Cairo University

Faculty of Computers and Information

CS251

Software Engineering I

EduGaming

Software Design

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Khaled Yousef

Islam Emam

December 2016

CS251: Phase 2 – CodeCraft
Project: <EduGaming>

Software Design Specification

GitHub Link

https://github.com/islam-Ellithy/EduGaming

Team

ID	Name	Email	Mobile
20140116	Rami Mohamed	ramimohamedsalah96@gmail.com	01149273153
20140109	Khaled Yousef	khaledyousef196@gmail.com	01114300109
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Document Purpose and Audience

Project declaration and Showing a static (class diagram) and dynamic (sequence diagram) design for how the system should work.
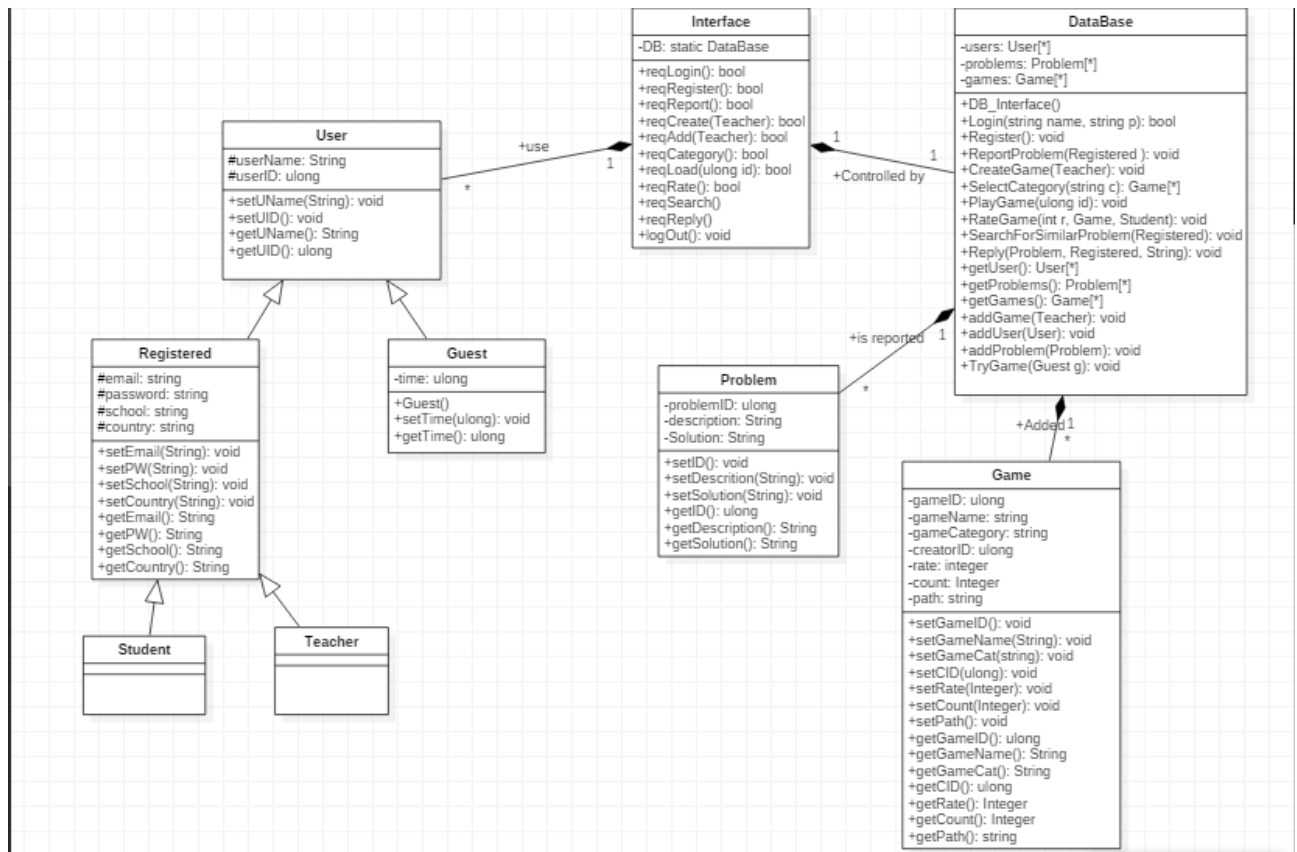
Audience :Computech Project Manager.

