



04170207

Software Engineering

Phase 2: Software Design Document Muscles Monsters(fitness club)

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GitHub link: <https://github.com/amrs12145/softwareEngineering-project>

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Team

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Document Purpose and Audience

Depending on this Document we can help Technical Staff Solving and Developing the required software Throw displaying useful diagrams and representing it in multi forms (UML, sequence, Database ,Algorithm) to ease the implementation process.

target audience

- 1- CEO , Software Architect ,Chief Software Officer
- 2- UI/UX Designer
- 3- Back-end/Front-end Developers

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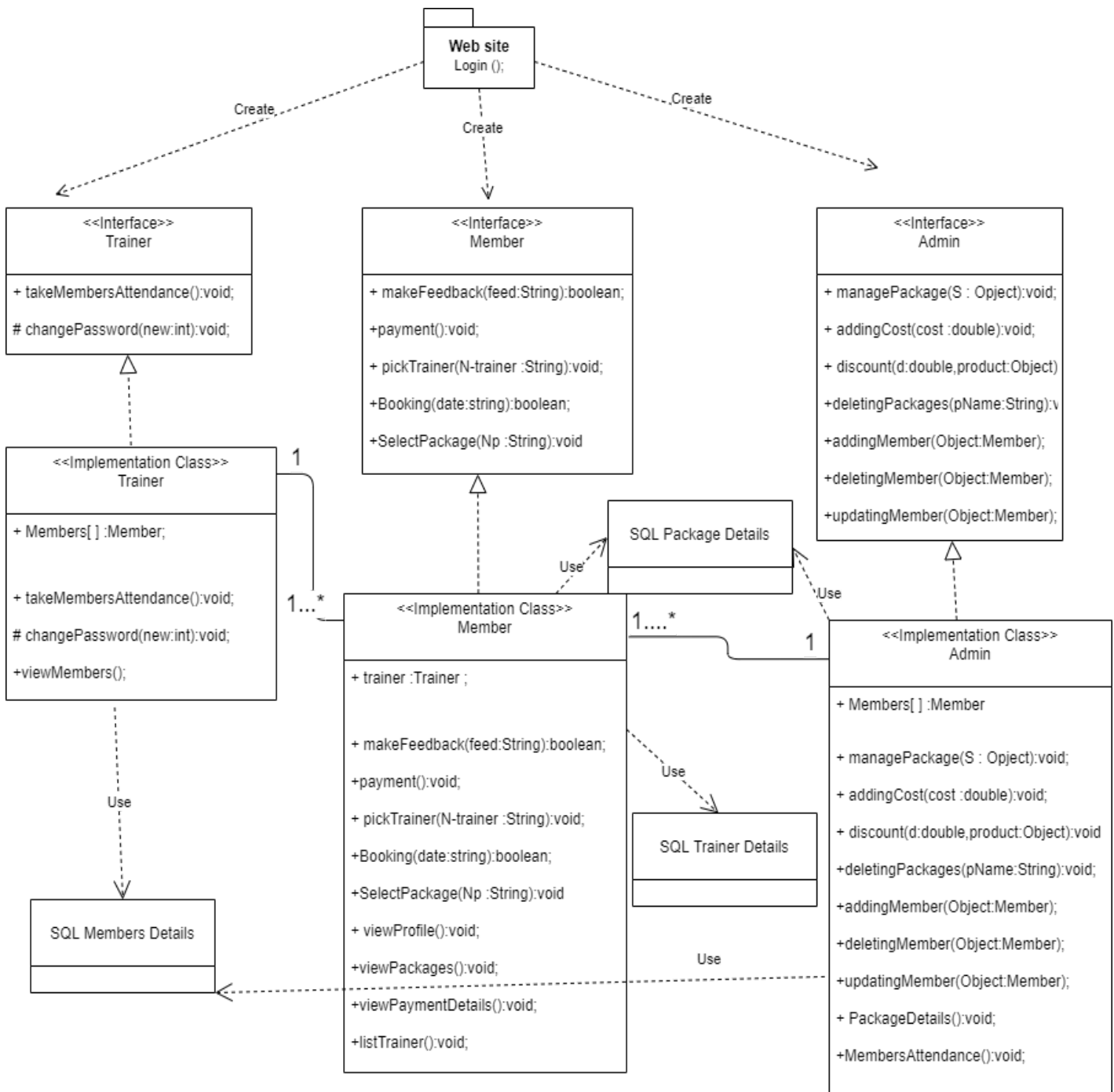


