Cairo University

Faculty of Computers and Information

CS251

Software Engineering I

Software Design

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CS251: Phase 2 – Eden
Project: Bright Minds

Software Design Specification

Contents

Software Design Specification

Team

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Document Purpose and Audience

- **Document purpose**: This document is the Software Design document. It includes the class diagram and sequence diagrams that help describe the architecture of the software project.

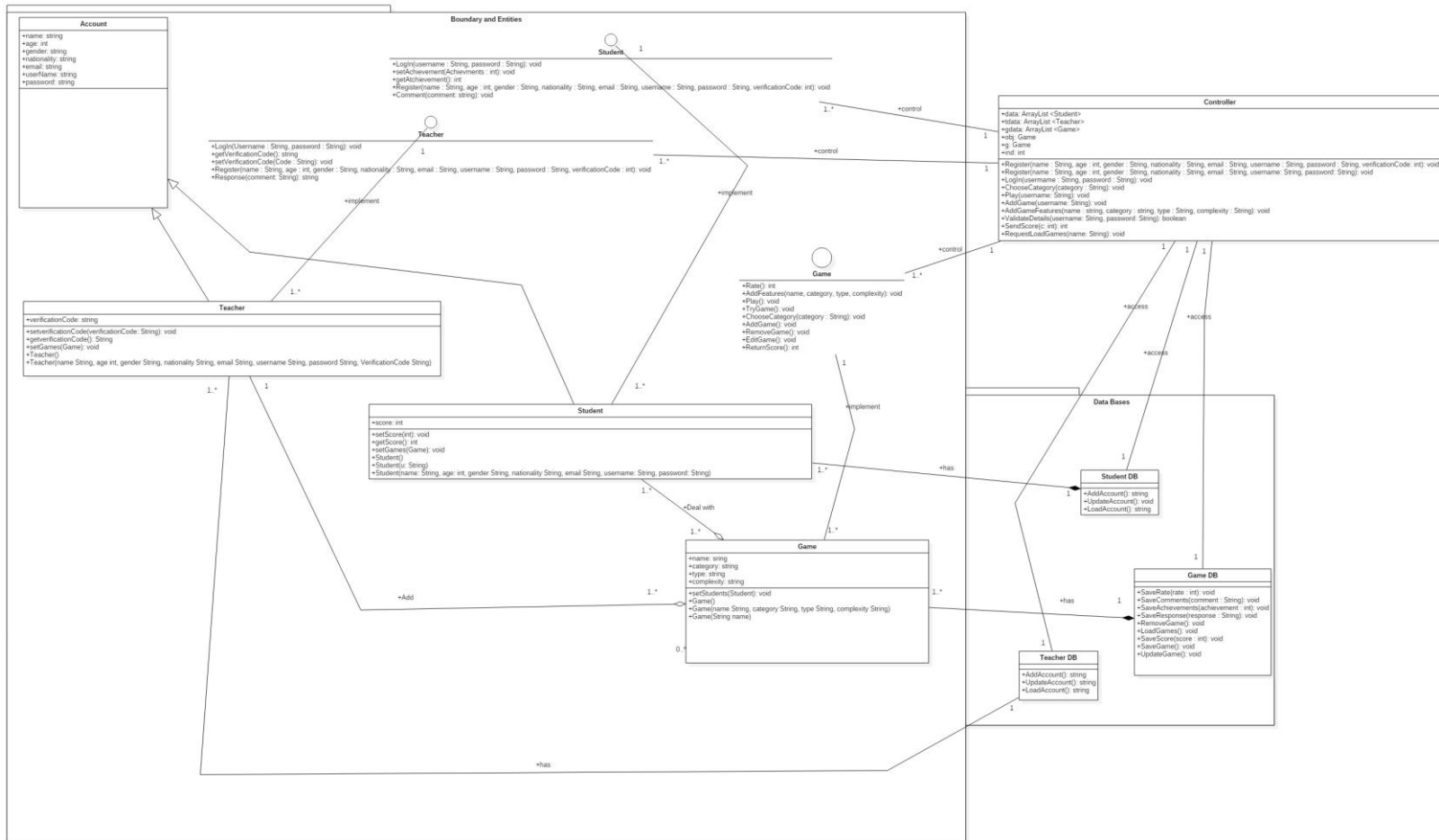- **Audience**: CEO, clients, the software developers, the software analysts, sponsors and testers.

