



POLITECNICO
MILANO 1863

Software Engineering II Project

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Data4Help

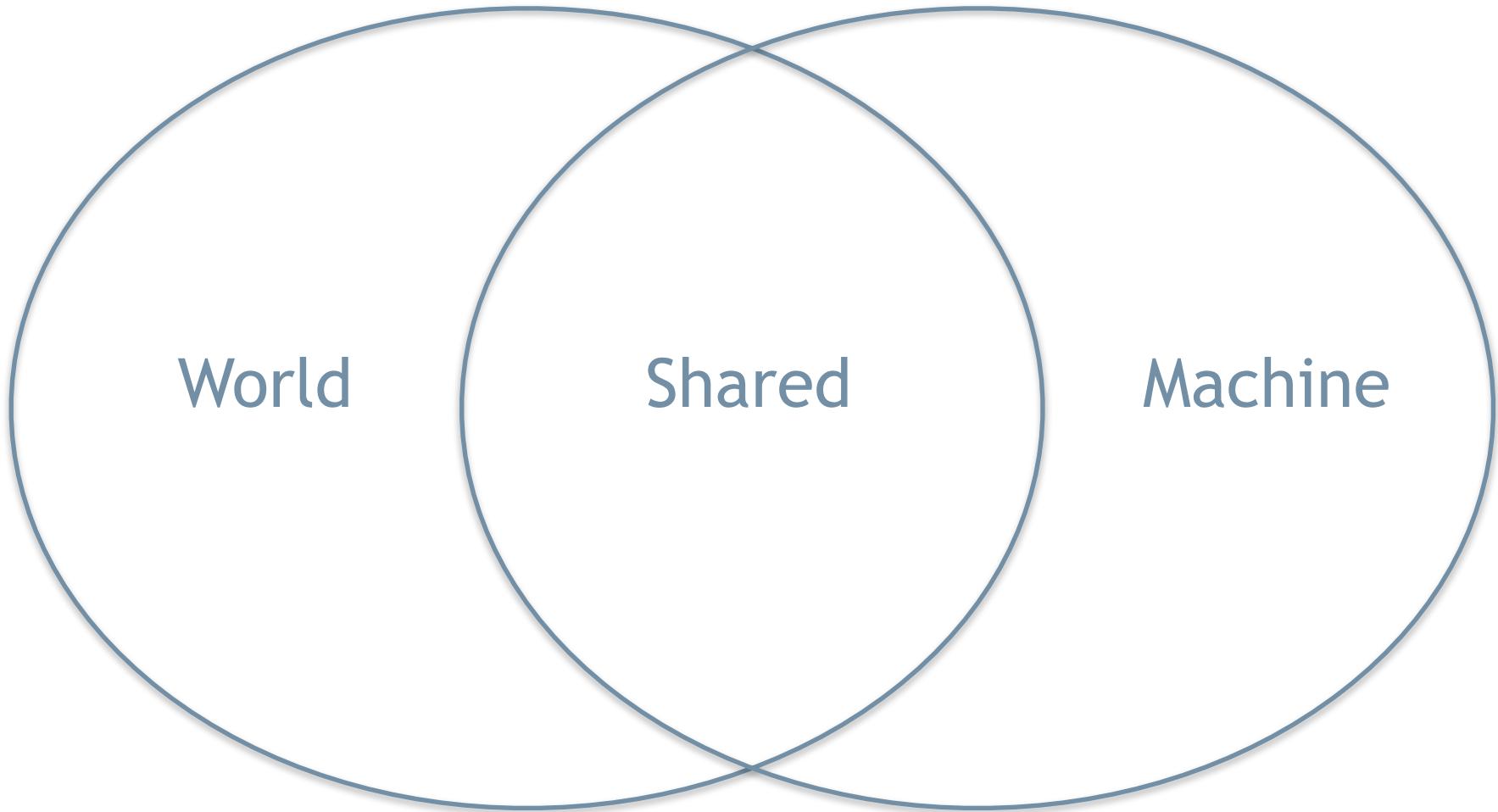


AutomatedSOS

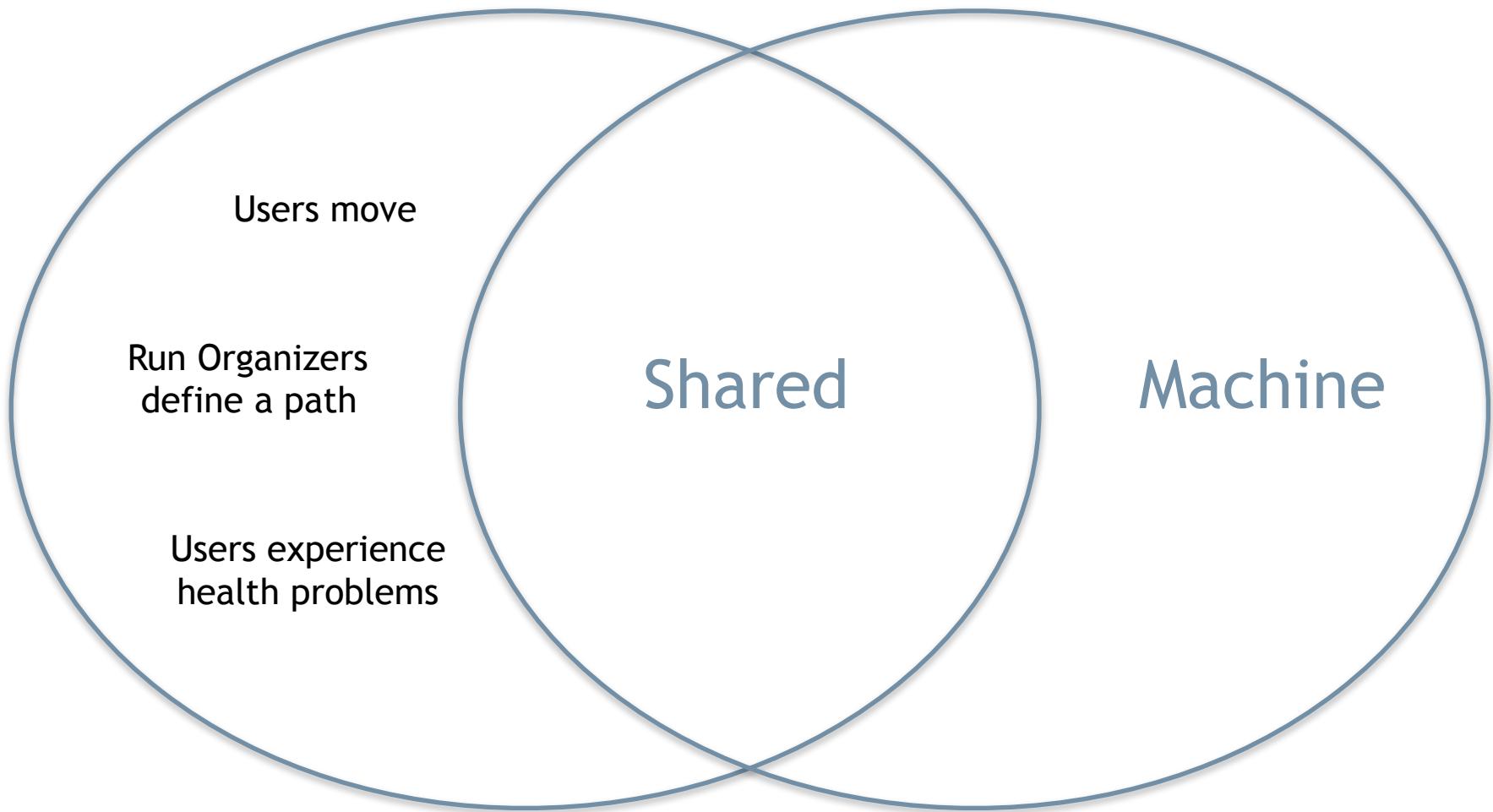


Track4Run

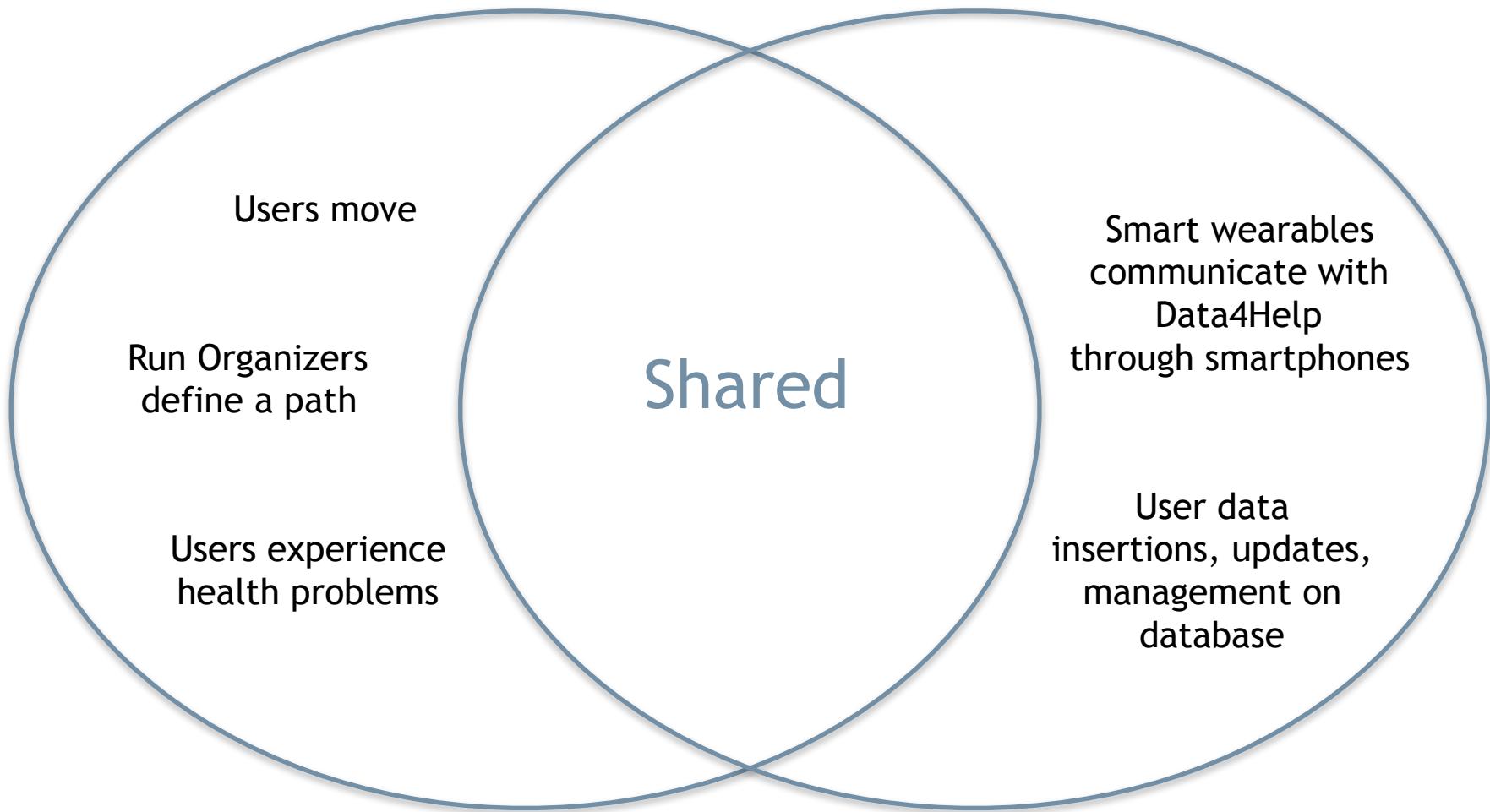
World and Machine Phenomena



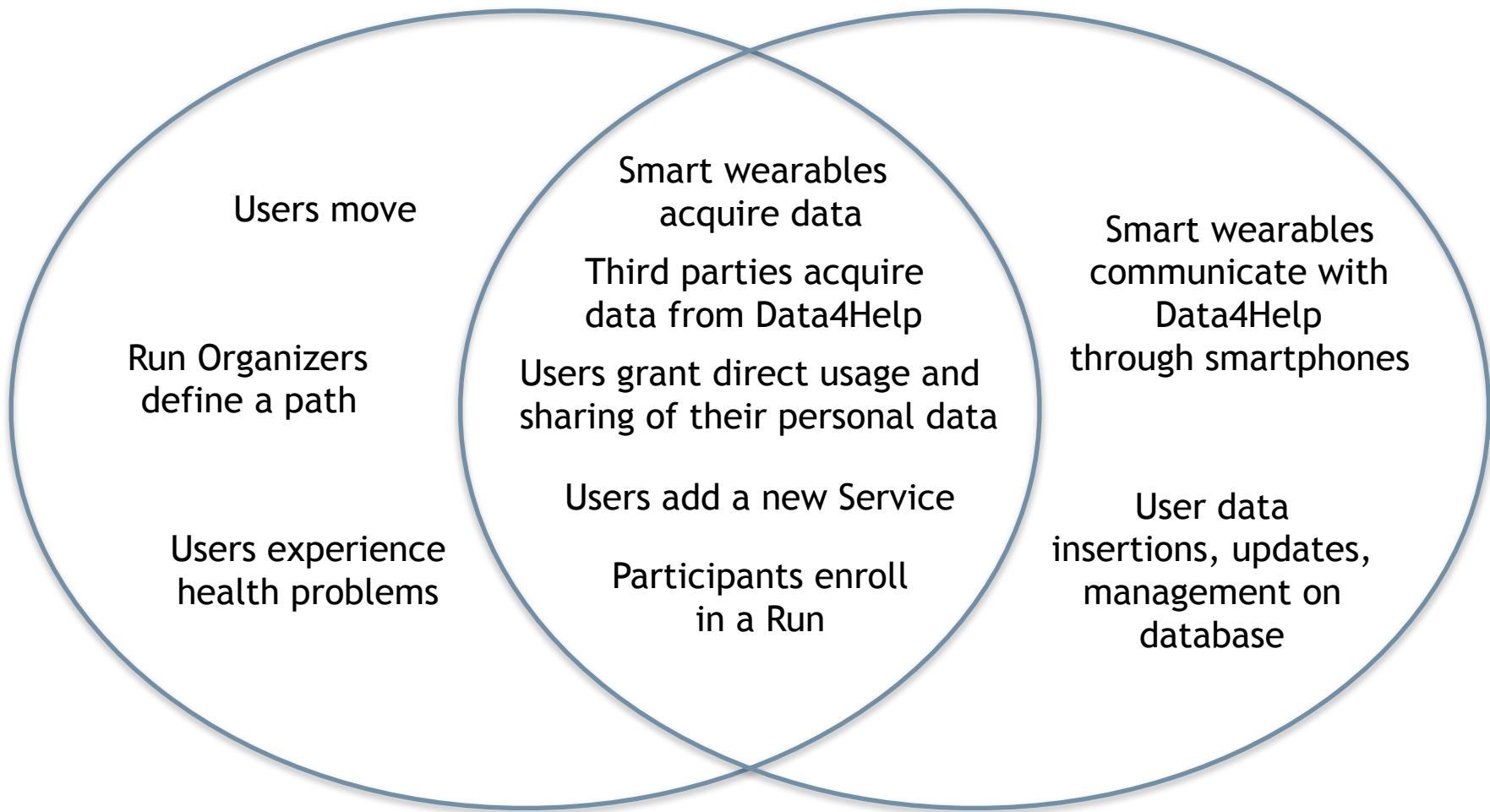
World and Machine Phenomena



World and Machine Phenomena



World and Machine Phenomena



Data4Help Goals

- Collect User data through Smart Wearables.
- Send specific User data to Third parties only if User consent was given after Third party access request.
