Cairo University

Faculty of Computers and Information

CS251

Software Engineering I

LEARNO

Software Design

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CS251: Phase 2 – <future Builders>
Project: <LEARNO>

Software Design Specification

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Software Design Specification

Team

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Document Purpose and Audience

The purpose of this document is

- **Show the dynamic behavior of the system using sequence diagrams.**
- **Illustrate the static representation of the system through class modeling.**

We are targeting the project manager and senior programmers as well as the designers to go deeply through understanding the functionality of the system .And make sure of the integrated components of the design.
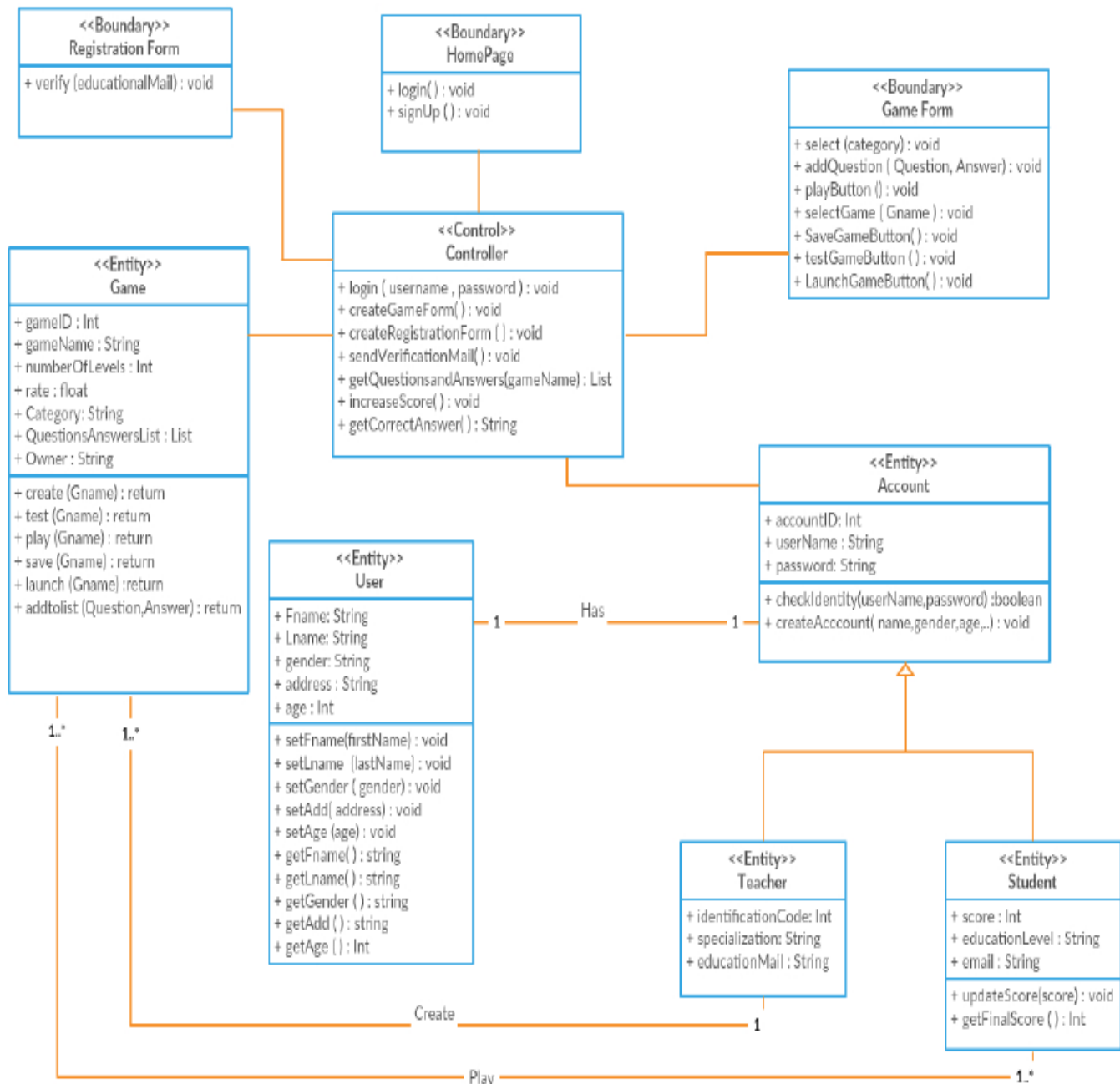
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System Models

