

Project name: UNIT

Members: Michal Cyprian (475926), Richard Granec (475976), Martin Jordán (475946), Jan Ondruch (433341), Boris Petrenko (433689)

Gym & Yoga Studio

Project description

The system is for two personal trainers, one that does powerlifting the other is a Yogi opening a studio that contains a powerlifting gym and a yoga hall. They have no prior experience in running such facility, nor have they used any system solving similar problems.

The customer wants a system that covers evidence of all the studio's staff, memberships, reservations, equipment and extra costs.

Staff

Structural information about staff related matters is required. This includes positions, salary tiers and types of contracts, as well as necessary information such as duration of a contract, conditions.

General information about the staff includes basic and legal information as their full name, date of birth, position, type of contract, their salary tier.

Maintenance staff attendance needs to be tracked. Their entries, exists, work done and plans for the upcoming weeks.

Trainers will be able to plan their private and group lessons, reserve the hall, send out emails regarding the lesson.

Memberships

Users will have an account created upon their entry. They can choose between various plans, including a one-time entry, monthly or yearly memberships.

Prolongement or cancellation with a partial refund is available.

Reservations

Users will be able to reserve a spot in a group lesson, or contact a trainer to reserve a personal lesson.

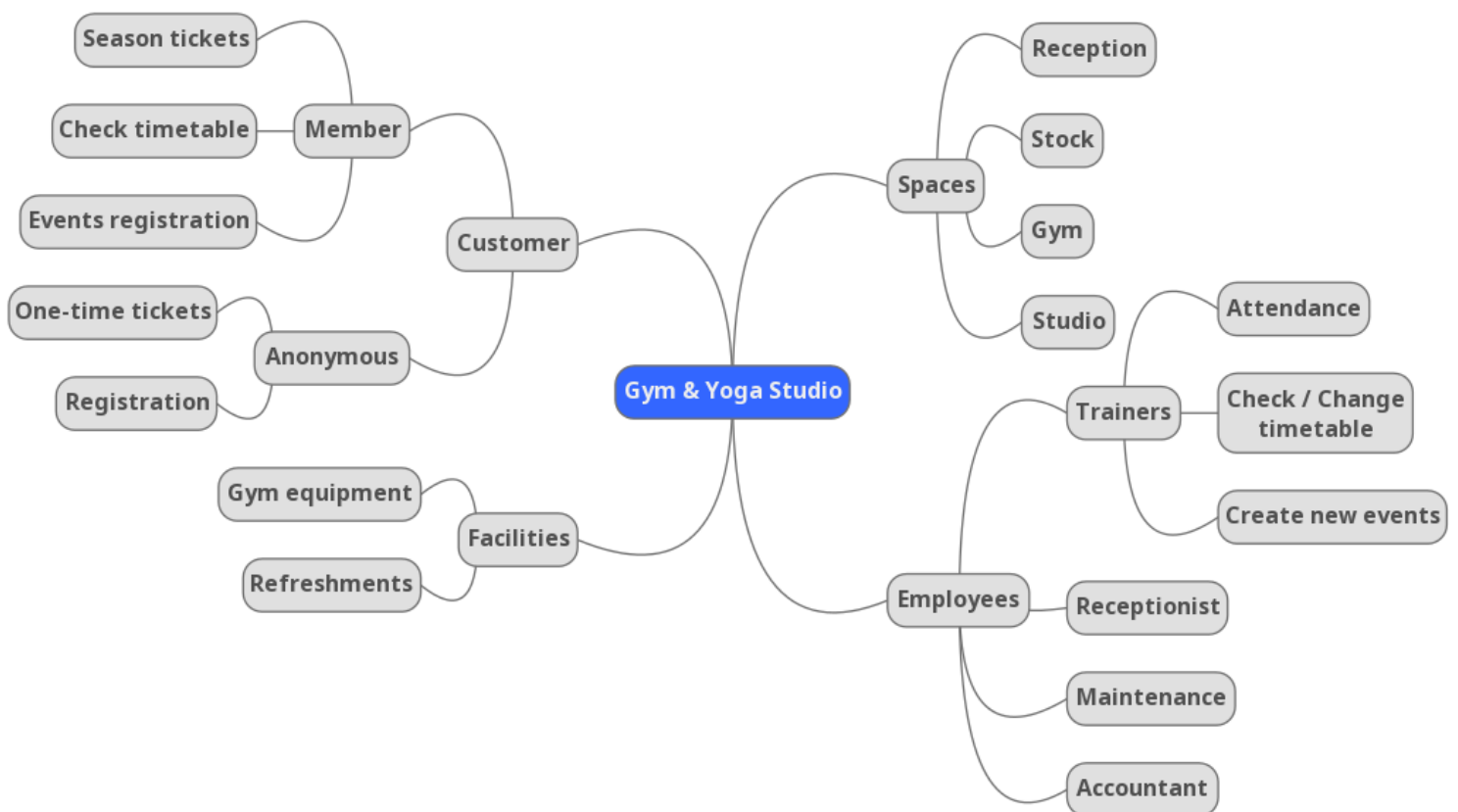
Users with a membership are also able to reserve the hall for a fee.

Equipment

Managers need to be able to keep track of the gym equipment, its state, age, as well as its orders and missing pieces.

Staff will be able to log any missing consumable equipment, both internal for maintenance and shop stock.

Mind map



WBS (Work Breakdown Structure)

