|---|---|---|
| | *As…* | *I want functions like…* | | *So that…* | | 1 sp = 3 ideal hours | Sum= 22sp |
| 1 | Customer | browsing and displaying the articles (front) | | | | 1 | 3sp |
| 2 | | video displaying page (front) | | | | 2 | 3sp |
| 3 | | upload the media sources (back) | | | | 4 | 4sp |
| 4 | | recommendation algorithms (data) | | | | 6 | 6sp |
| 5 | | recommendation adjustment and settings | | | | 5 | 2sp |
| 6 | | content management | | | | 7 | 2sp |
| 7 | | content interaction (like/mark/tag/download) | | | | 3 | 2sp |
| 8 | | | | | | | |

# Sprint 6: Reminder system(Rutva)

| ID/# | Actor | Activity /User Story Use case 5 | Value | Notes | Rank | Estimate [Story Points or Ideal Hours] |
|---|---|---|---|---|---|---|
| | *As…* | *I want functions like…* | *So that…* | | 1 sp = 3 ideal hours | Sum= 5 sp |
| 1 | Customer | Be able to change/set reminders | | | | 2 sp |
| 3 | | Rise & shine, Getup & move (Daily reminder) | | | | 1 sp |
| 4 | | Reminder to input calories for food items | | | | 1 sp |
| 5 | | Complete exercise goal reminder | | | | 1 sp |

# Overview Context Diagram(informal)

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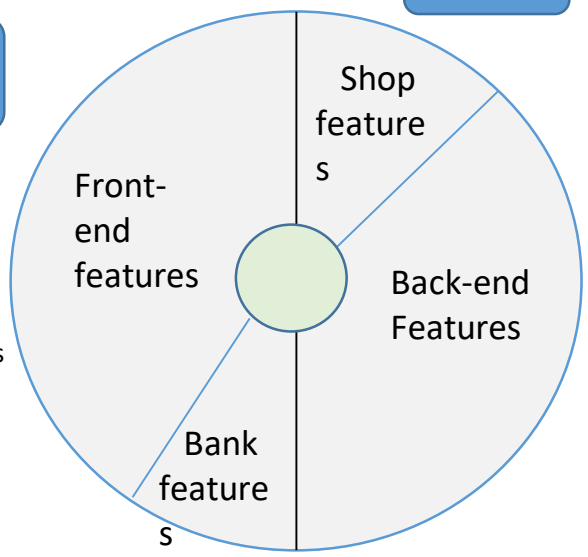
# HealthTrack-informal overview-context diagram v1




Shops

1. Register as shops
2. Upload the goods items
3. Receive the orders from users

Front-end Users

1. Register/Login API
2. Display Exercise Videos
3. Portal of Community
4. Portal to Self Information
5. Track nutrients (Scan/Input)
6. Portal of notification Messages
7. Entrance of recommend Info
8. Reward Sys (badge, coupons)
9. Reminder settings