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System Models

• Class diagrams



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subsystem 1 refers to the employees of the gym and subsystem 2 refers to the members and customers

Class ID	Class Name	Subsystem ID	Description & Responsibility
1	Admin	1	1- Admin of the the gym have the permission to add new members, upgrade their information or delete expired subscribers.
1	Admin	1	2- in addition to attracting new customers throw new discounts on packages as they can add new packages or even adding special promo codes for special members
2	Trainer	1	1- Trainers of the gym can customize their private profile so when members watch it can easily pick them depending on their portfolio.
2	Trainer	1	2- Trainers can also take attences for members so lazy members can not find a place in this gym or working-out harder and more seriously..
2	Trainer	1	3- Viewing members history and packages they subscribed to and adding a rating for them
2	Trainer	1	4-changing their current password or profile picture
3	Member	2	Logging into the system and adding their private portfolio
3	Member	2	1- Viewing Top-Rated Trainer's portfolio and selecting whatever they want depending on the trainer plan and

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			previous ratings
3	Member	2	2-Booking and choosing the package which goes with the membre condition
3	Member	2	3- Selecting the Payment method (MasterCard,Meeza,Cash)
3	Member	2	3- Giving Feedback to trainers so the gym administration can reward trainers and giving a bounce to them (it's considered as the most important process)

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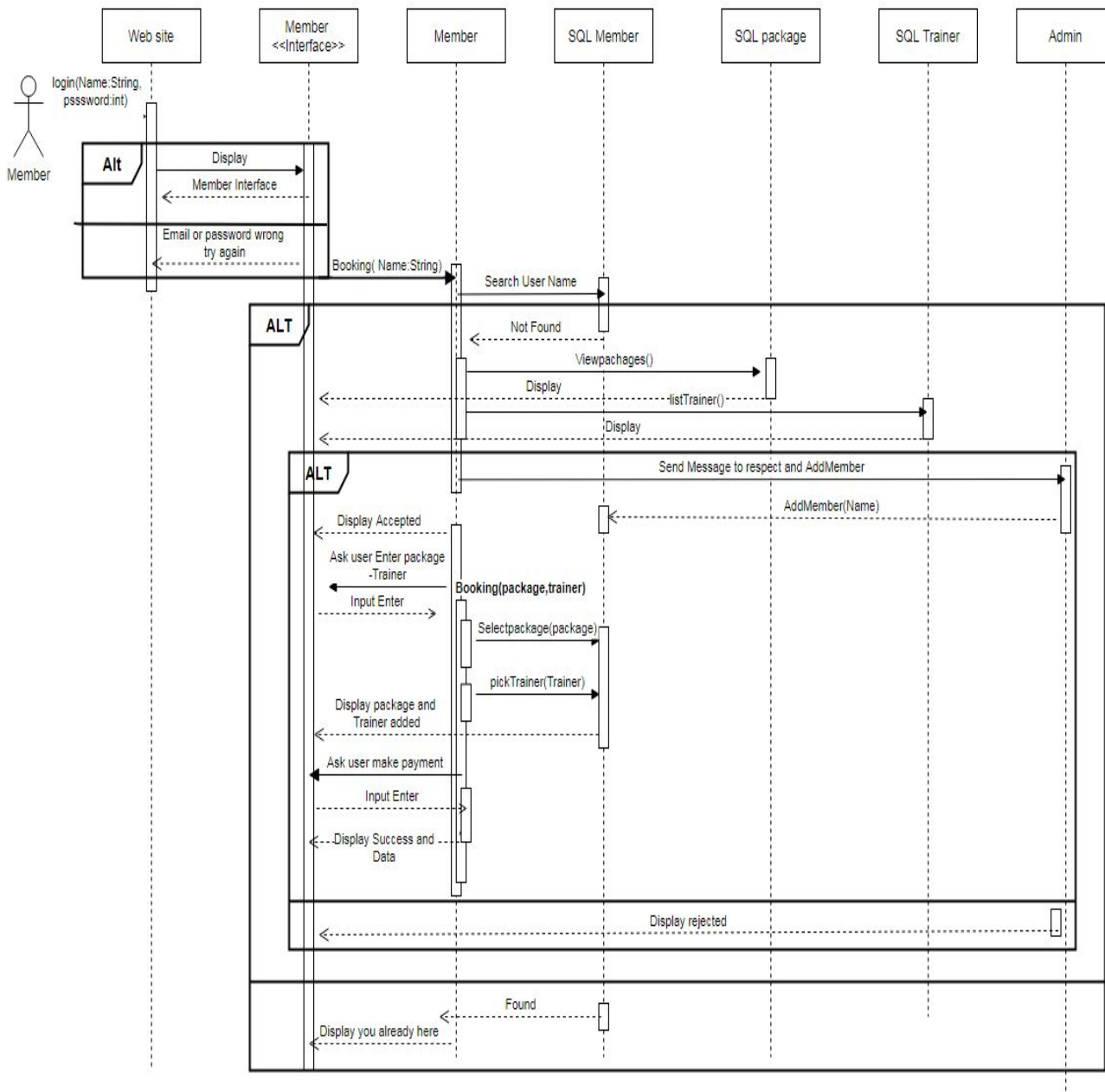