UNIT IS

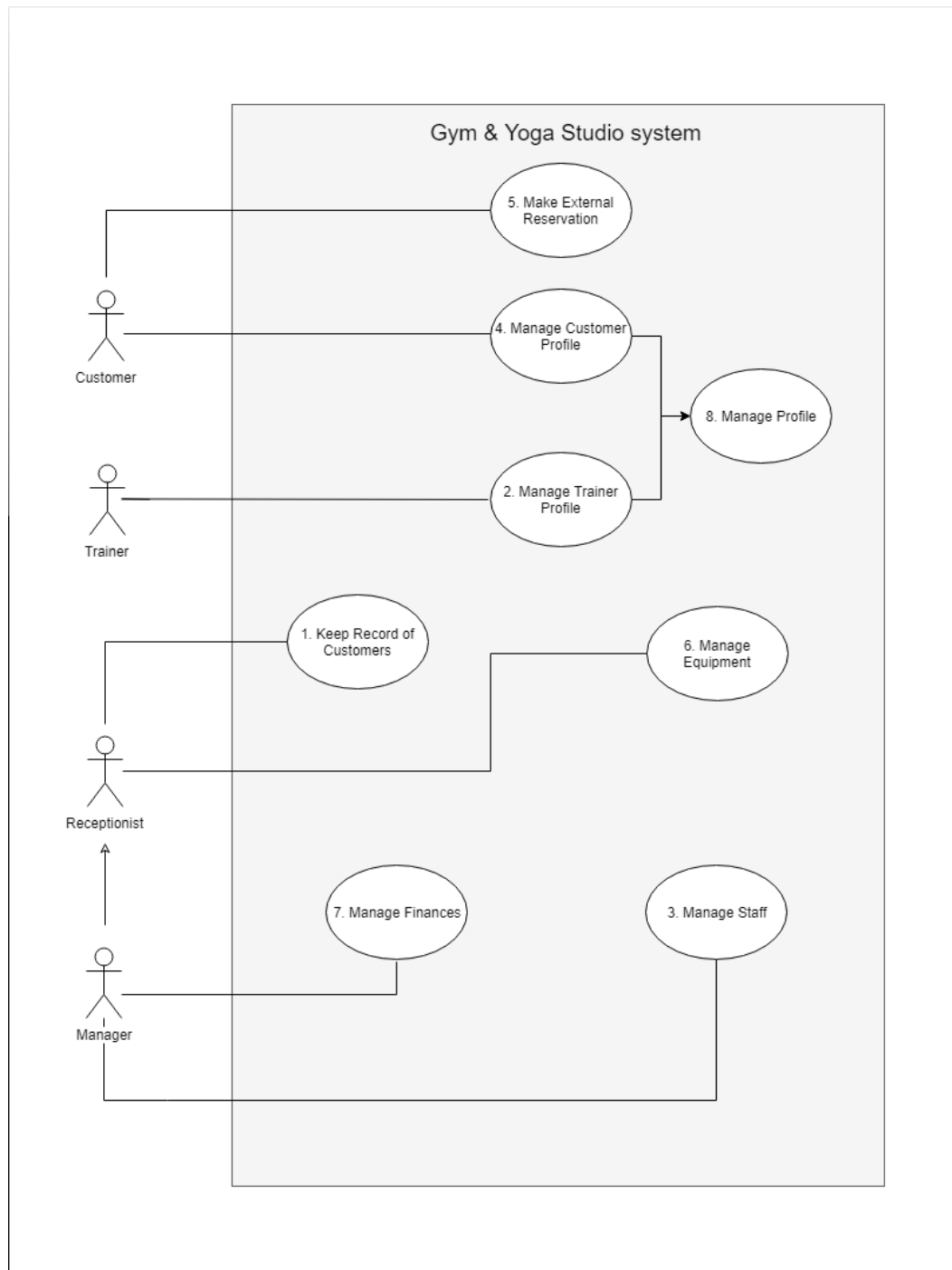
1. Requirements specification
 - 1.1. User requirements
 - 1.2. System requirements
2. Analysis
 - 2.1. Roles
 - 2.2. System modules & functionality
 - 2.3. Software Requirements Specification document
3. Design
 - 3.1. Servers & Hosting
 - 3.2. GUI & UX
 - 3.3. Database structure
 - 3.4. Frontend structure
 - 3.5. Backend structure
 - 3.6. REST
4. Implementation
 - 4.1. Backend programming
 - 4.2. Database creation
 - 4.3. Frontend programming
 - 4.4. API
 - 4.5. Unit testing
 - 4.6. Integration (testing) & Deployment
5. Testing
 - 5.1. Functional testing
 - 5.2. Database testing
 - 5.3. UI testing
 - 5.4. Acceptance testing
6. Handover
 - 6.1. Requirements check
 - 6.2. Training
 - 6.3. SLA
7. Support & Maintenance
 - 7.1. Adding new functionality
 - 7.2. Fixing bugs
 - 7.3. Integration testing

Functional requirements (7-10 reqs)

ID	Requirement Name	Acceptance Criteria
1	Customer evidence	Application allows to keep a record of customers, register, delete, update, sort and export customers. It also allows to keep a record of membership - create, edit, change expiration date, remove. It stores personal information of the customers, as well as information related to the gym.
2	Trainer profile management	Application enables the trainers to create new lessons and events, edit and delete them. It displays time schedule for the gym and yoga studio.. The system allows the trainers to manage theirs lessons - add and remove customers.
3	Staff evidence	Application keeps record of trainers and other employees of the gym. It holds theirs personal information, allows to add a new person, delete or edit them.
4	Customer profile management	Application allows customers to, buy a new/prolong current membership. It is also possible to make a new registration to a lesson or to an event.
5	Reservations module	Application allows external customers to make a reservation for the yoga studio or the gym.
6	Equipment management	Application keeps track of gym equipment, consumables as well as of additional maintenance stuff.
7	Finances management	Application allows to keep track of incomes and expenses of the gym.
8	Manage profile	Application allows to keep track of personal information - CRUD.