- Send anonymized requested Group Data to Third parties if the group it refers to is made up of 1000 or more Users.
- Send User data and Group Data to subscribed authorized Third parties as soon as they are produced.
- Allow Users to manage their subscription so Services and to Data4Help.

AutomatedSOS Goals

- Analyse User data to check whether or not a User is a User in need.
- Send an ambulance to the last position of a User in need.

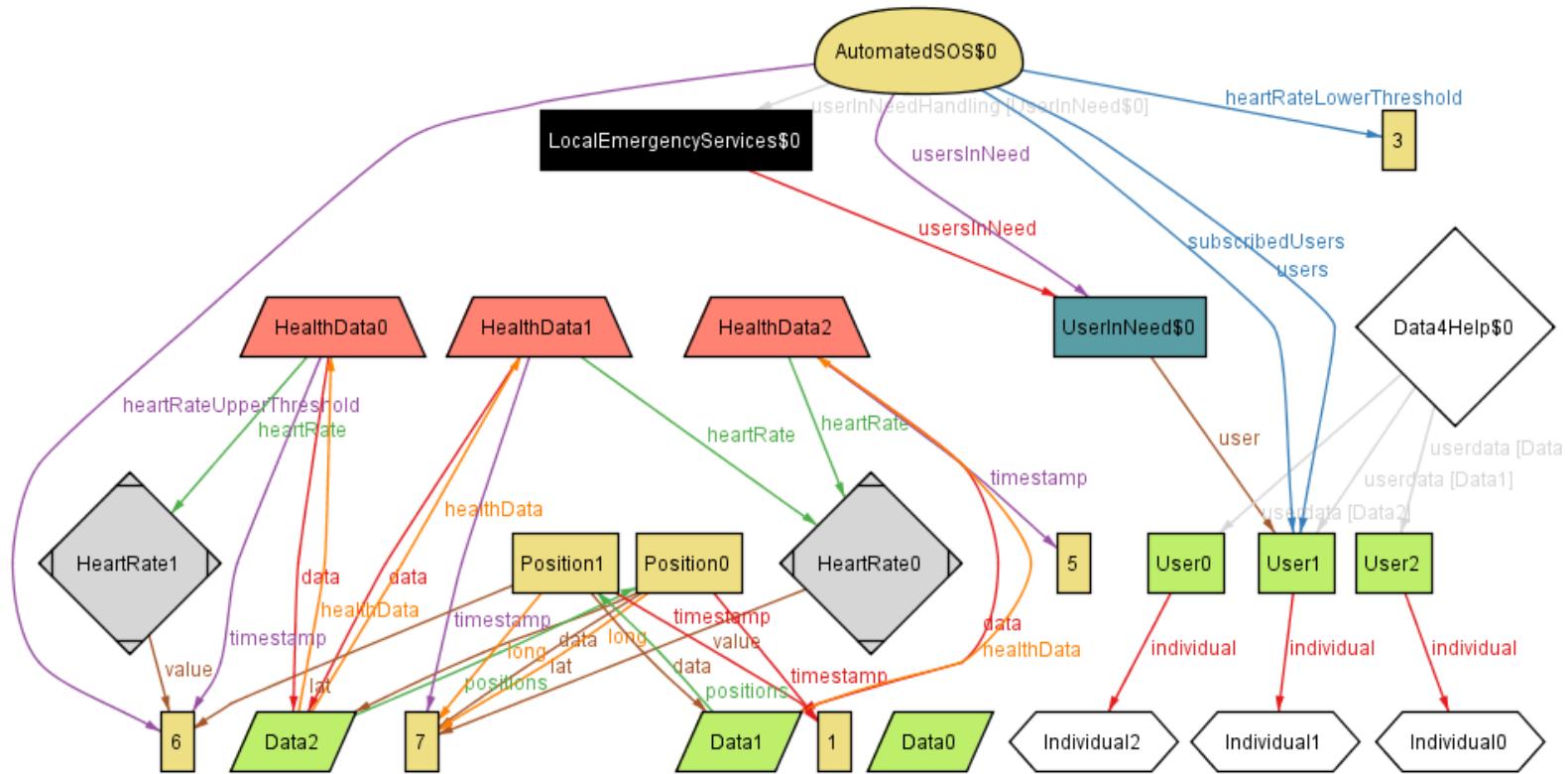
Track4Run Goals

- Allow Organizers to create a Run.
- Allow Users to enroll in a Run as Participants.
- Allow Spectators to watch a Run.