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I. Sequence diagrams

Member class Booking



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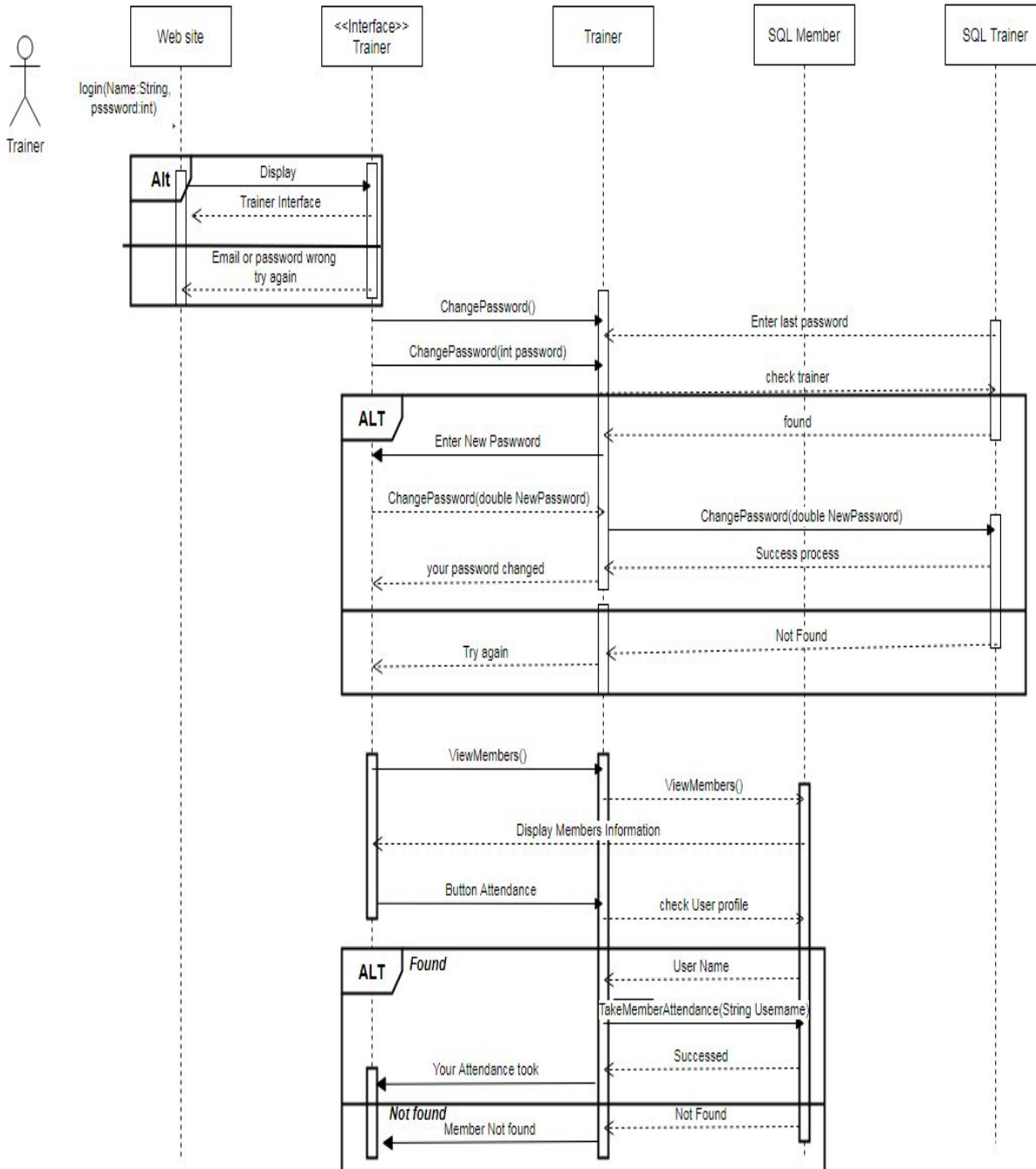
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Trainer class