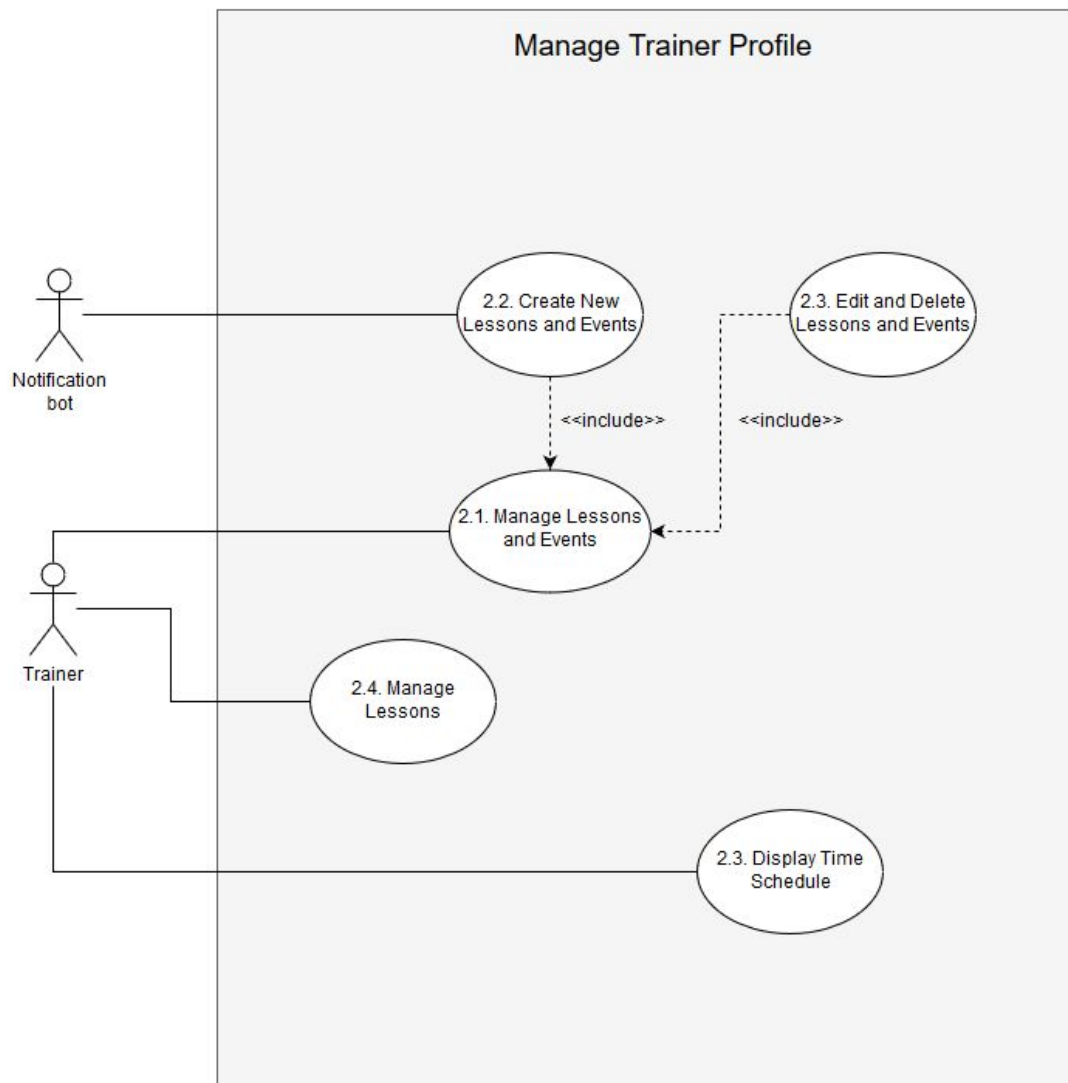
Use Case Diagram

<https://drive.google.com/file/d/1XQK1NBeAV3KEIkStpOTPy7dMHkXBvFn2/view?usp=sharing>



Use Case Diagram 2

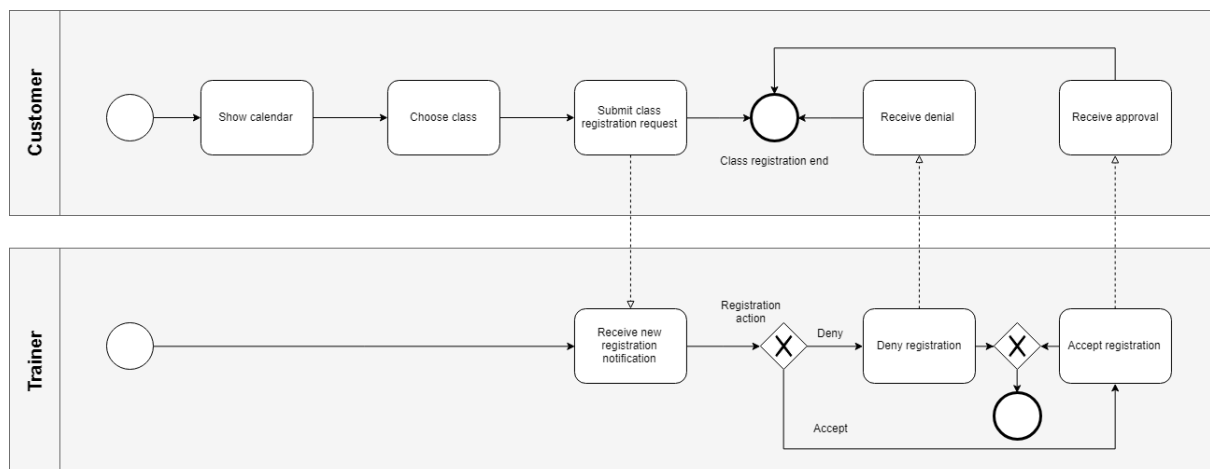
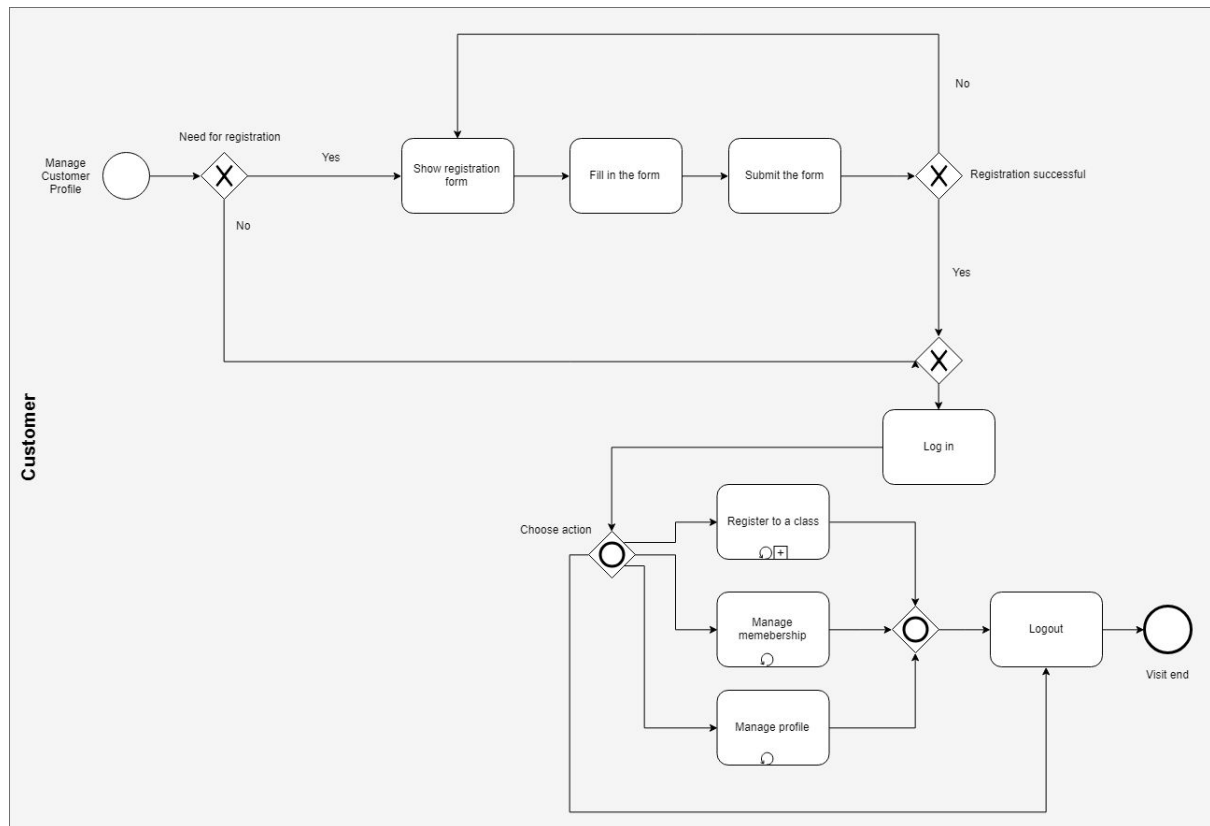
<https://drive.google.com/file/d/1zfZa8BwzrmKIsUFhHzKjIhxxD5viB9nm/view?usp=sharing>



