

207

**Software Engineering Theory**

Gym System

Phase 2: Software Design Document

**Final Project**

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**Dec 2020**

**Dec 2020**

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# Software Design Document

# Team

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# Document Purpose and Audience

* The SDD documents tracks the necessary information required to effectively define architecture and system design to give the development team guidance on the architecture of the system to be developed. Design documents are incrementally and iteratively produced during the system development life cycle, based on the circumstances of the information technology (IT) project and the system development methodology used for developing the system.
* The proposed solution will simply add additional features and functionality to the existing solution to meet the original scope and vision of the Gym System. These features will extend SFT to be a real and integrated one call mobility management solution.
* The intended audience for the SDD is the project manager, project team, and the future development team. The audience or users for this system design document including:
  + - 1. ARC Project Management Team
      2. ARC Information Technology Team
      3. Future application development team
      4. FTA Project Managers and Oversight Team
      5. Internal Consulting Team

# System Models

## I. Class diagrams

Diagram

Description automatically generated

|  |  |  |  |
| --- | --- | --- | --- |
| Class ID | Class Name | Subsystem ID | Description & Responsibility |
| **1** | **Gym System** | **1.1, 1.2, 1.3, 1.4** | **Composition** |
| **1.1** | **Registration System** | **1.1.1, 1.1.2** | **Association, Generalization** |
| **1.1.1** | **User** | **1.1.1.1, 1.1.1.2, 1.1.1.3** | **Generalization** |

## II. Sequence diagrams

Diagram

Description automatically generated

### Class - Sequence Usage Table

|  |  |  |
| --- | --- | --- |
| Class Name | Sequence Diagrams | Overall used methods |
| **Registration** | **1, 1.1, 2.1.1.1, 2.1.2.1, 2.1.2.2, 2.1.2.3.1.1** | **Join, Enter, Check, Try\_ another\_ password, Account created** |
| **System** | **2.1, 2.1.1, 2.1.2, 2.1.2.3, 2.1.2.3.1** | **Verify\_ password\_ length, Account verified** |

## Diagram Description automatically generated

### Class - Sequence Usage Table

|  |  |  |
| --- | --- | --- |
| Class Name | Sequence Diagrams | Overall used methods |
| **Login** | **4, 7, 11, 12** | **Login, manage\_ gym, manage\_ trainers\_ details** |
| **Gym Management** | **1, 5, 7.1** | **Add/Edit Data, Save/Update data, List/Delete data** |
| **Package Management** | **3, 6, 9** | **Add/Edit packages, Save/Update packages, List/Delete packages** |
| **Trainer Management** | **2, 8, 10** | **Add/Edit trainer, Save/Update trainer, List/Delete trainer** |

## Diagram Description automatically generated

### Class - Sequence Usage Table

|  |  |  |
| --- | --- | --- |
| Class Name | Sequence Diagrams | Overall used methods |
| **Login** | **3, 7, 8** | **Login, choose, feedback and ratings** |
| **Package Management** | **1, 4, 6** | **Add/Edit packages, List/Delete trainers, Add/Update payment options** |
| **Feedback** | **2, 5** | **Save/Update feedback, Save/Update ratings** |

## Diagram Description automatically generated

### Class - Sequence Usage Table

|  |  |  |
| --- | --- | --- |
| Class Name | Sequence Diagrams | Overall used methods |
| **Payment** | **1, 2, 3, 3.1, 4.1, 5.1** | **Pay, choose\_ how\_ to\_ pay, Information, Check validation, Paid successfully, Try again** |
| **System** | **4, 5** | **Valid info, Invalid info** |

## III. Physical Entity-Relationship Diagram

Diagram

Description automatically generated

## IV. User Interface Design

* Graphical user interface, application

  Description automatically generatedScreen 1 – Login Screen

* Screen 2 – Registration Screen

A picture containing text, monitor, screen, screenshot

Description automatically generated

* Screen 3 – Home Screen

A picture containing text, person, indoor

Description automatically generated

* Screen 4 – Payment Screen

Graphical user interface, application

Description automatically generated

* Screen 5 – Feedback Screen

Graphical user interface, text

Description automatically generated

V. Dataflow diagram (DFD)

**0 Level DFD:**

Diagram

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**1 Level DFD:**

**Diagram

Description automatically generated**