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System Models

I. Class diagrams

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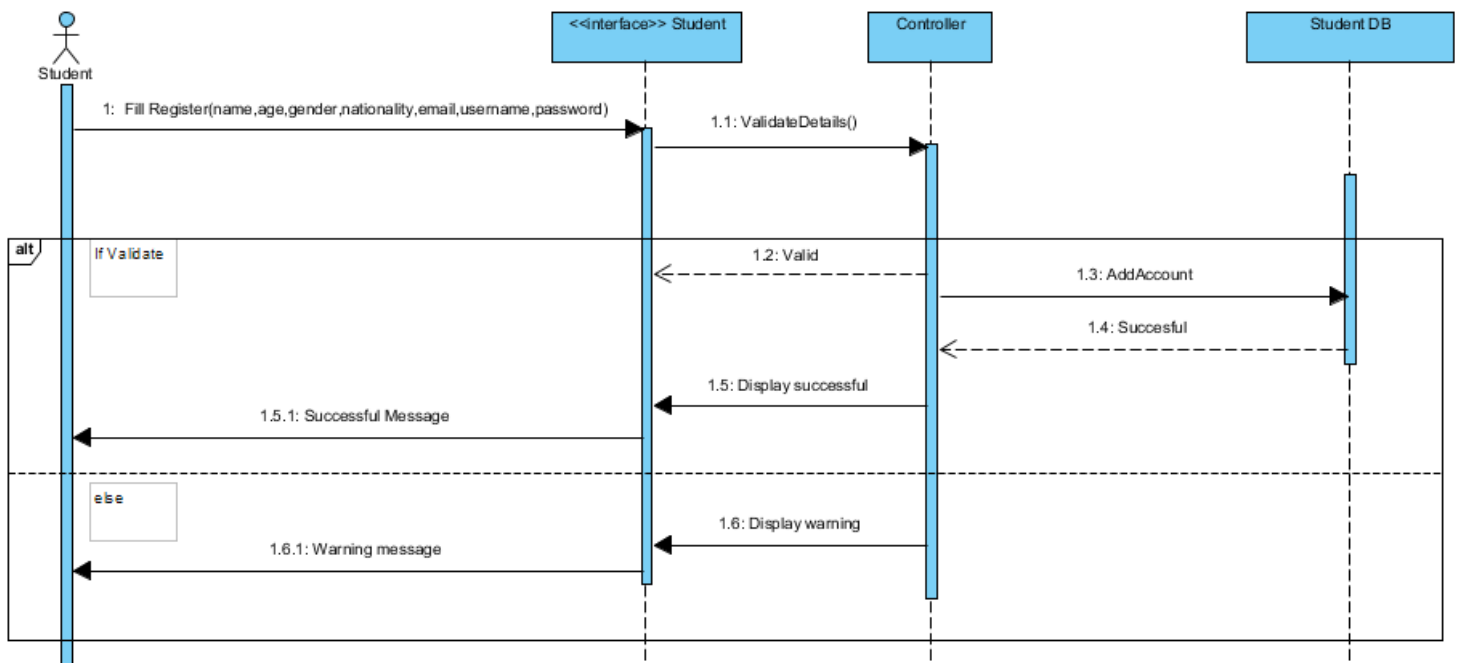| Class ID	Class Name	Description & Responsibility
1	Account	(Abstract class) Every user has account to enter web site
2	Teacher	User can try game , respond to comments , create game , edit game and remove game
3	Student	User can play game , comment on game and rate game
4	Game	Every category has a collection of games. Every game has type like MCQ game and true/false game
5	Student(interface)	The screen which enables a student to communicate with a web site
6	Teacher(interface)	The screen which enables a teacher to communicate with a web site
7	Game(interface)	The screen which enables a user to deal with game easily
8	Student DB	Collection of data about students
9	Teacher DB	Collection of data about teachers
10	Game DB	Collection of data about games
11	Controller	It controls the communication between interface and database

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II. Sequence diagrams

- Student Registration (1)