Use case: Create new lessons and events
ID: 2.2
<p>Brief description:</p> <p>A trainer creates new lesson or event, which can be either one-time or regularly repeating event.</p>
<p>Primary actors:</p> <p>Trainer</p>
<p>Secondary actors:</p> <p>Notification bot</p>
<p>Preconditions:</p> <ol style="list-style-type: none"> 1. Trainer has a permissions to add and edit events to the event calendar
<p>Main flow:</p> <ol style="list-style-type: none"> 1. The use case starts when trainer opens events calendar and chooses the option to add a new event or lesson. 2. The system asks trainer to fill in all the necessary data like name, date and time, required space and equipment. 3. The system asks trainer if this new event should be repeated on a regular basis. 4. The system asks trainer if it should notify the clients about the new event. 5. Notification bot sends e-mail notifications to selected groups of clients.
<p>Postconditions:</p> <ol style="list-style-type: none"> 1. The new event is scheduled in the event calendar. 2. All the clients, who might be interested or affected by this new event are notified by e-mail.
Alternative flows: None

Business Process Model and Notation (BPMN)

<https://drive.google.com/file/d/1guZ8a33Uh8Rmcxb3Krv9y2w-7ZhCWyQb/view?usp=sharing>



Datový slovník

Person = @personID + firstName + lastName + birth + city + street + house num

Employee = @personID + firstName + lastName + birth + city + street + house num + salary
+ position + contractStart + contractEnd

Customer = @personID + firstName + lastName + birth + city + street + house num +
consent

Participation = role

Membership = @membershipID + from + to

MembershipType = @membershipTypeID + name + price

Lesson = @lessonID + name + start + length + type

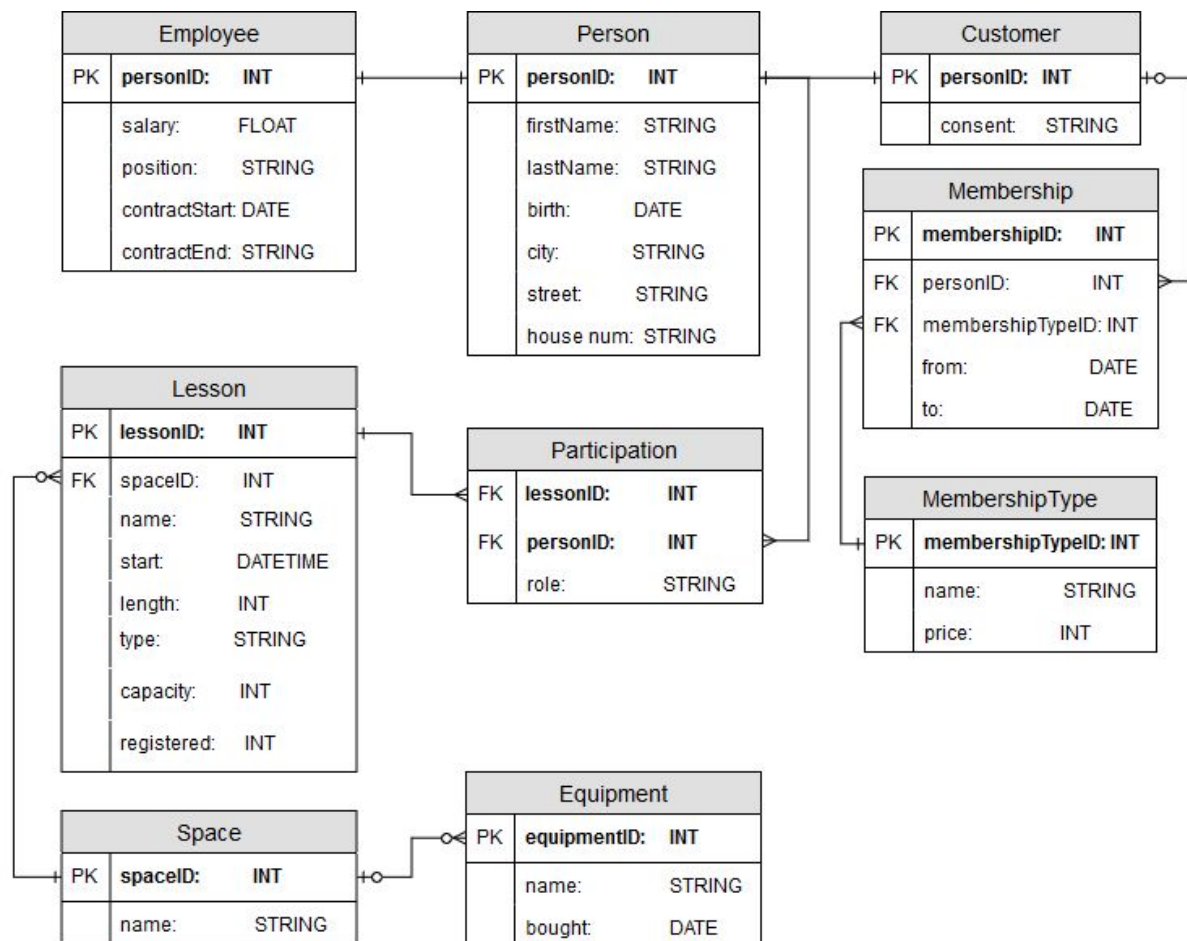
Space = @spaceID + name

Equipment = @equipmentID + name + bought

Role = [Attendee | Lecturer]

ERD

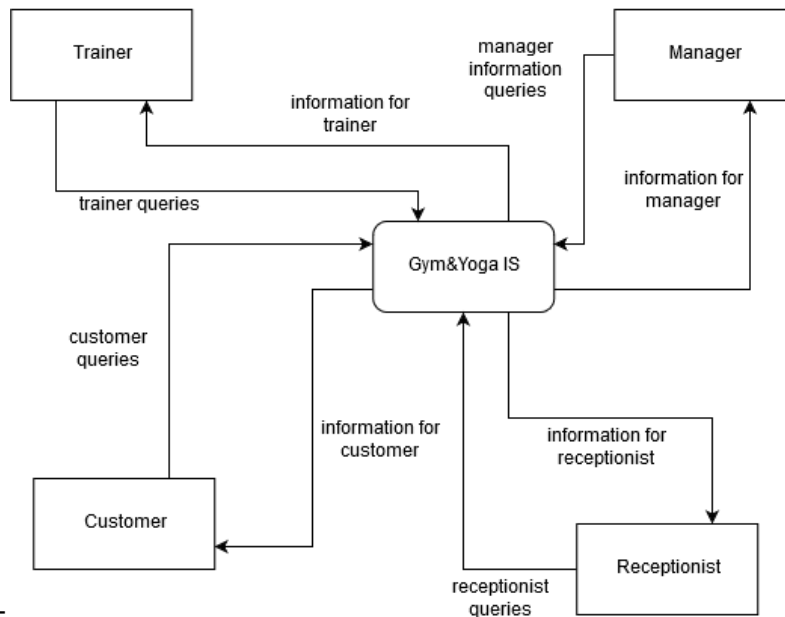
<https://drive.google.com/file/d/1N1Z4UNJmyG1G4RNx0JaixoySZcbY2o3w/view?usp=sharing>