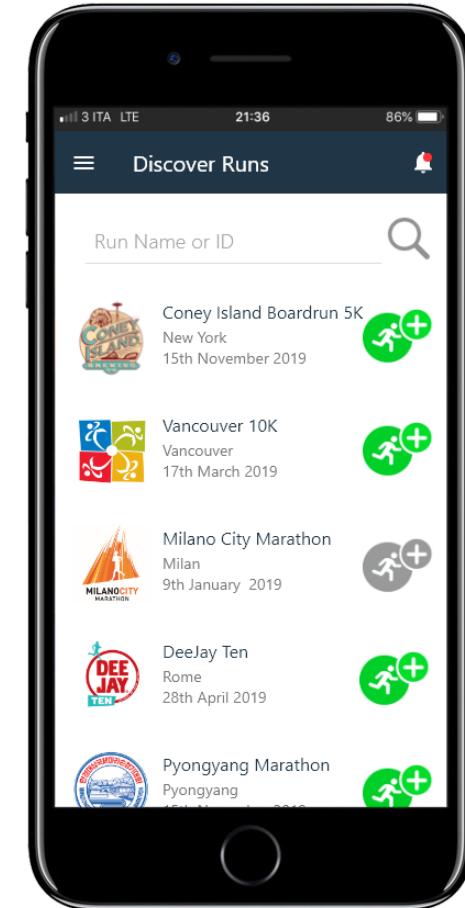
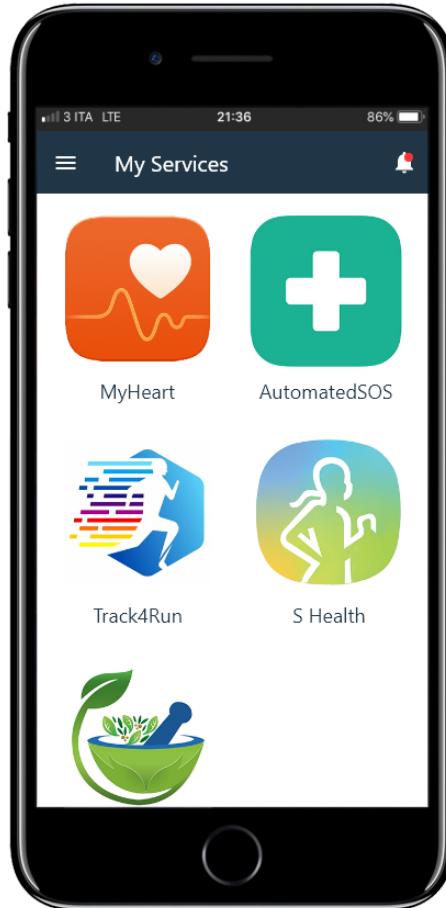
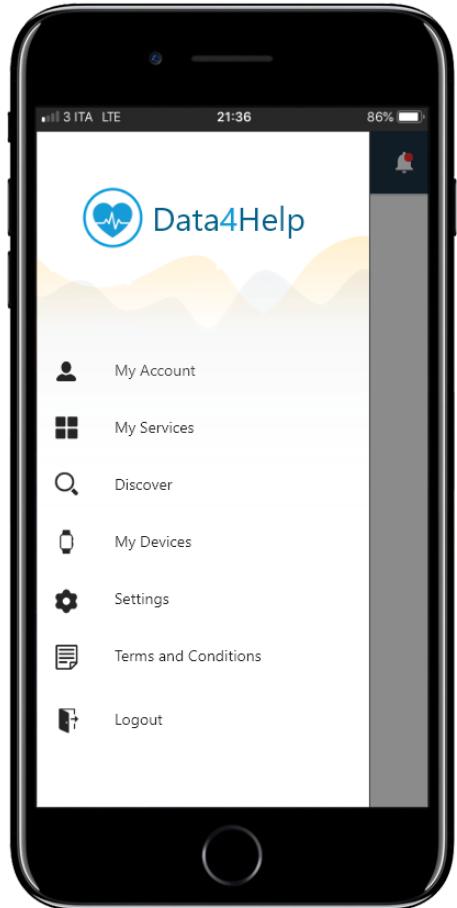
Main Requirements

- Receive and store User data in Data4Help Database.
- Receive User consent approval or denial with respect to Third party data access requests.
- Send specific User data and Group data to the requesting Third party.
- Allow Users to add a Service.
- Call local emergency services providing necessary User data of User in need.
- Allow Organizers to create a Run, defining: name, path, date, maximum number of Participants and enrollment closure date.

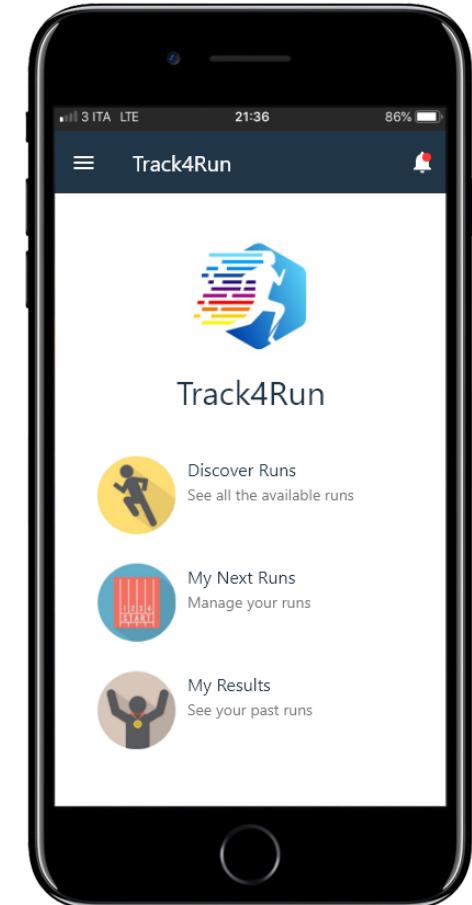
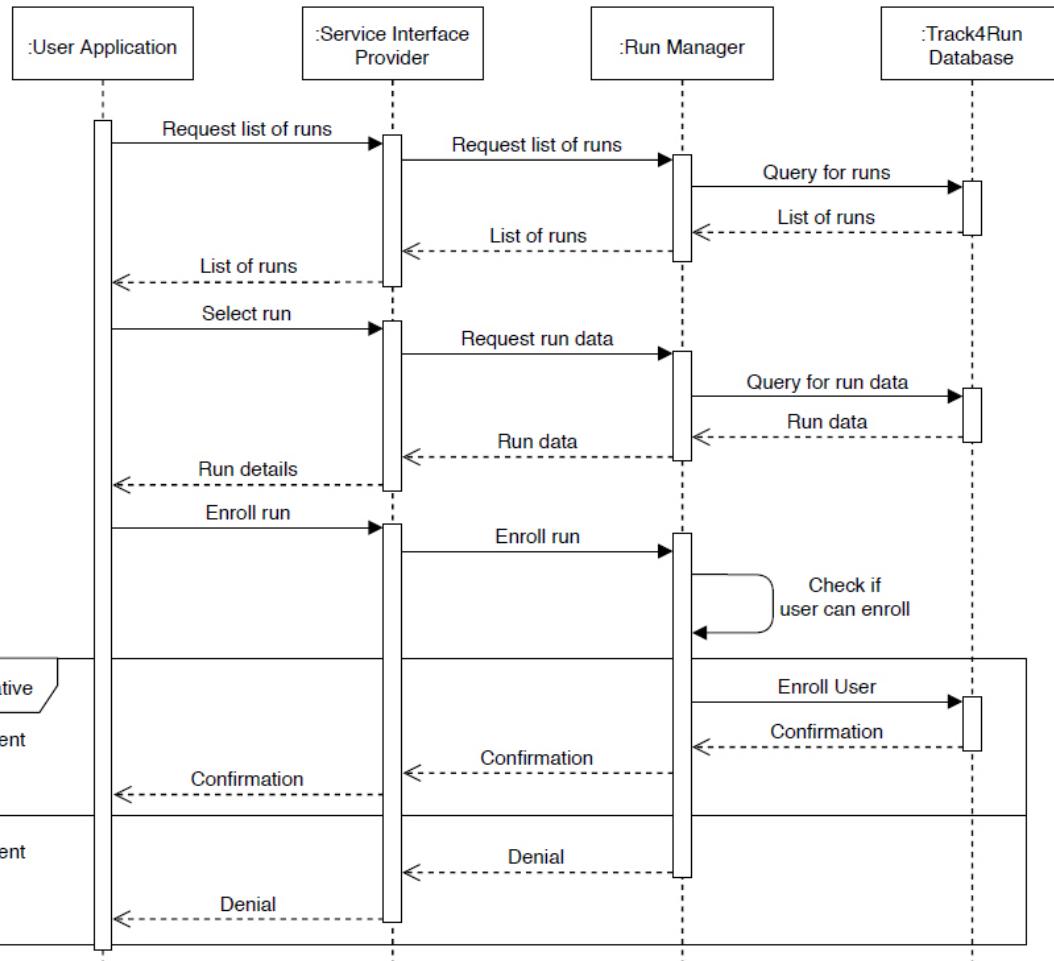
Formal Modelling through Alloy