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Software Design Specification

System Models

I. Class diagrams

Class ID	Class Name	Description & Responsibility
1	Interface	Is a class that deals with the interface of the software by loading the required web page when a function is called. It also deals with the database by requesting to add any new students-teachers-games-problems to the database.
2	DataBase	Is a class that saves all the games-problems-users to it.
3	User	Any kind of user that uses the software or the website. Has an ID.

Software Design Specification

Class ID	Class Name	Description & Responsibility
4	Registered	Kind of User that is saved to the database and has an account(name-password-country-school) and has more access than the Guest.
5	Guest	Kind of User that doesn't have an account and has limited access that is only to try a game for a specified amount of time.
6	Student	Kind of Registered User that can play or rate a game.
7	Teacher	Kind of Registered User that can add a game.
8	Problem	A problem is an issue within the system that is reported by a registered user and is immediately added to database with its ID so that its solution can be found easily if it happens again in the future.
9	Game	Has an ID, creator, rate, category and name and is added by the teacher (creator) and can be played or rated by student or tried by a guest.

Important Algorithm

Register: User enters his/her information (name –email – password – country – school) in text areas and they are sent to the DB_Interface class that makes a new user (Student –Teacher) then adds this information to it and saves the new user to the database.
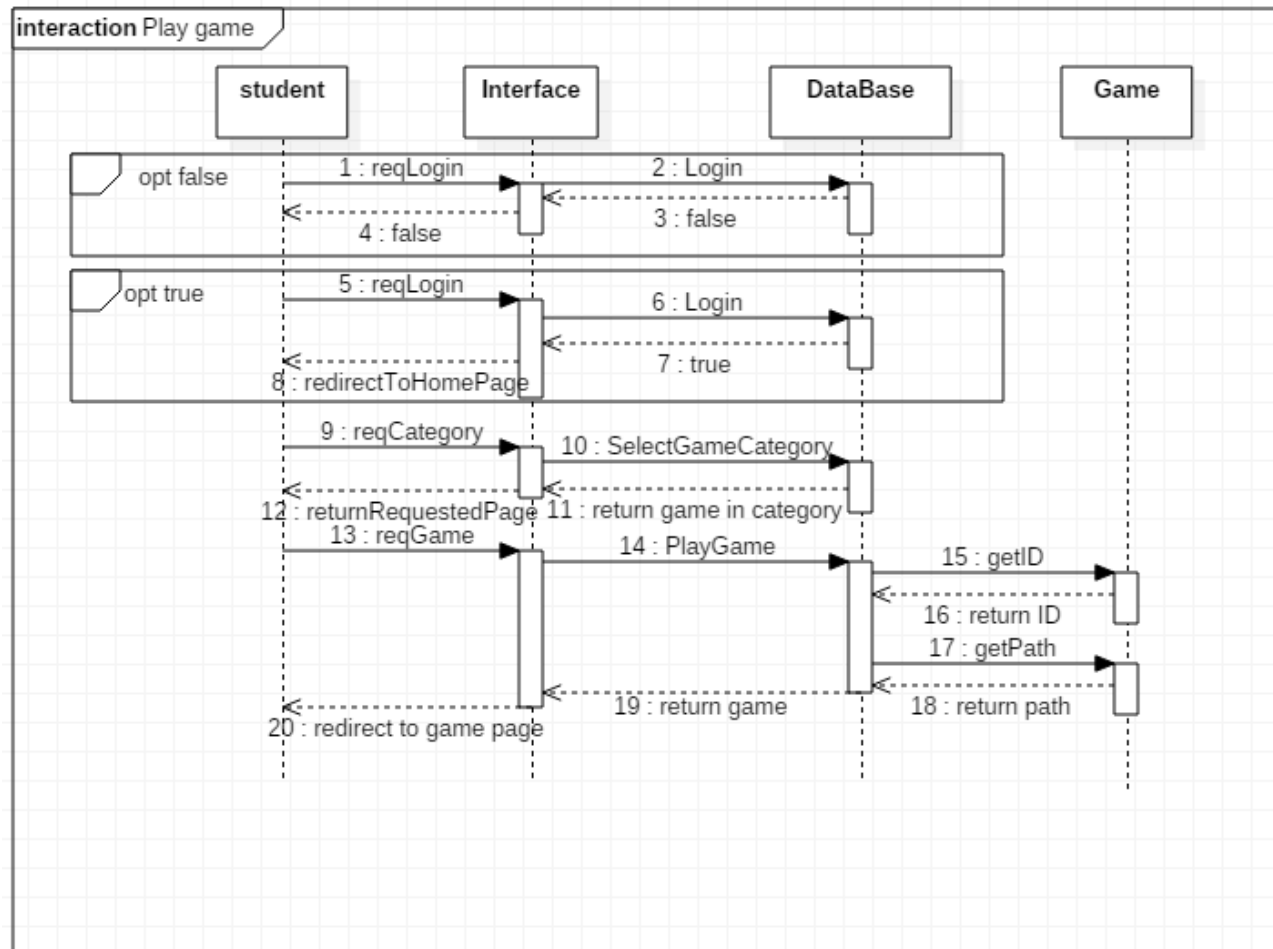
II. Sequence diagrams