I. Class diagrams

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| Class ID	Class Name	Description & Responsibility
1	Registration form	• Show Registration fields to make the user able to enter his basic information (Age, gender, name etc.) • Verify teacher educational mail (check pattern)
2	Home page	• Contains buttons to facilitate some operations like (Registration process, sign up , add game) • It's the basic front of the website
3	Game Form	• Contains buttons that enable the users to complete the process of adding new game OR playing a game according to their authorization access.
4	Controller	• It connects the GUI to the entity and contains Logic of the calling between different classes and methods.
5	Game	• Contains needed information of game entity • Deals with DB to create new game OR retrieve existing game to play.
6	User	• Act as the external actor of the system
7	Account	• Contains needed information of account entity • Deals with DB to create new account. • Check the validation of user data
8	Teacher Account	• Special type of Account that has privilege to add game • Give more security for the access management of the teacher through the identification code
9	Student Account	• Special type of Account that has ability to play a game • Contains the achievements of the student

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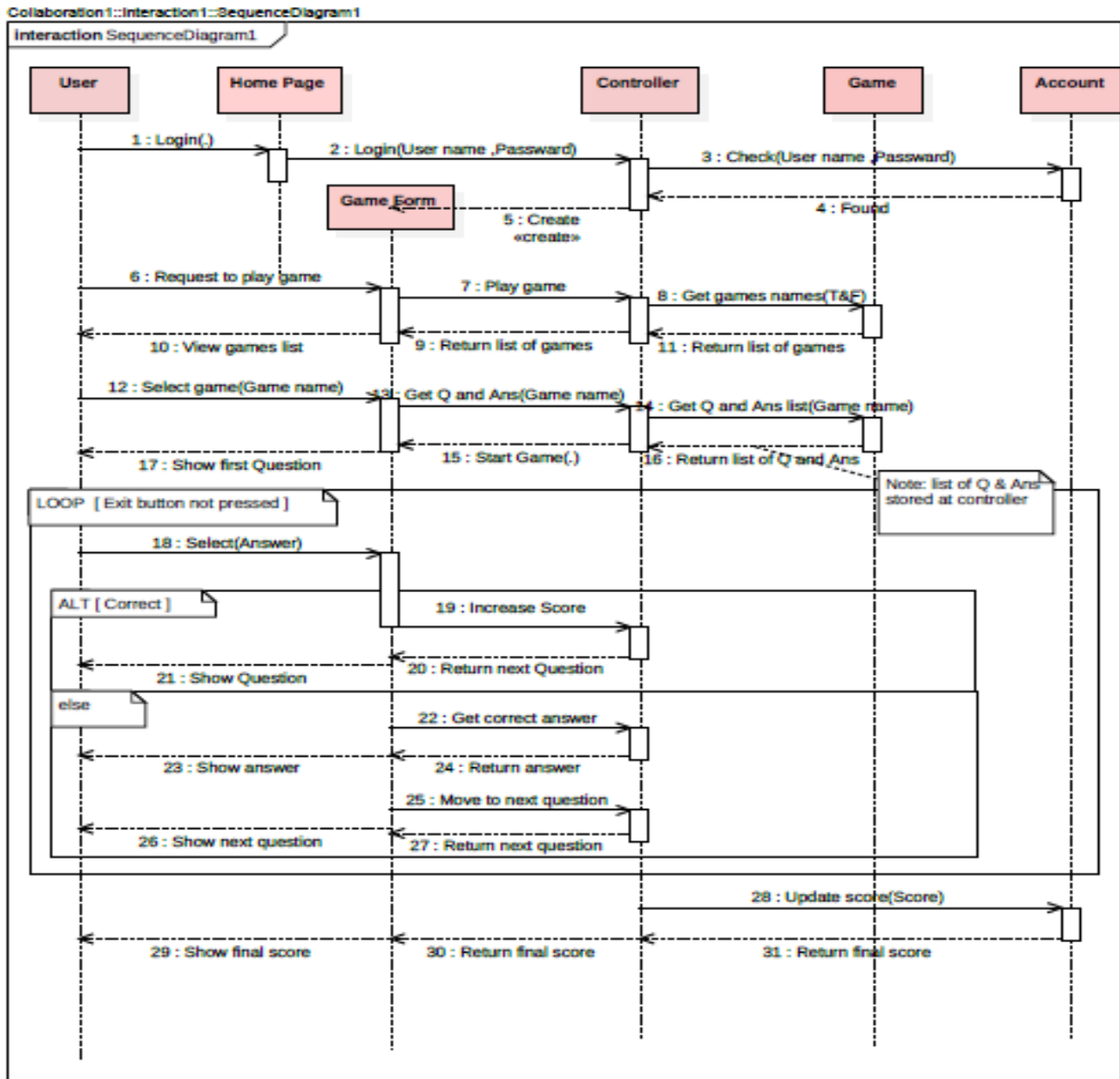
II.   Sequence diagrams