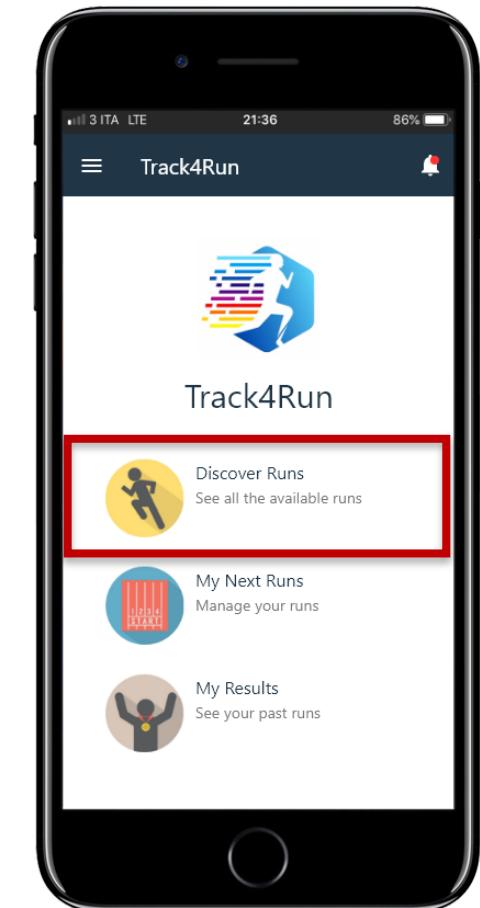
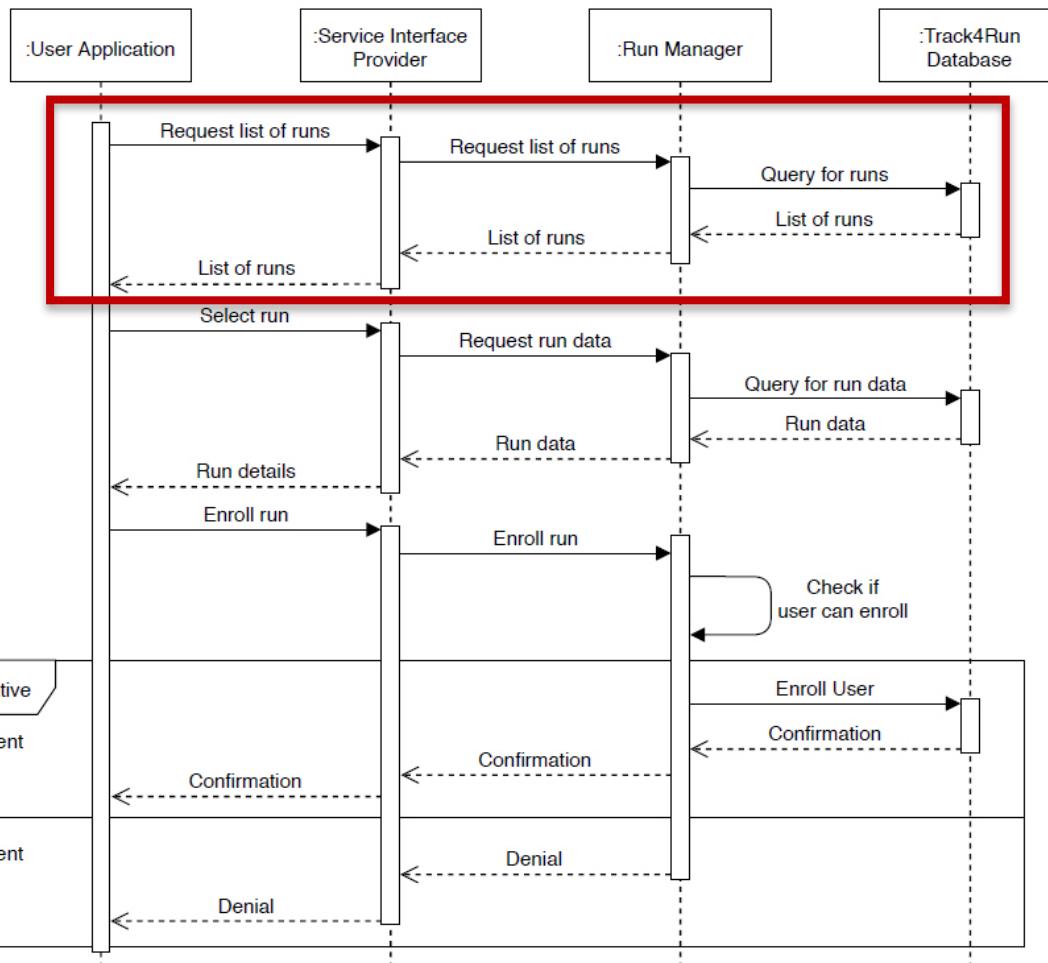
A Meaningful Use Case