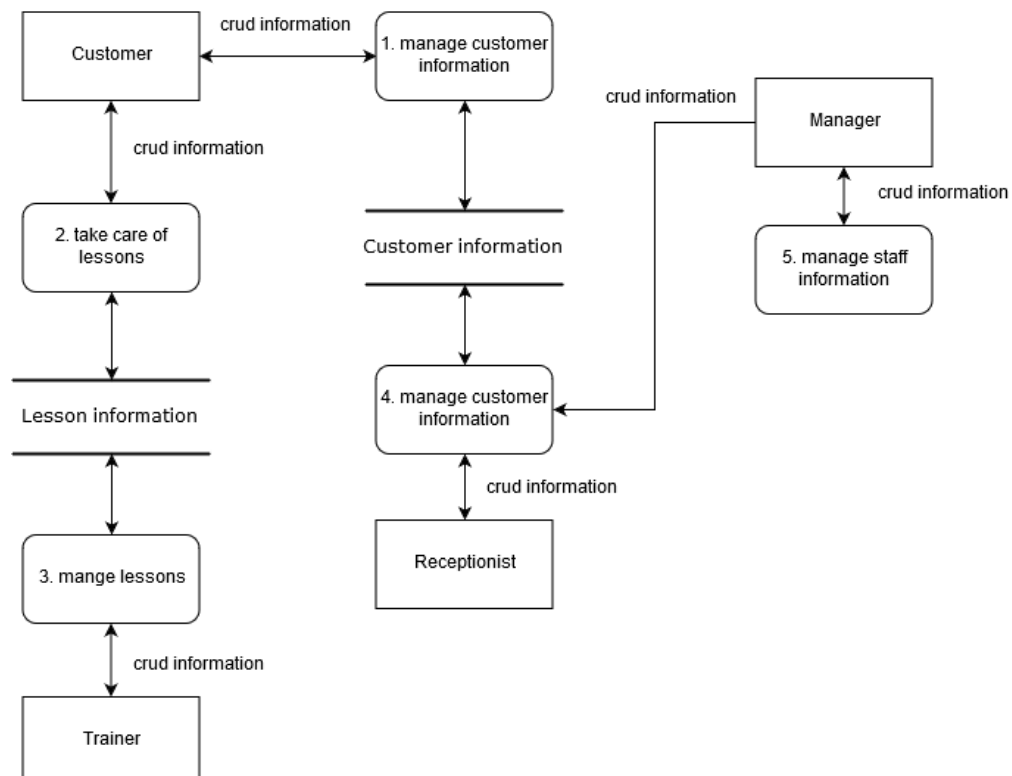
DFD

<https://drive.google.com/file/d/1zkEjfAtfiDhsZYE4sPOzfNLBOEUmjYvk/view?usp=sharing>