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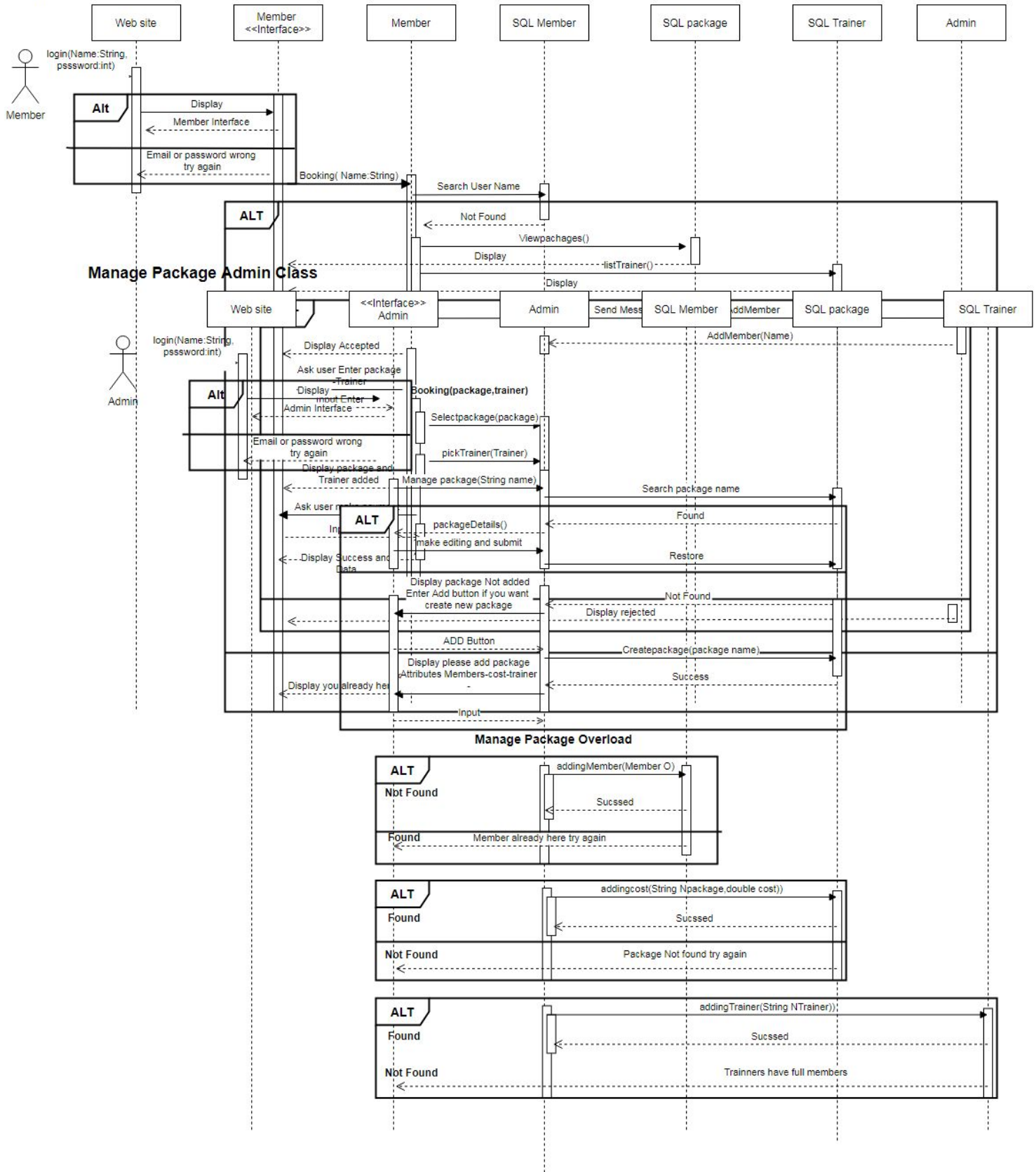
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Booking