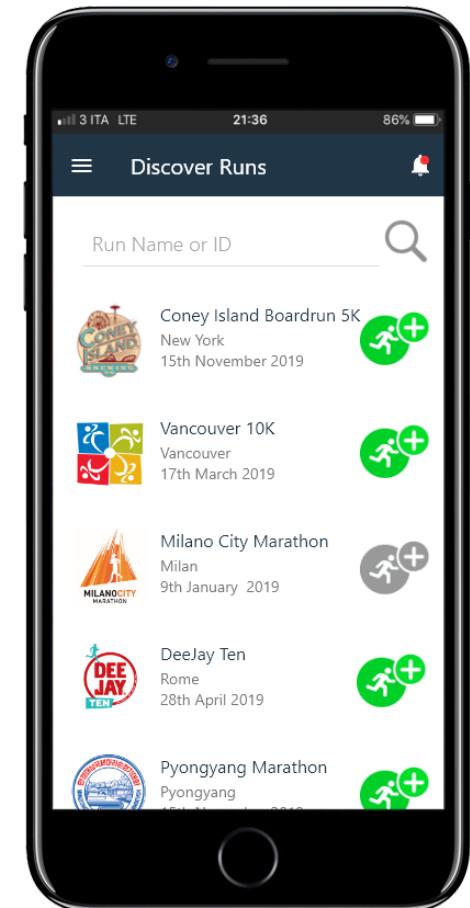
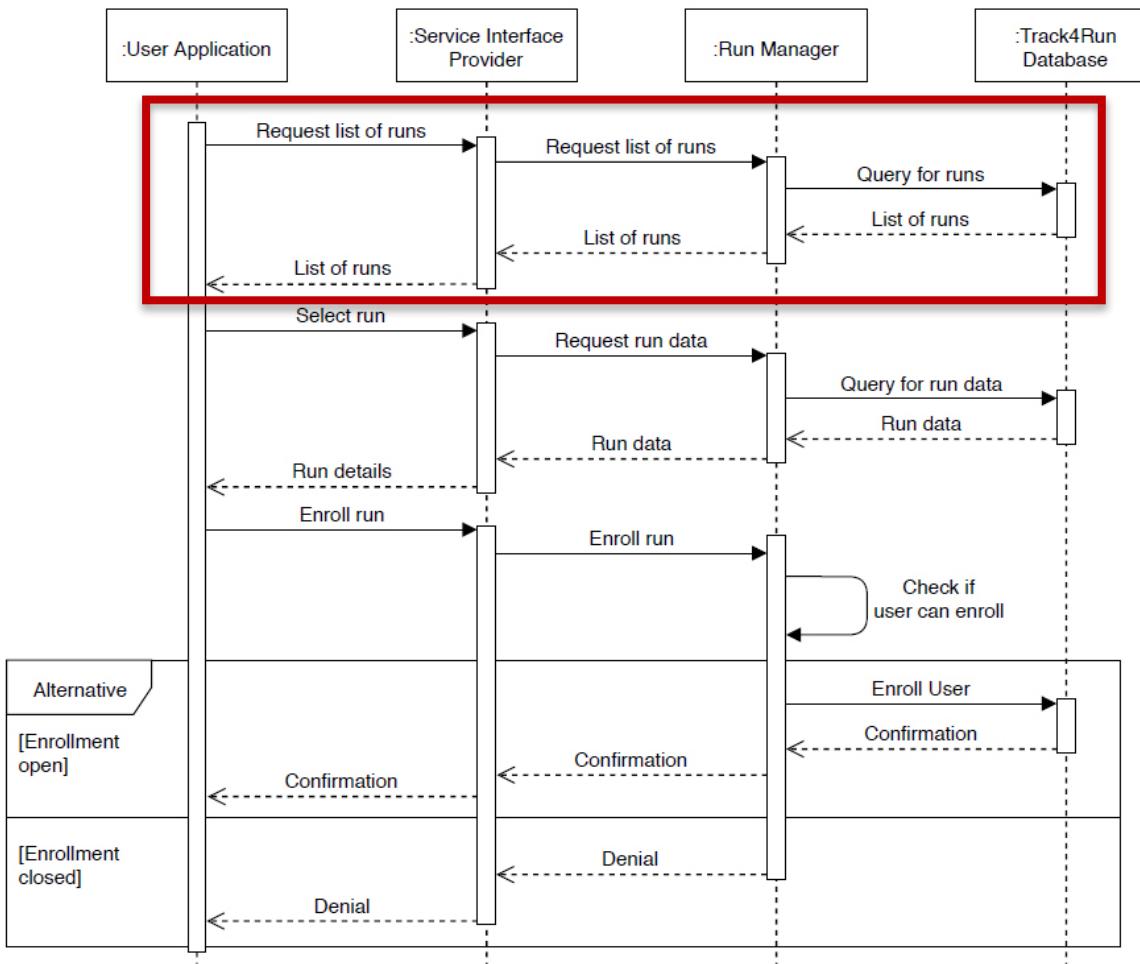
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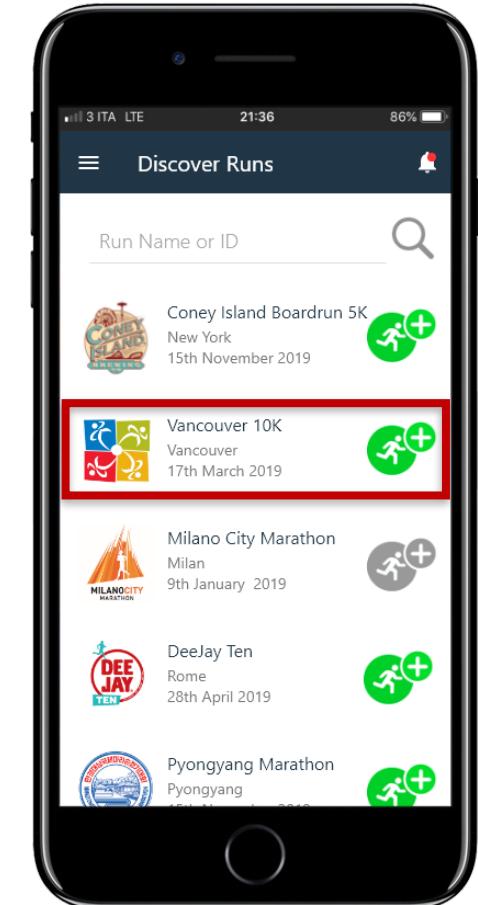
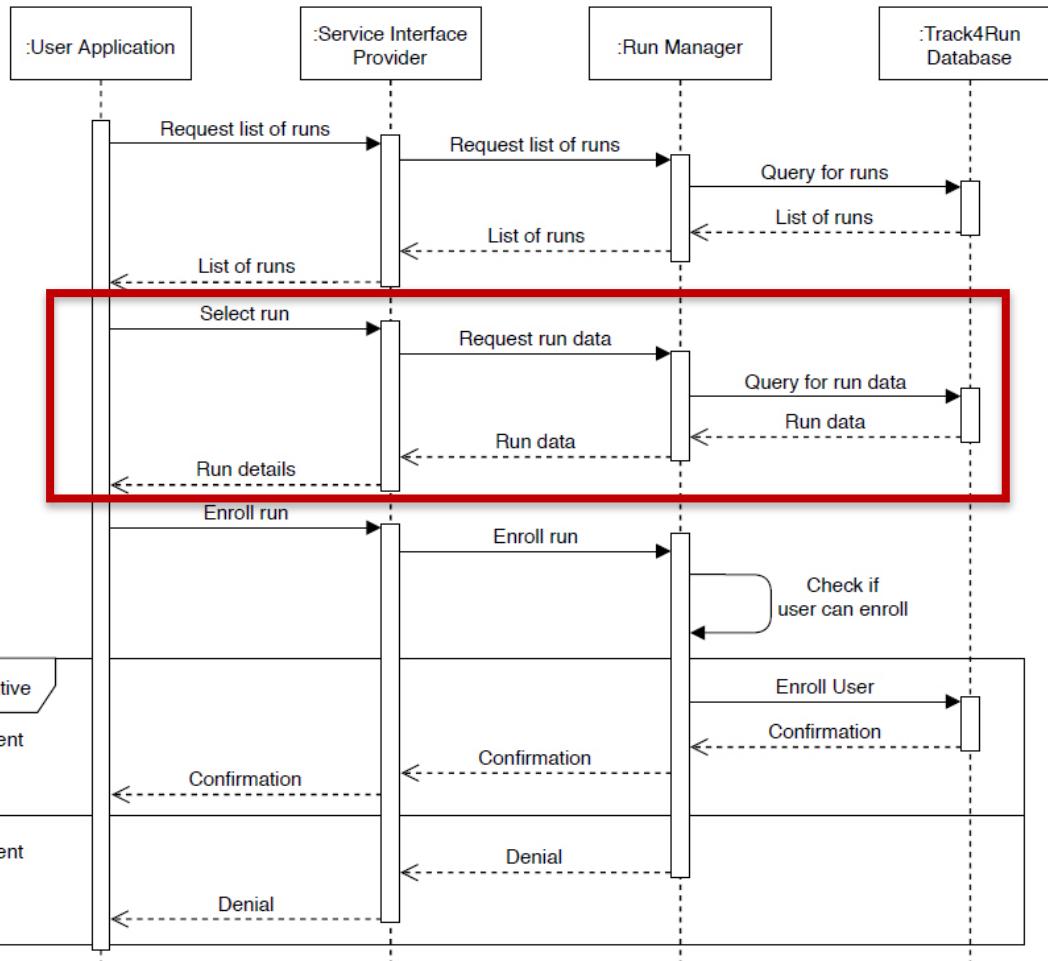
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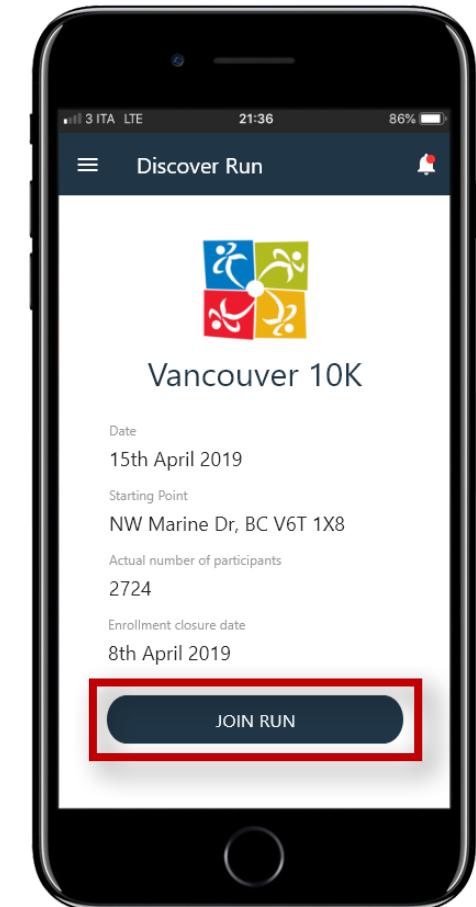