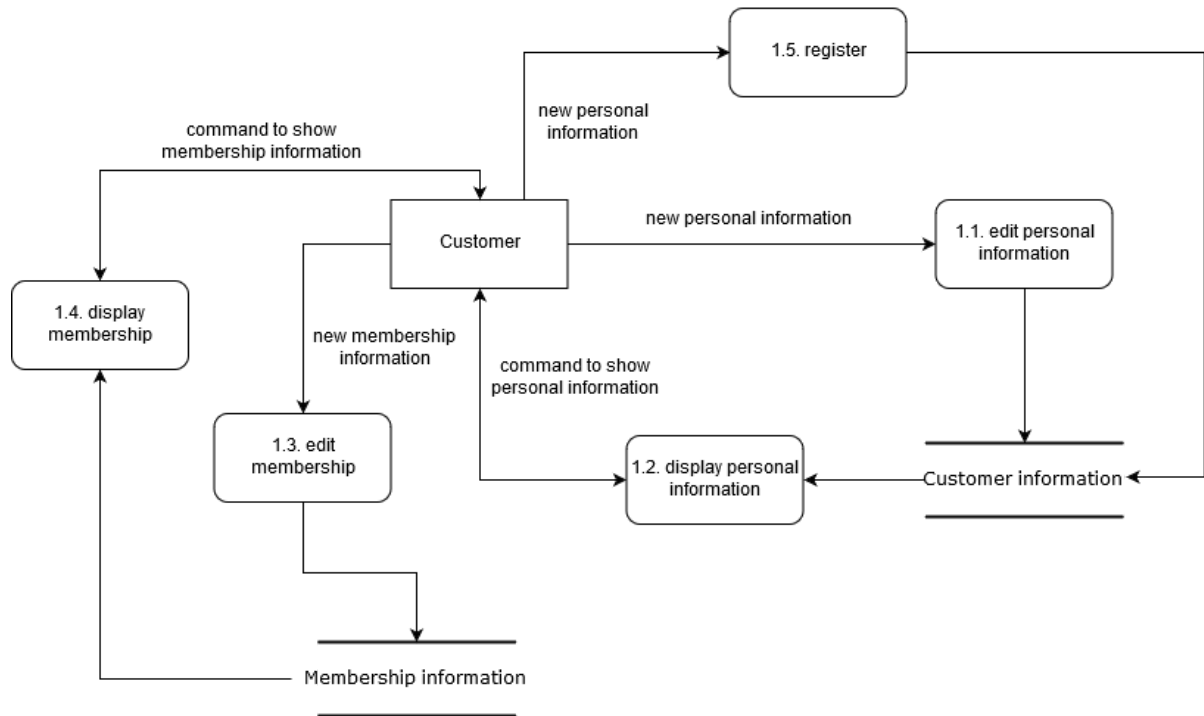
Context diagram



DFD IvIO

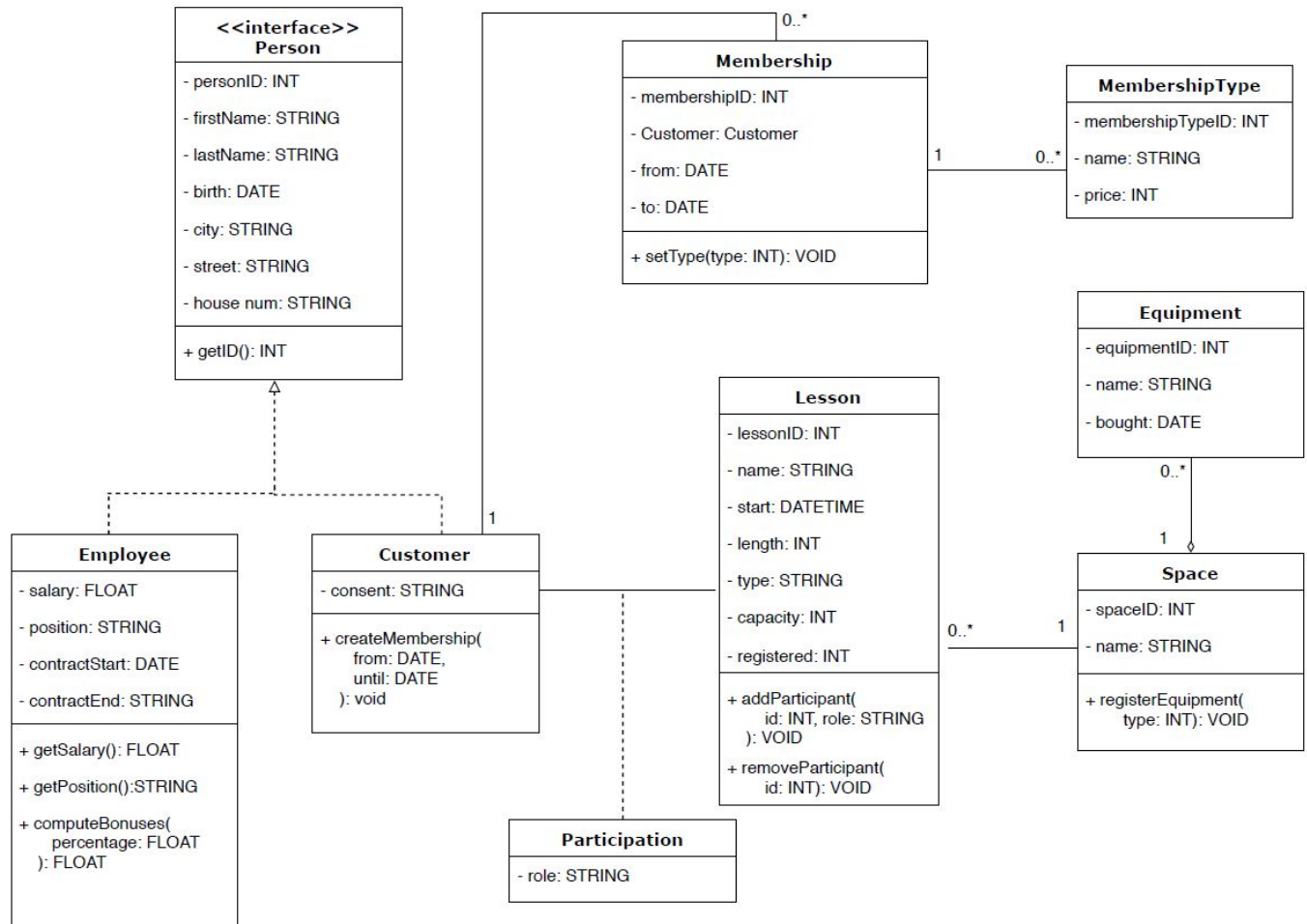


DFD lvl1



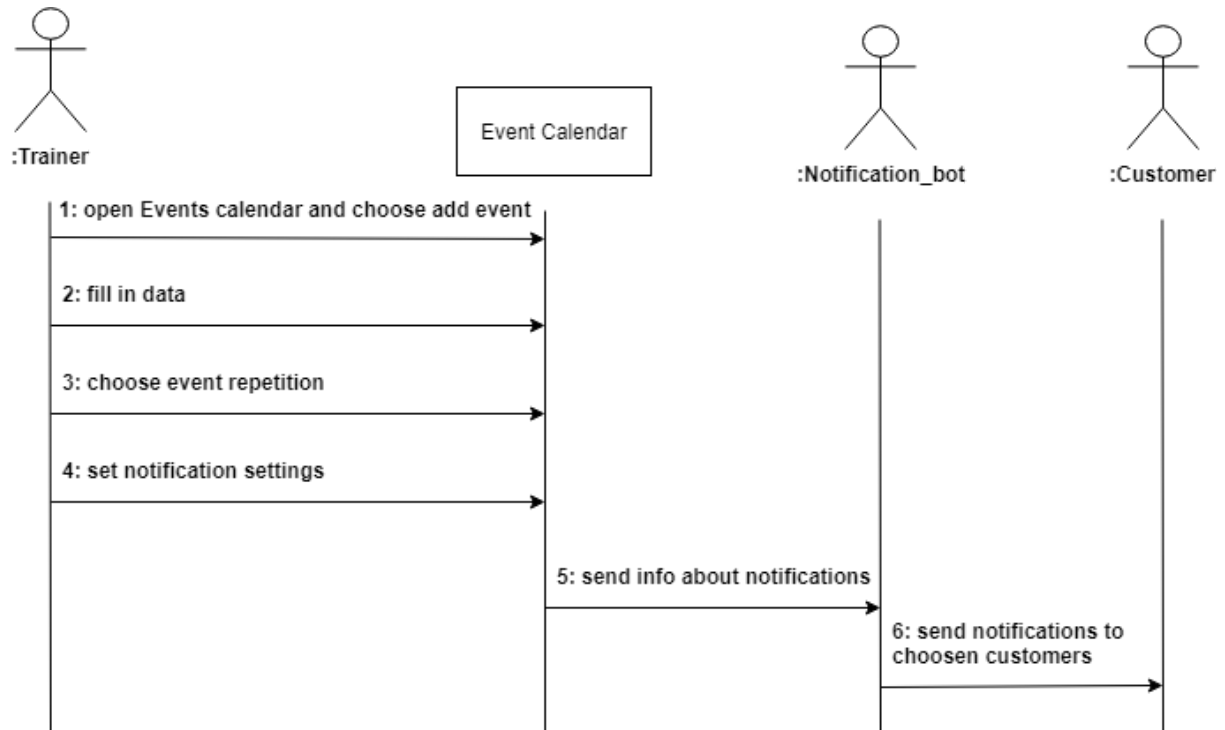
Class Diagram

https://drive.google.com/file/d/1nvnJF9ocYLC-tMmnDOR5BpkZf0z_5OEB/view?usp=sharing