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Class - Sequence Usage Table

Class Name	Sequence Diagrams	Overall used methods
Admin.	<p>1- Continuous checking for absent members and trainer's rating so that deciding who gonna take bounce or fired</p> <p>2- Adding new discounts and low-income pakges ending with attracting new members demanding bigger databases</p> <p>3- Deleting lazy members in case of skipping continuous 5 absent days</p>	<p>AddPackage</p> <p>delete, upgradePackage</p> <p>addMember, deleteMember, updateMember, ViewAttendance</p> <p>addPaymentMethod</p>
Trainers	<p>1- Customizing his portfolio career</p> <p>2-Taking members attendance</p> <p>3- Adding new private plans for low-income users</p>	<p>takeAttendance</p> <p>customizePortfolio</p> <p>Login, changePassword</p>
Members	<p>1-member try to book a package with a topRated trainer</p> <p>getting trainers sorted from the database with discounts</p>	<p>Login, changePassword</p> <p>viewTrainers , viewToprated</p> <p>viewPackages, viewDiscounts</p> <p>paybill,viewSubscription</p>

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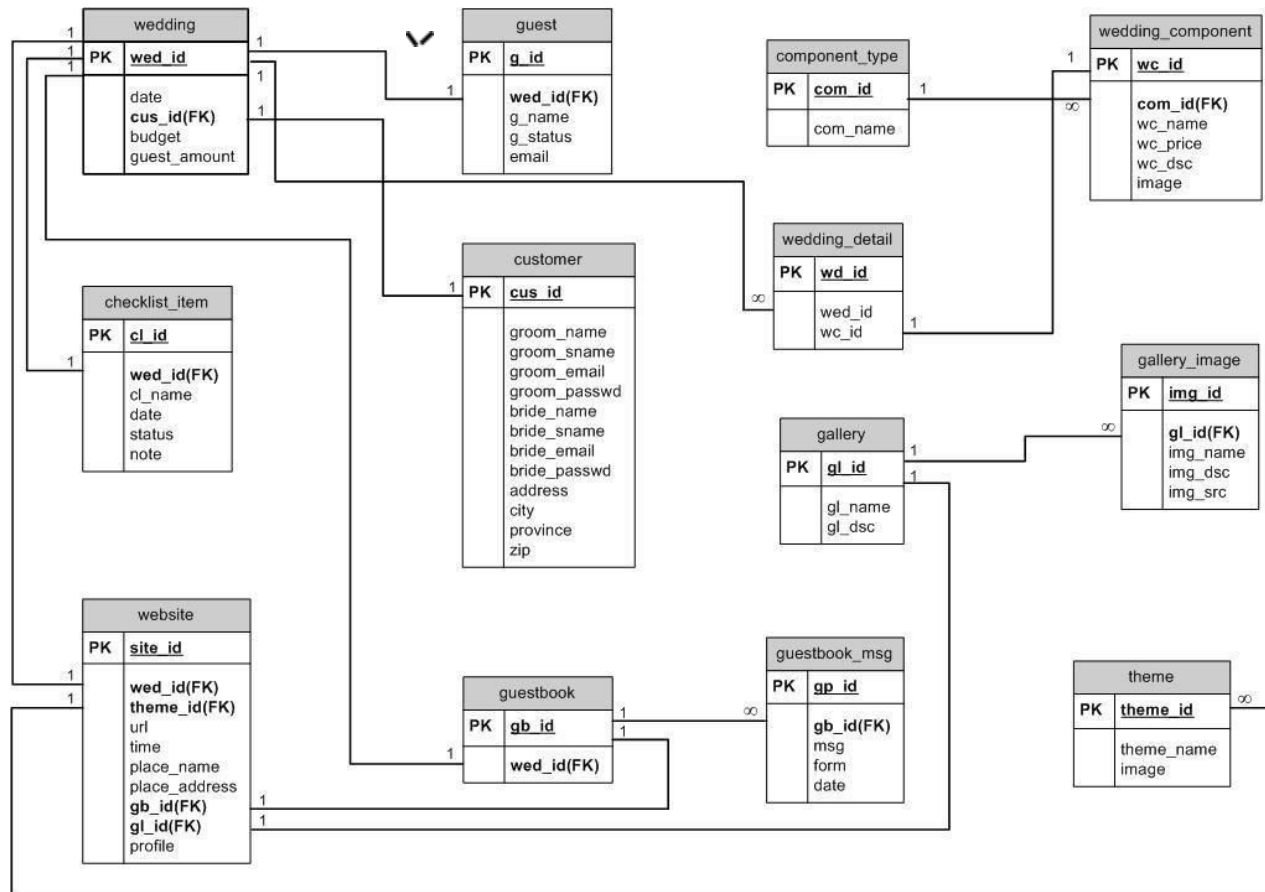
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	<p>2-admin verify the member or reject with a failed message</p> <p>3-if verified the member can specify his Payment method</p> <p>4-cybersecurity engineers job is to prevent hacking in this process giving memberes a smooth paying process</p>	
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III. Physical Entity-Relationship Diagram

- Provide the ERD Diagram
- All entity classes on the class diagram that need to be stored permanently, convert them and their relationships into ERD diagram.
- Don't list any boundary or control entities!
- Use a suitable notation for representing ER diagram, e.g., the one proposed on the book or an alternative version. Build qit using a tool.
- Following is an example of ER diagram, using different notation.



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IV. User Interface Design

////To be Done in Phase 2

V. Data Flow diagram (DFD)

- ////To be Done in Phase 2

VI. Algorithms and Data Structures

- ////To be Done in Phase 2

Ownership Report

Item	Owners
UML Diagram	Zeyad
Sequence Diagram	Zeyad
Drawing Tools	Zeyad
UML Description	Amr
Sequence Description	Amr
Spell Checker	Amr
GitHub Configuration	Amr
Flow Chart	Amr,Zeyad

TODO:

-description uml diagram ⇒ Done.

-description sequence diagram ⇒ Done.

-ER diagram ⇒ Tomorrow.