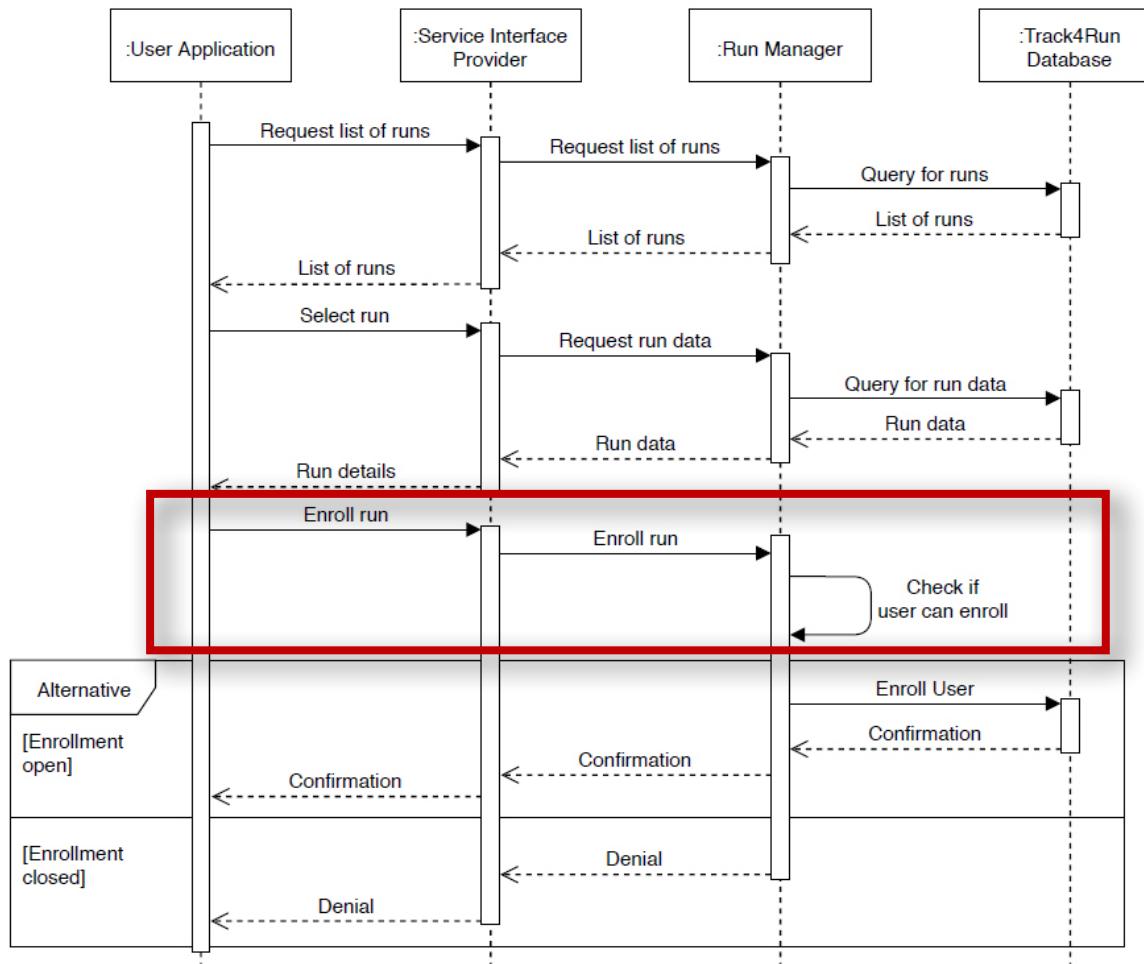
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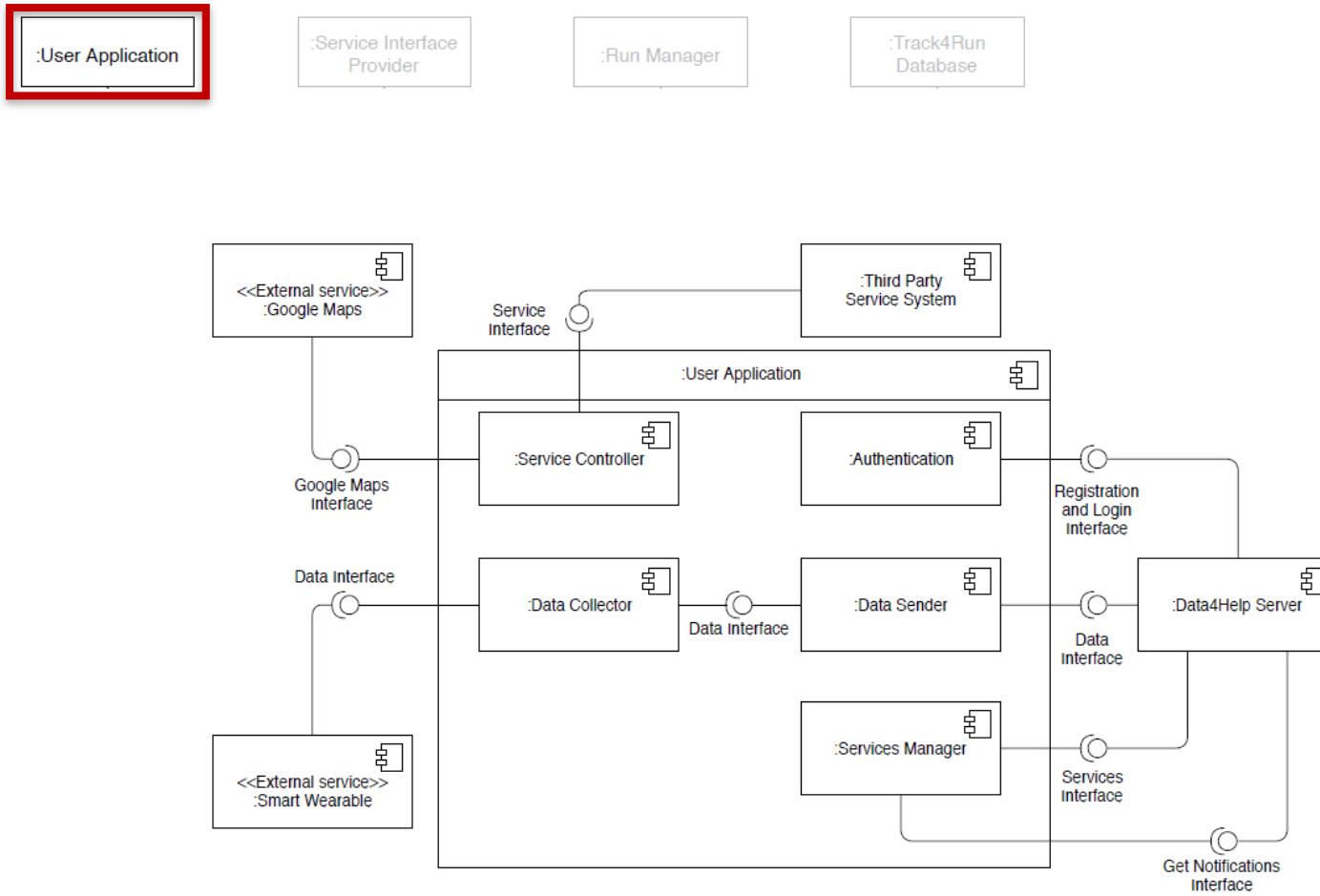
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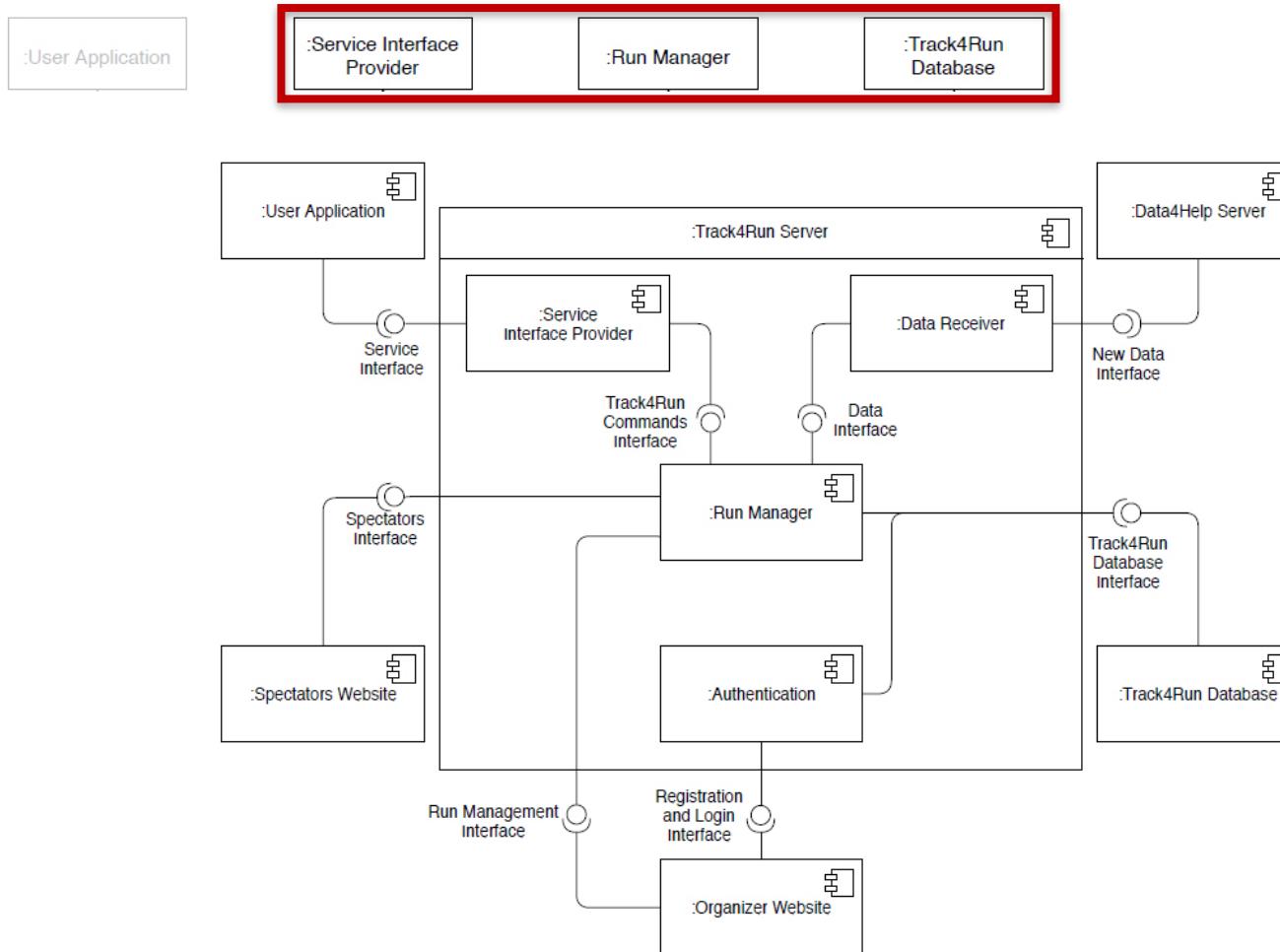