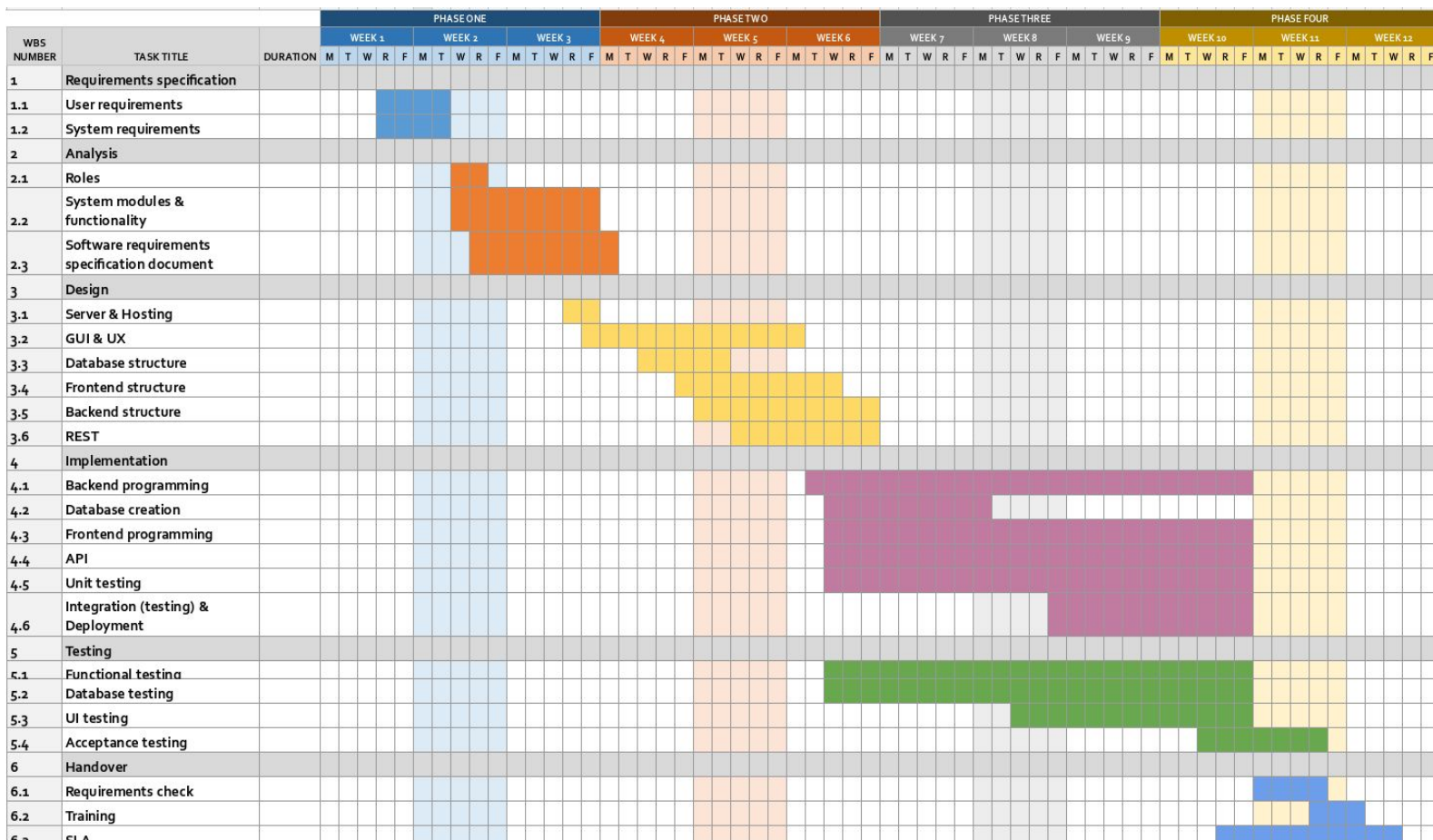


Sequence Diagram

<https://drive.google.com/file/d/1f6oZZCveuEyjYRHiz0XqHA2yH-l7g5zH/view?usp=sharing>



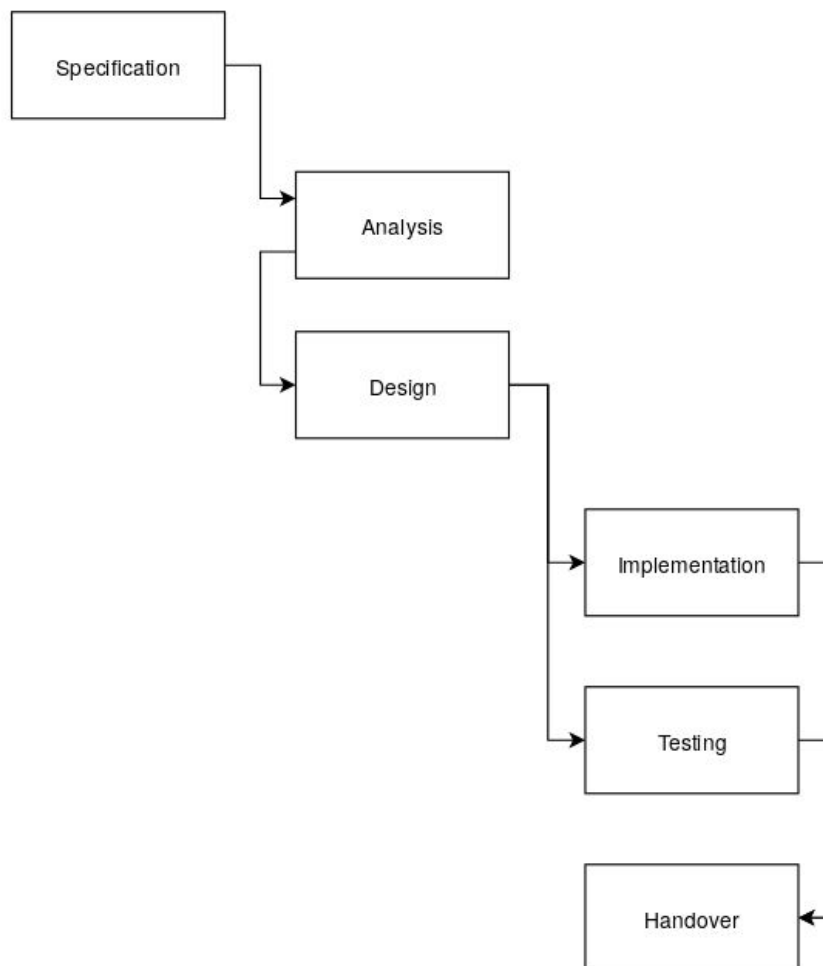
Ganttūv Diagram



https://docs.google.com/spreadsheets/d/1mw3QEflyQSi5Mlv6_xJ4ZREJfIGUGj8_p5aKJq0WHqw/edit?usp=sharing