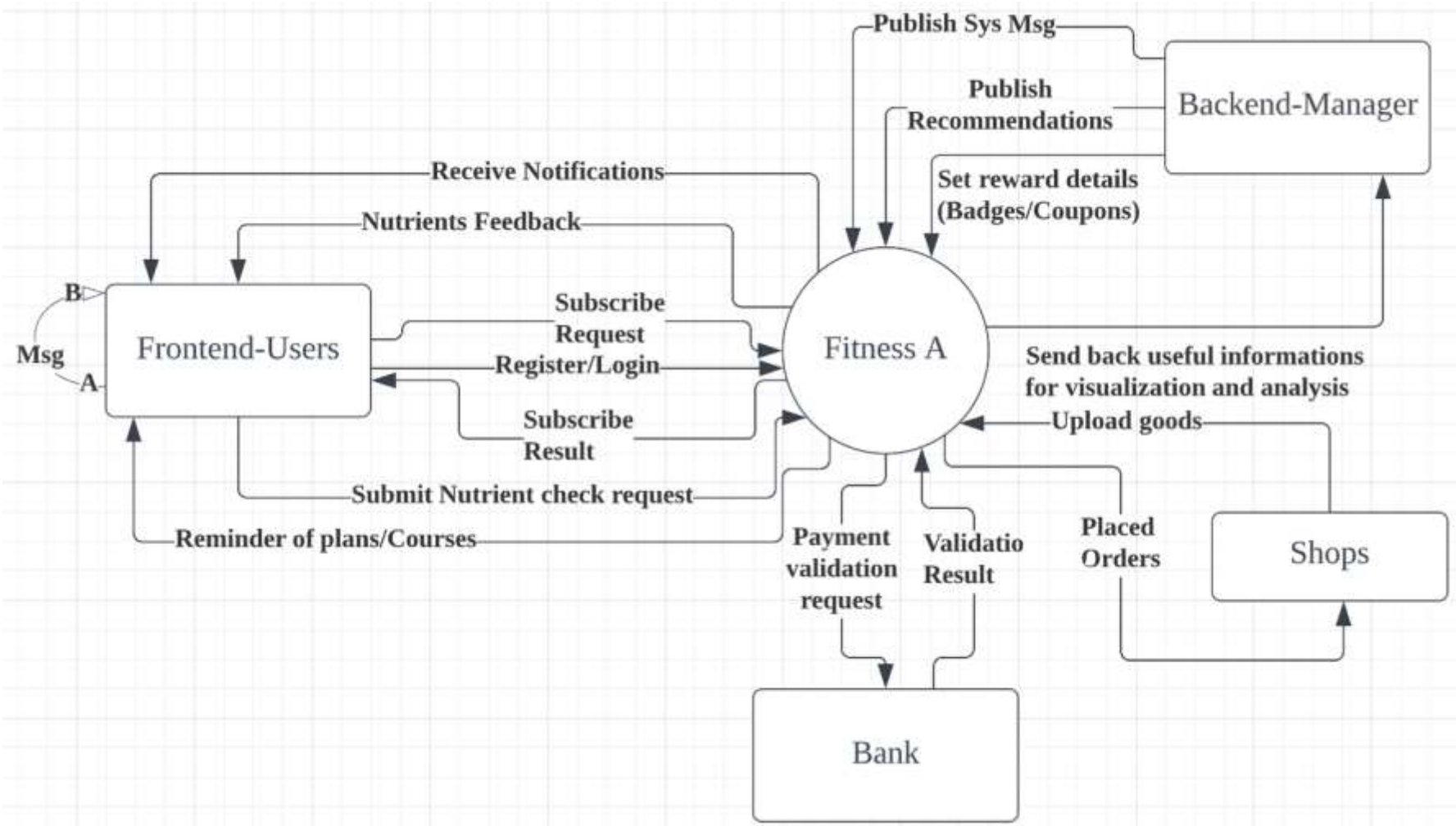
Backend Manager

1. Conduct data analysis on user increment
2. Visualize the user distribution
3. Exercise type ranking
4. Send system notifications
5. Send recommended articles
6. Information validation/ sensitive info check/ Lock users
7. Interest analysis, etc.