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- Teacher Registration (2)
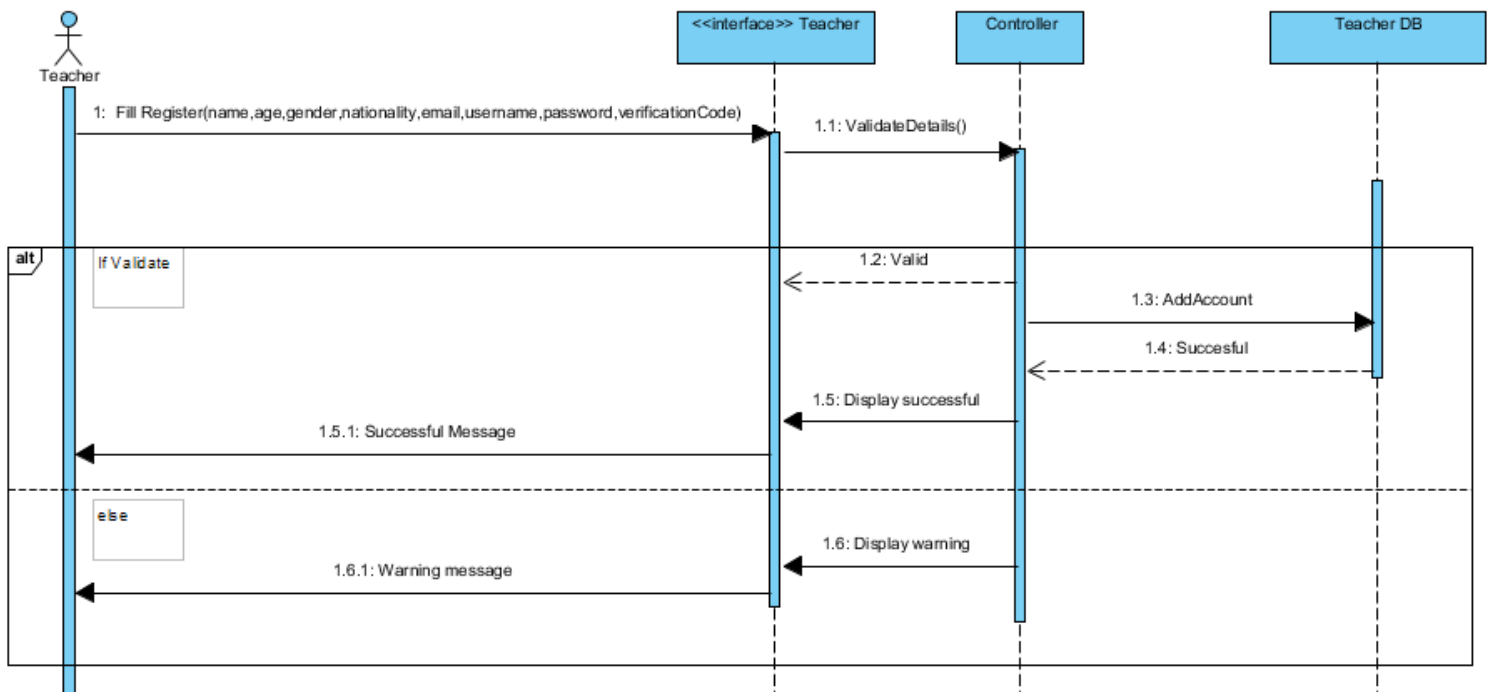
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- Play Game (As Student) (3)