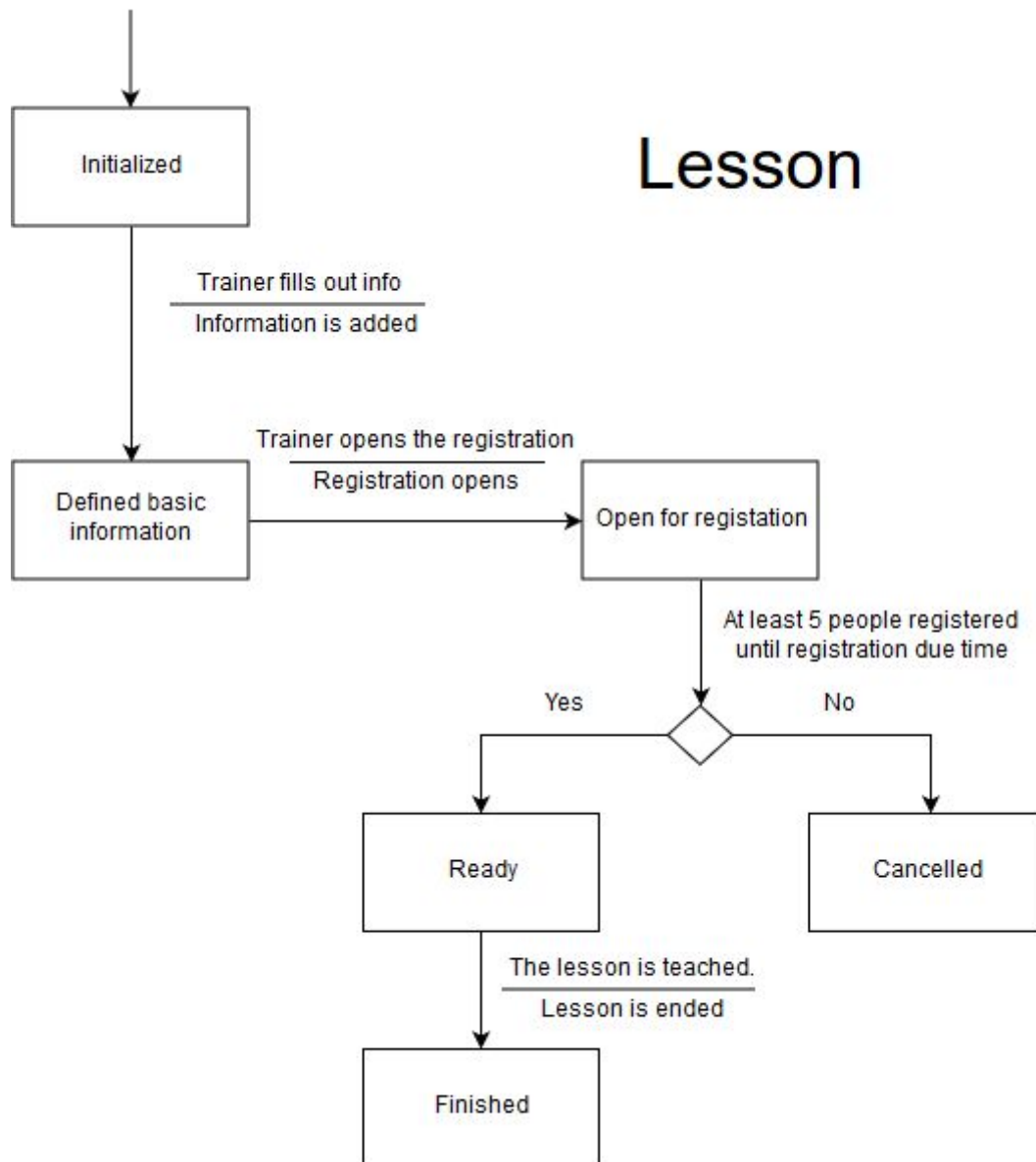
Sietovy diagram

https://www.draw.io/?lightbox=1&highlight=0000ff&layers=1&nav=1&title=network_diagram#R5Zhdb5swFIZ%2FTW4nvkkvtzRbJ21XmbTu0oJTcGU4yJgC%2B%2FUz4QBx3VaTppBovYrP6%2BOP8%2BYxONn4u6L7llmVf8cUxMZz0m7j3248z3VvHP0xKP2oxFE4CpnkKSUtwoH%2FBhJpXNbwFGojUSEKxStTTLAsIVGGxqTE1kx7QGGuWrEMLOGQMGGGrP3mq8IHdetGi3wHP8mllN7oZewo2JVMldc5SbE8kf7%2FxdxJRja2i24EYzJt8Gcd9fqV33piEUv3VAJ%2F2ofqpOEh1rRSiVDImWDKxX9RPEpsyhWEGR0e5KoRuuroJHVf3J%2B1fQ8qHclhKJft7GnEMxj5v6HwEpXr6llmjUEvLwt8QK5py3Oqvw1erJanGRiaURRUqJjOgrGB2WiMKWIDej06RIJjiT%2BbsjFjJ5rzFTt0gR192l5Z%2BYqKhSQ8VJPYBJ3odLC3rTWPbnCs4VOxYSKtPkmk2zQ1SQfe2H3alNMAncnszbBem3QnU%2FITnyPI3a9zgHOA5BnjxW%2BSdH7zABi9cCbzAAu%2BjrgiveX1x5uaHf%2F%2BMsFWoCy%2F7uDs%2FdKENXbQSdG70Ds2NVzl3tE70LdQ8u%2Fw75PI5ni9pq5zn7crluWsjF9nlbVdCLrKQ%2B1pUAgq93Su5voS%2BeX9ZFb34f0cvvhx6sYXeD6gVL7OrYy5Yk7mtZcsdK1PUBV2dL%2BEZfdHh8gv52HfyP4O%2F%2FwM%3D



State Diagram

https://drive.google.com/file/d/1eiAjh8x1_P4tt1K6Y9zIshzkTdiMGoUG/view?usp=sharing



Seznamy událostí


Event ID	Name	Type (F, T, C)
1.Customer		
1.1.	Display personal information	F
1.2.	Edit personal information	F
1.3.	Register	F
1.4.	Edit membership	F
1.5.	Display membership	F
1.6.	Buy new membership	F
1.7.	Show schedule	C
1.8.	Register to lesson	C
1.9.	Unregister from lesson	C
1.10.	Log out	C
1.11.	Log in	C
2.Trainer		
2.1.	Log in	C
2.2.	Log out	C
2.3.	Create new lesson	F
2.4.	Cancel lesson	F
2.5.	Deny registration of a customer	C
2.6.	Accept registration of a customer	C
2.7.	Show schedule	C
2.8.	Display personal information	F
2.9.	Edit personal information	F
2.10.	Edit lesson	F
2.11.	Send notification email to customers	C

Receptionist		
3.1.	List customers	F
3.2.	List equipment	F
3.3.	Add a new equipment	F
3.4.	Remove equipment	F
3.5.	Add a new customer	F
3.6.	Remove customer	C
3.7.	Show schedule	C
Manager		
4.1.	Add new staff member	F
4.2.	Remove staff member	C
4.3.	Show balance (\$)	F
4.4.	Show schedule	C

Mockups

Trener zobrazí kalendář:

<https://drive.google.com/file/d/1xbeKjlszo5bllkego9cg-ONsqWvW8K5c/view?usp=sharing>

UNIT IS

CRUD personal info
Show schedule
LOG OUT

YOUR SCHEDULE

<

October 2014


>

Mo	Tu	We	Th	Fr	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
5	6	7	8	9	10	11

Class
Dessert / love ice cream pie.
EDIT **REMOVE**
ADD

Trener vytvárá novou lekci:

<https://drive.google.com/file/d/1VhVZ2QrtgE3nTeKs6pOdee5Vo7Xanlwa/view?usp=sharing>

UNIT IS

CRUD personal info
Show schedule
LOG OUT

Add new lesson

Insert title

24. oct 201415:30 – 17:00single time▼

TypeParticipants

group lesson▼Name/IDattendee▼⊕

Space

Thor's room▼

Create

Trener schvaluje/odmítá ziadost o registráciu na lekciu:

<https://drive.google.com/file/d/1iuOkKmTHEaGlnDo9bY5dX-y05NjQFKsd/view?usp=sharing>

UNIT IS



CRUD personal info

Show schedule

LOG OUT

Registration request

User John Doe requested registration!

Title: Cross-training

Date: Tuesday at 10:30, repeated each week

Capacity: 11/18

Joe is registered since 20. 4. 2014

See profile

Decline

Accept