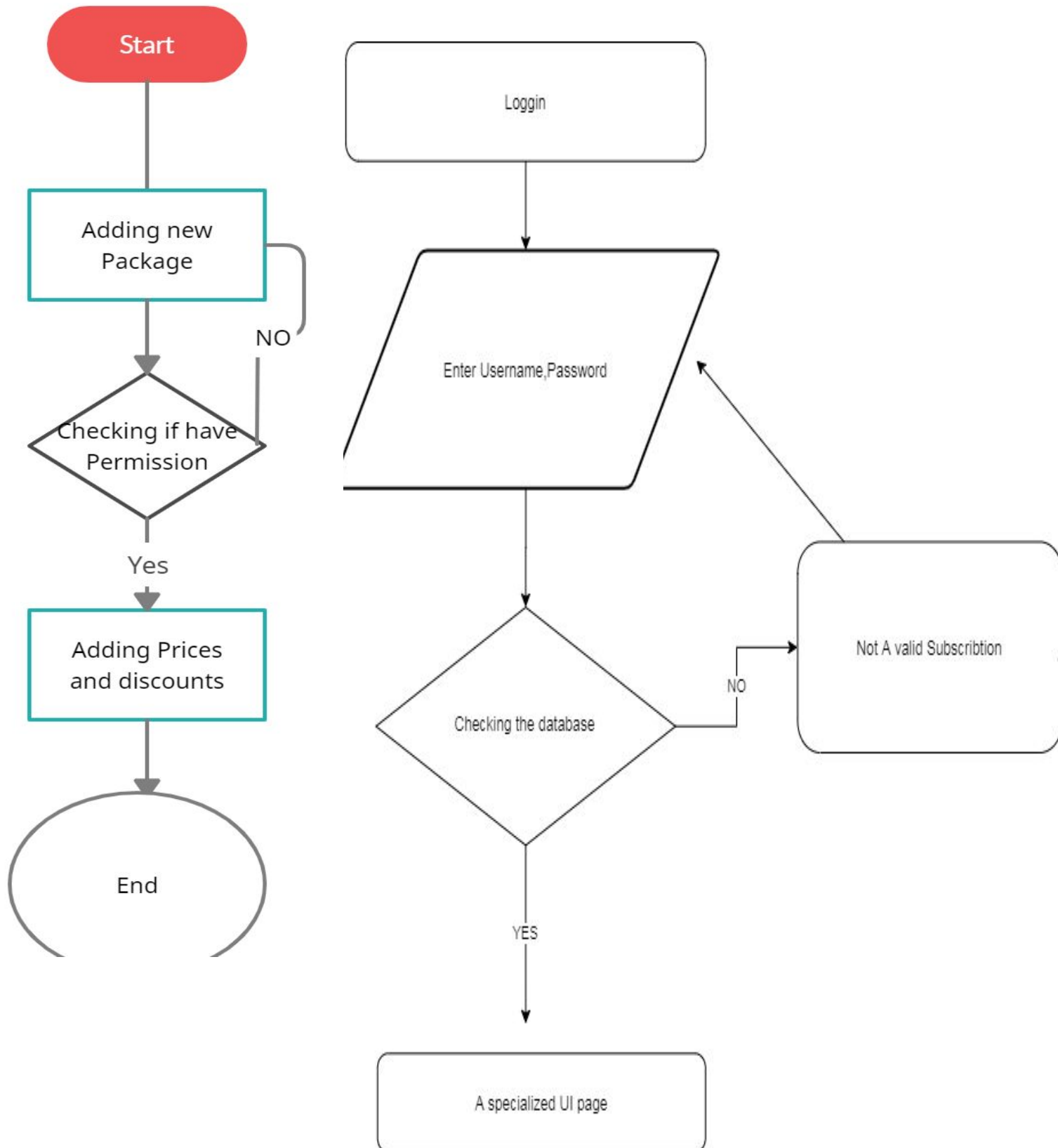
-UI design ⇒ Phase2

DFD ⇒ Phase 2

Algorithm ⇒ Tomorrow.

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