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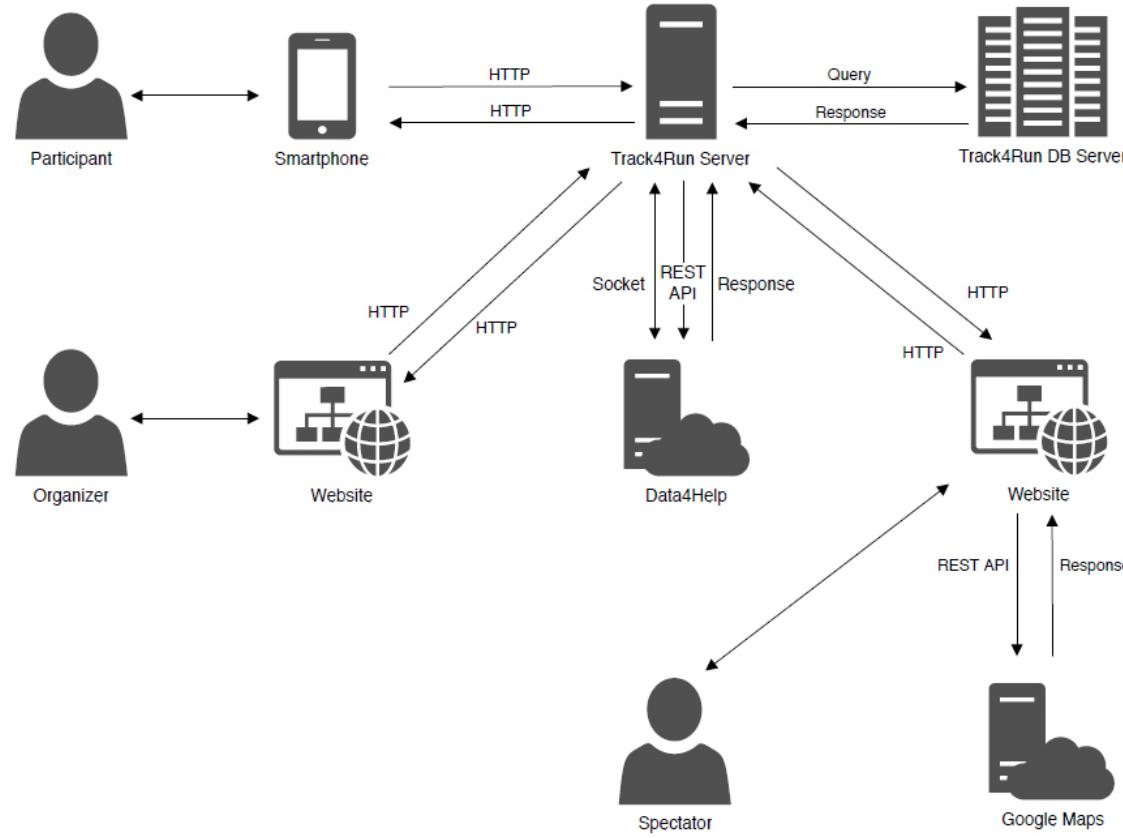
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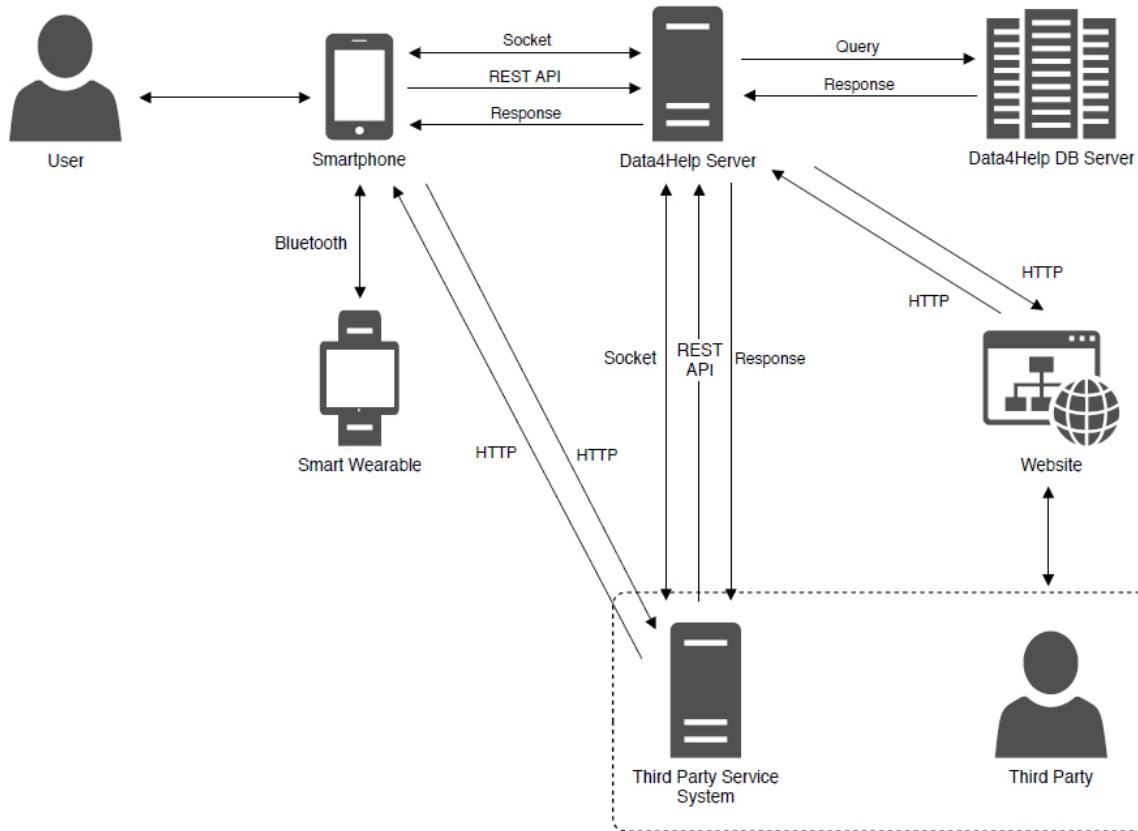
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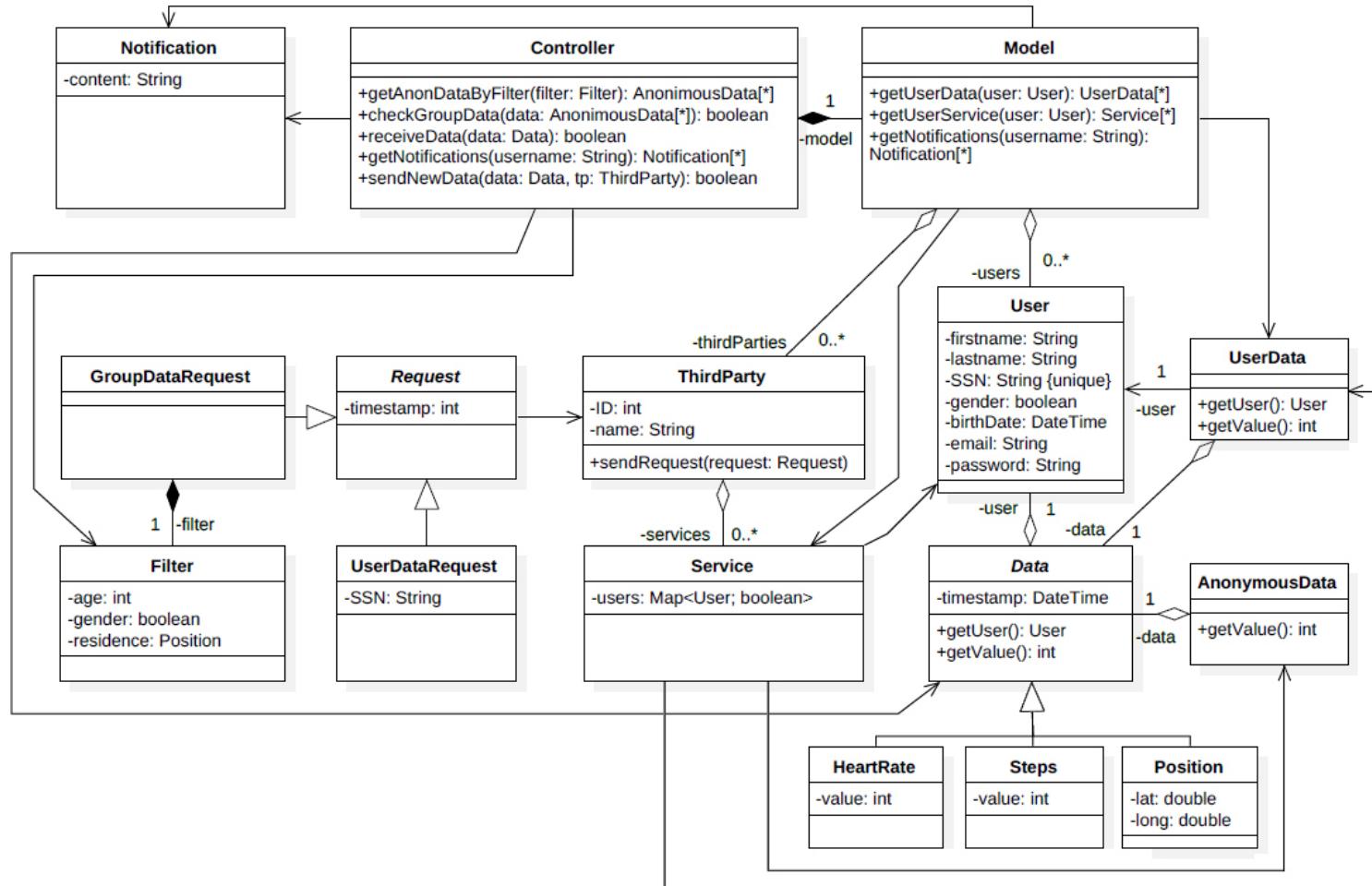
Overview