Banks

1. Payment validation
2. Regular pay subscribe
3. Abnormal payment action detection

# HealthTrack-informal overview-context diagram v2



# System-level Context Diagram(functional segments)

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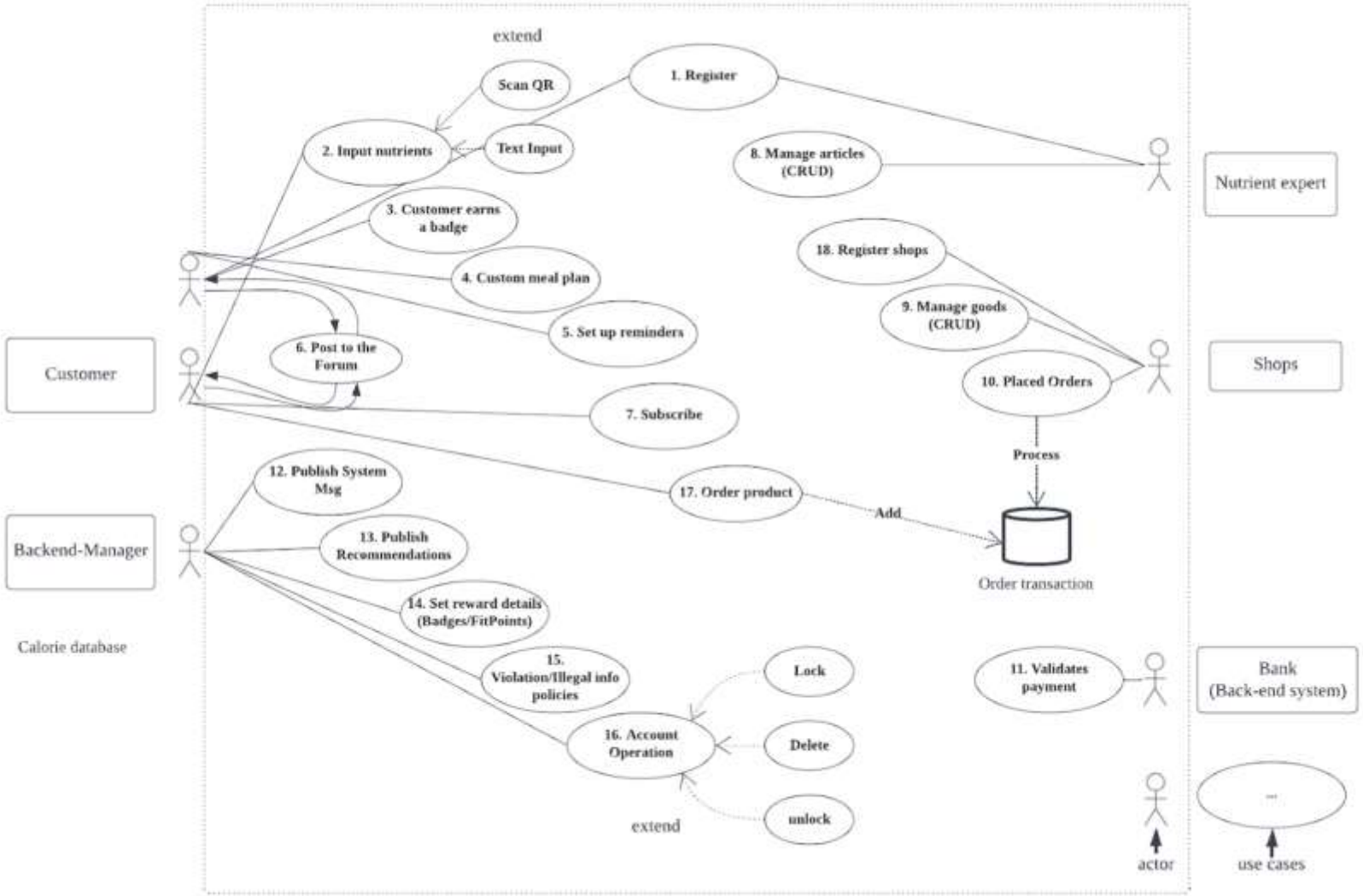
# **System level** Use Case model




System boundary

# Use Case Example(more information)

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**System level** Use Case

# Use Case Template

*(Adopted from Alistair Cockburn)*

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**Use Case:** <number> <the name should be the goal as a short active verb phrase>

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**CHARACTERISTIC INFORMATION**

**Goal in Context:** <a longer statement of the goal, if needed>

**Scope:** <what system is being considered black-box under design>

Level: <one of: Summary, Primary task, Subfunction>

**Primary Actor:** <a role name for the primary actor, or description>
Channel to primary actor: <e.g. interactive, static files, database>

**Supporting Actors:** <list of other systems needed to accomplish use case>
Channel to Secondary Actors: <e.g. interactive, static, file, database, timeout>

**PRE-CONDITIONS, END-CONDITIONS, TRIGGER**

**Preconditions:** <what we expect is already the state of the world>

**Success End Condition:** <the state of the world upon successful completion>

**Failed End Condition:** <the state of the world if goal abandoned>

**Trigger:** <the action upon the system that starts the use case, may be time event>

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