1- Registration
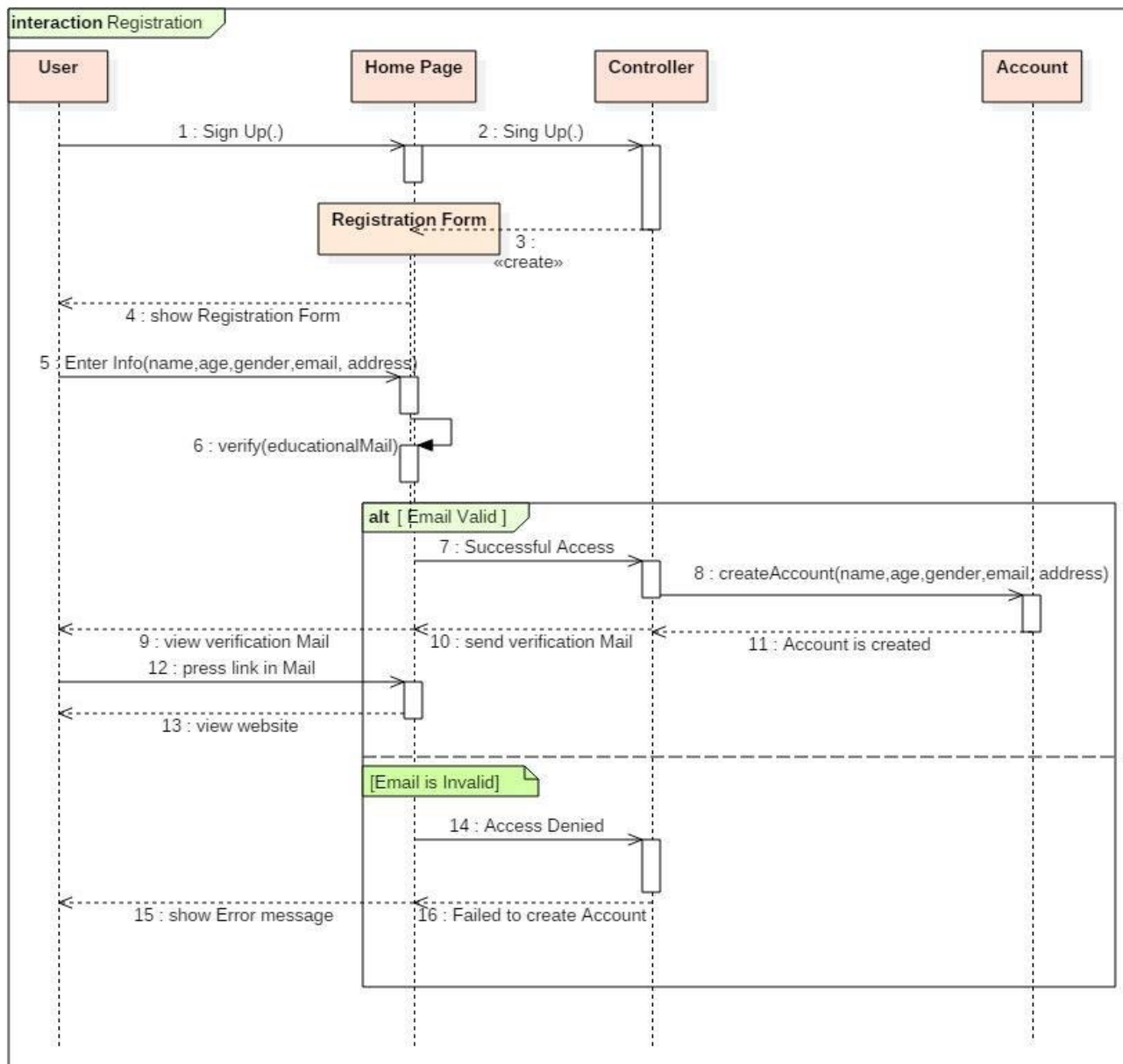
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2- Play Game
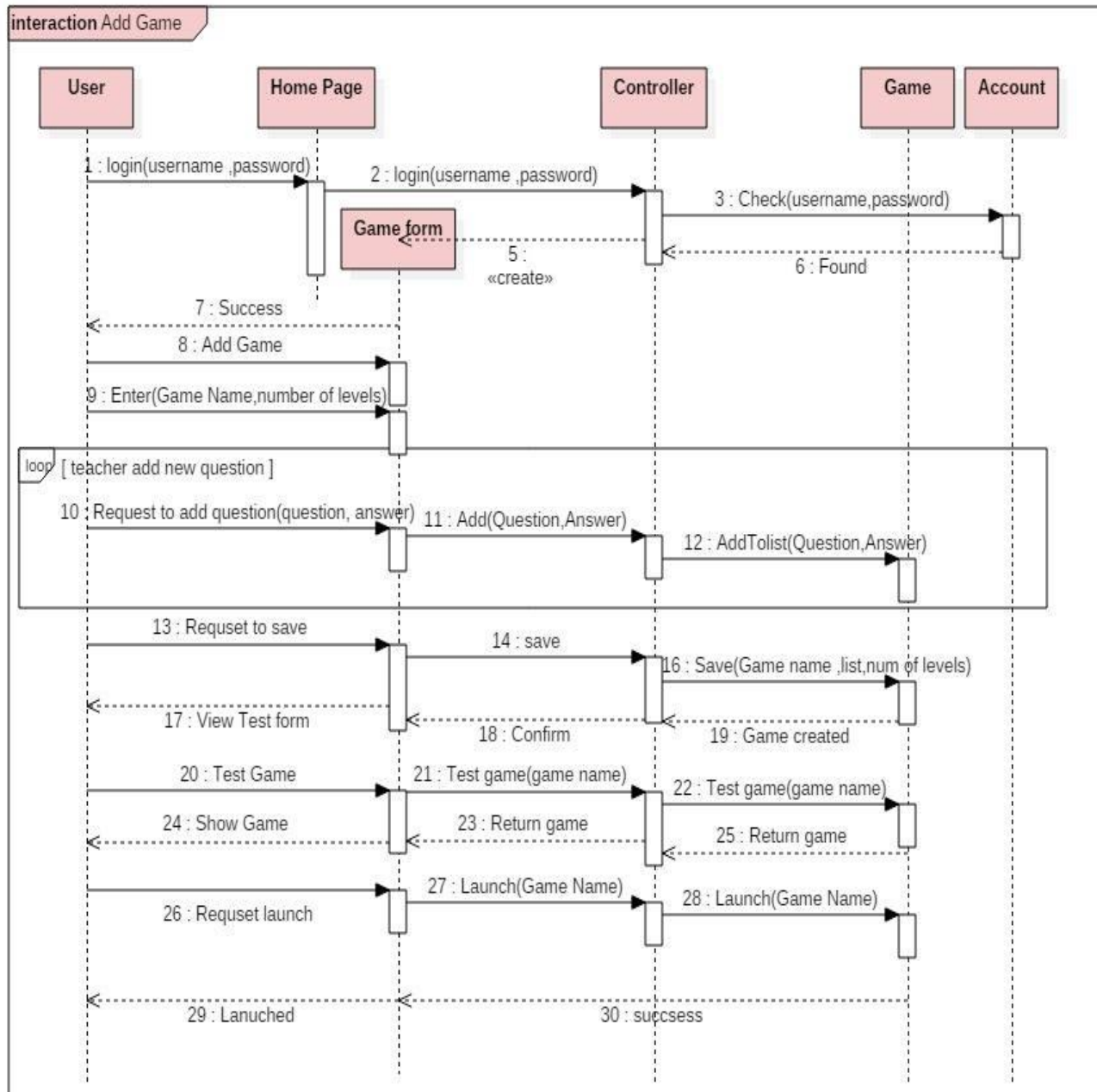
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3- Add Game

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Class - Sequence Usage Table

Class Name	Sequence Diagrams	Overall used methods
Home page	1,2,3	Login ,signup
Registration	1	Verify
Game	2,3	Create , test ,play ,save ,launch ,addtolist
Game Form	2,3	Select,addquestion,playButon,selectGame,SaveGameButton,TestGameBuuton,LaunchGameButton
Controller	1,2,3,	Login ,CreategameForm ,CreateRegistartionForm,SendVerfiactionMail ,getQuestionandAnswers,incraeseScore,getCorrectAnswer
Account	1,2,3,	Check, create Account

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Ownership Report

Item	Owners
Document Purpose and Audience	Aya gad
Class diagram	All members … (Radwa)
Classes table	Aya gad
Sequence diagram (Add game)	Amany el daly
Sequence diagram (Play game)	Sara Mahmoud
Sequence diagram (Registration)	Aya tarek , Radwa ali
Class - Sequence Usage Table	Amany , sara