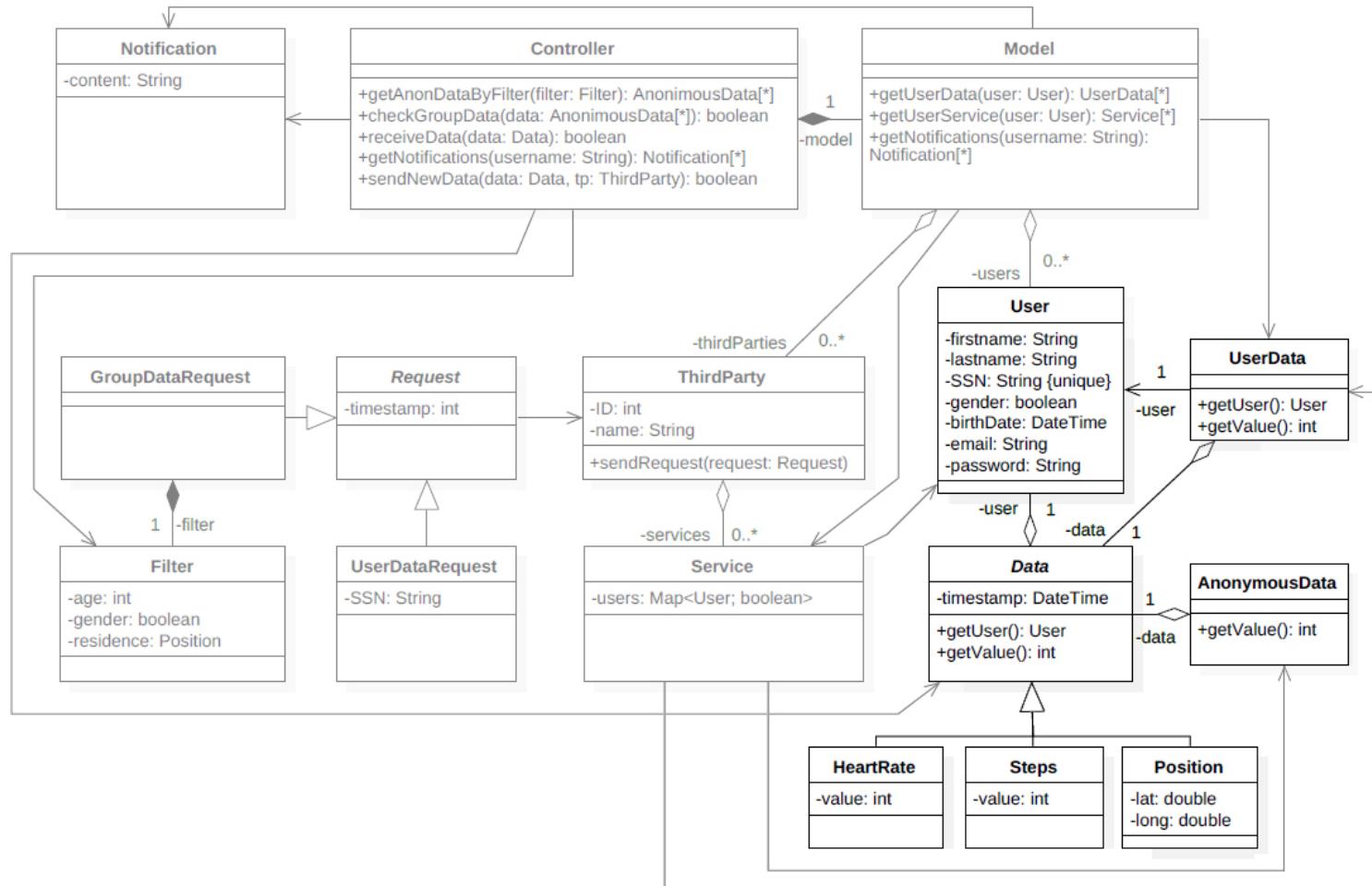
Overview



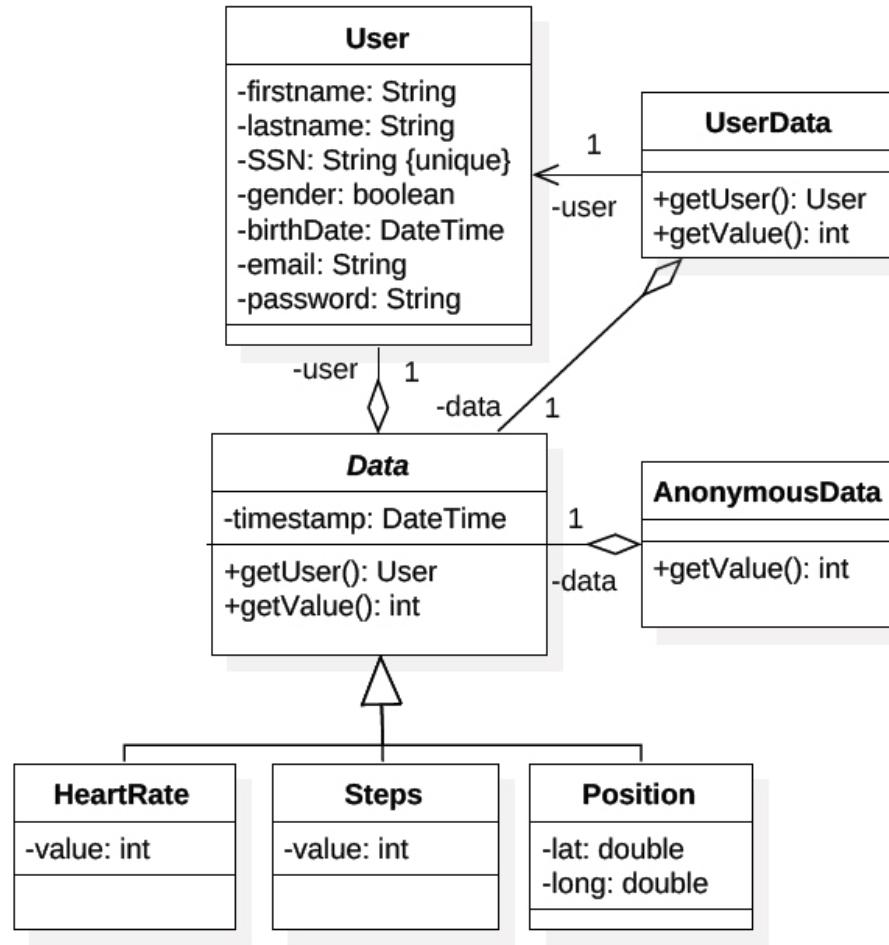
Data4Help Class Diagram



Data4Help Class Diagram



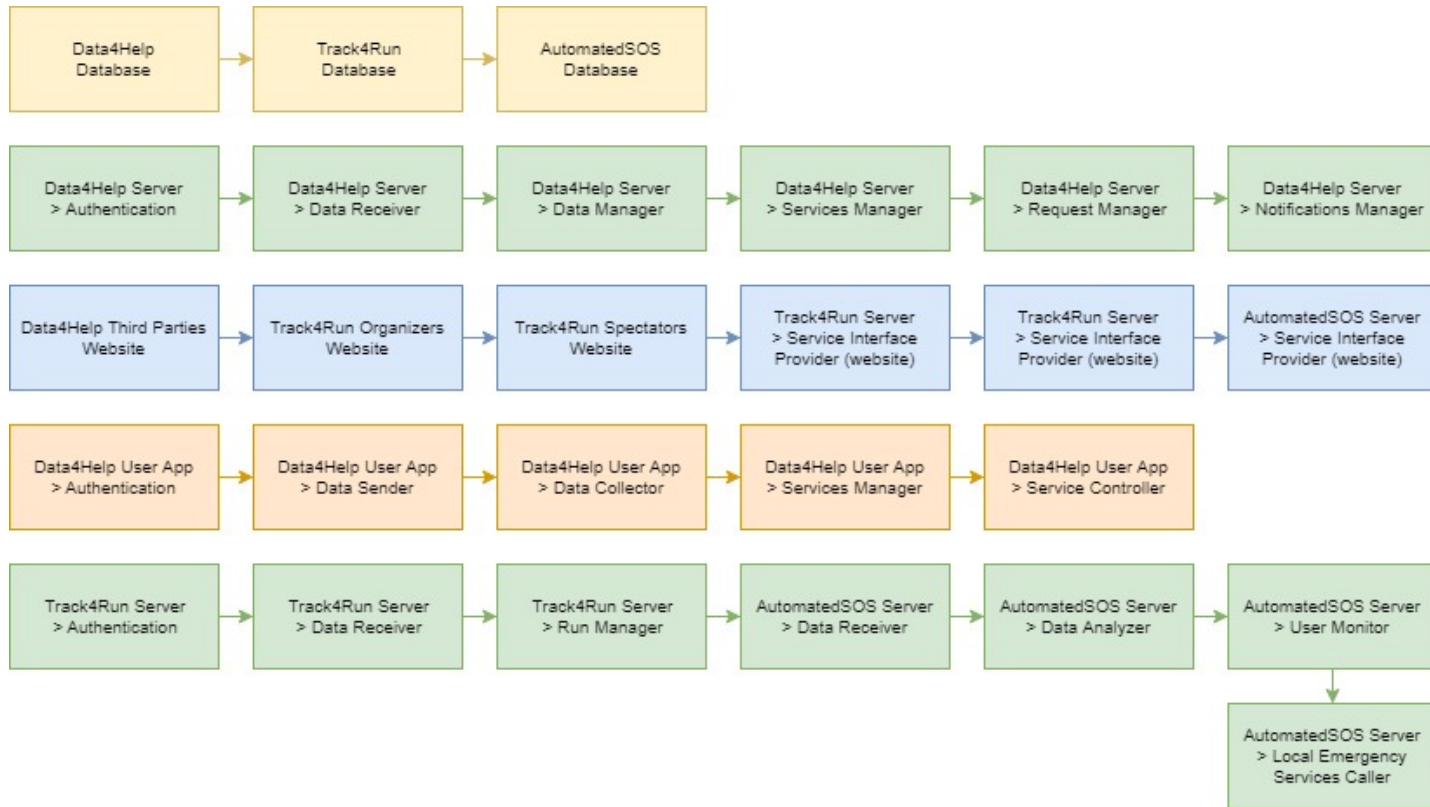
Data4Help Class Diagram



Architectural Styles and Patterns

- Three tier architecture
- Communication between components
- Data exchange
- Notifications system
- Third party services
- Defensive database design

Implementation Plan and Unit Testing

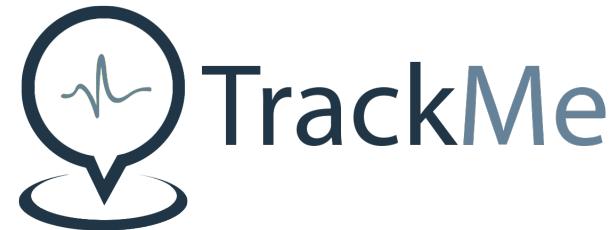


Integration Plan and Testing





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