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- Add Game (As Teacher) (4)
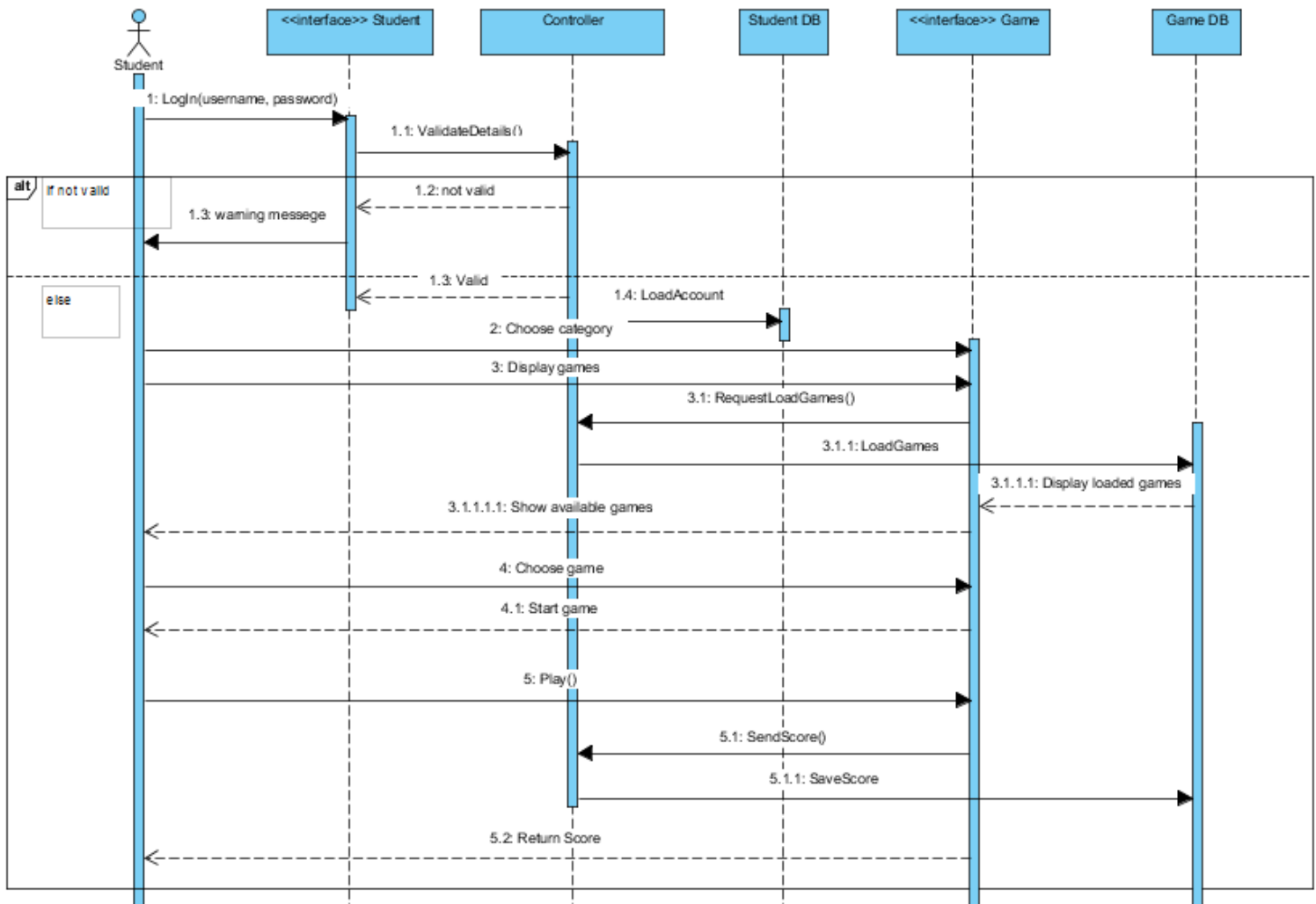
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Class - Sequence Usage Table

Class Name	Sequence Diagrams	Overall used methods
User(Teacher)	2, 4	1. LogIn(String username , String password) 2. Register(String name , int age , String gender , String nationality , String email , String username, String password, String verificationCode)
User(Student)	1,3	1. LogIn(String username , String password) 2. Register(String name , int age , String gender , String nationality , String email , String username, String password)
Teacher(interface)	2,4	1. LogIn(String username , String password) 2. Register(String name , int age , String gender , String nationality , String email , String username, String password, String verificationCode)
Student(interface)	1,3	1. LogIn(String username , String password) 2. Register(String name , int age , String gender , String nationality , String email , String username, String password)
Controller	1,2,3,4	1. ValidateDetails() 2. ChooseCategory(string category) 3. AddGame(string name) 4. RequestLoadGame() 5. SendScores()

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Class Name	Sequence Diagrams	Overall used methods
Student DB	1,3	
Teacher DB	2,4	
Game DB	3,4	

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Ownership Report

Item	Owners
Class Diagram	*Amira, Dina, Nouran, Youmna*
Sequence Diagram	*Amira, Dina, Nouran, Youmna*

GitHub Account

https://github.com/AmiraAlsayed/Software-Engineering-I