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Software Design Specification
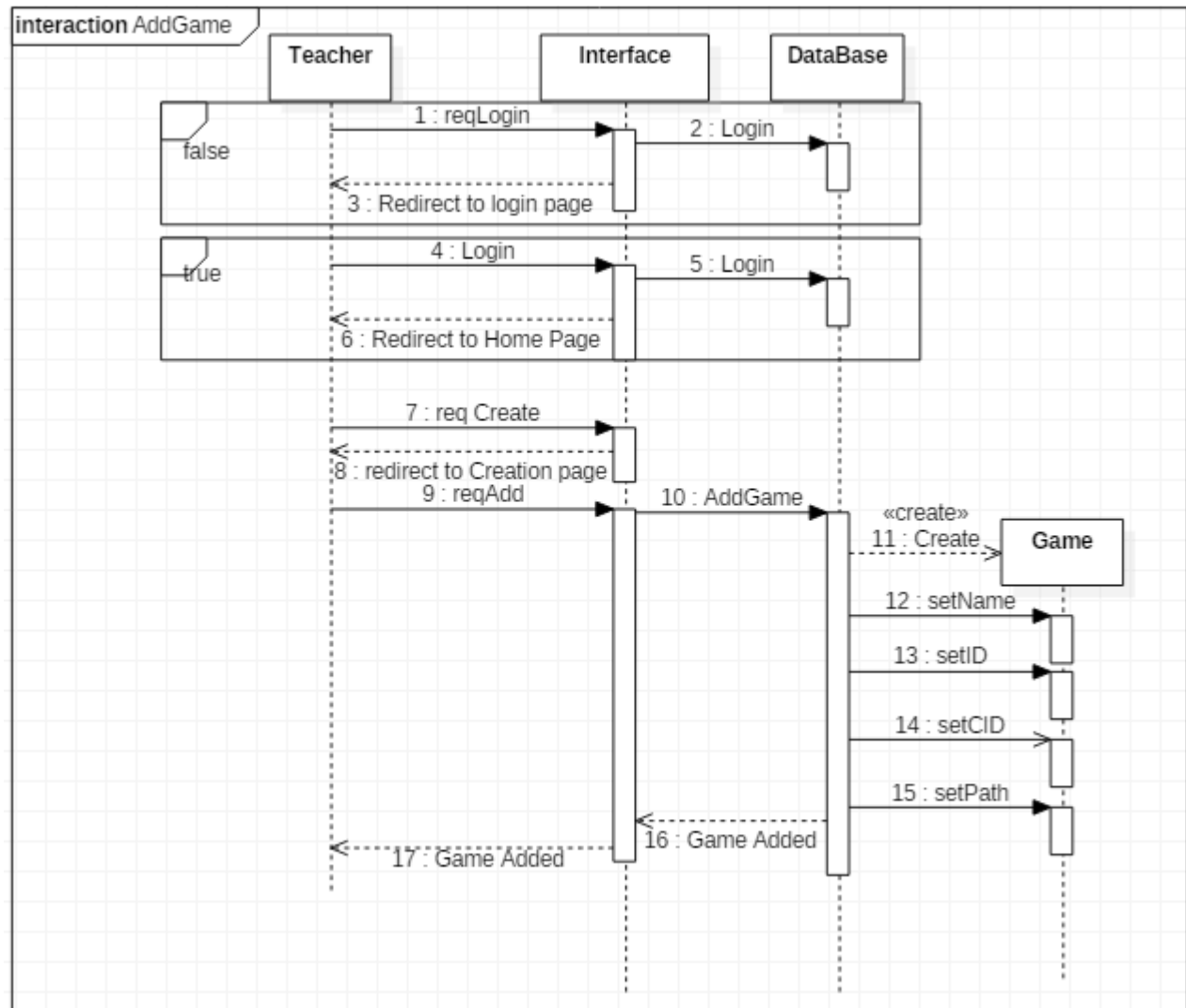
CS251: Phase 2 – CodeCraft
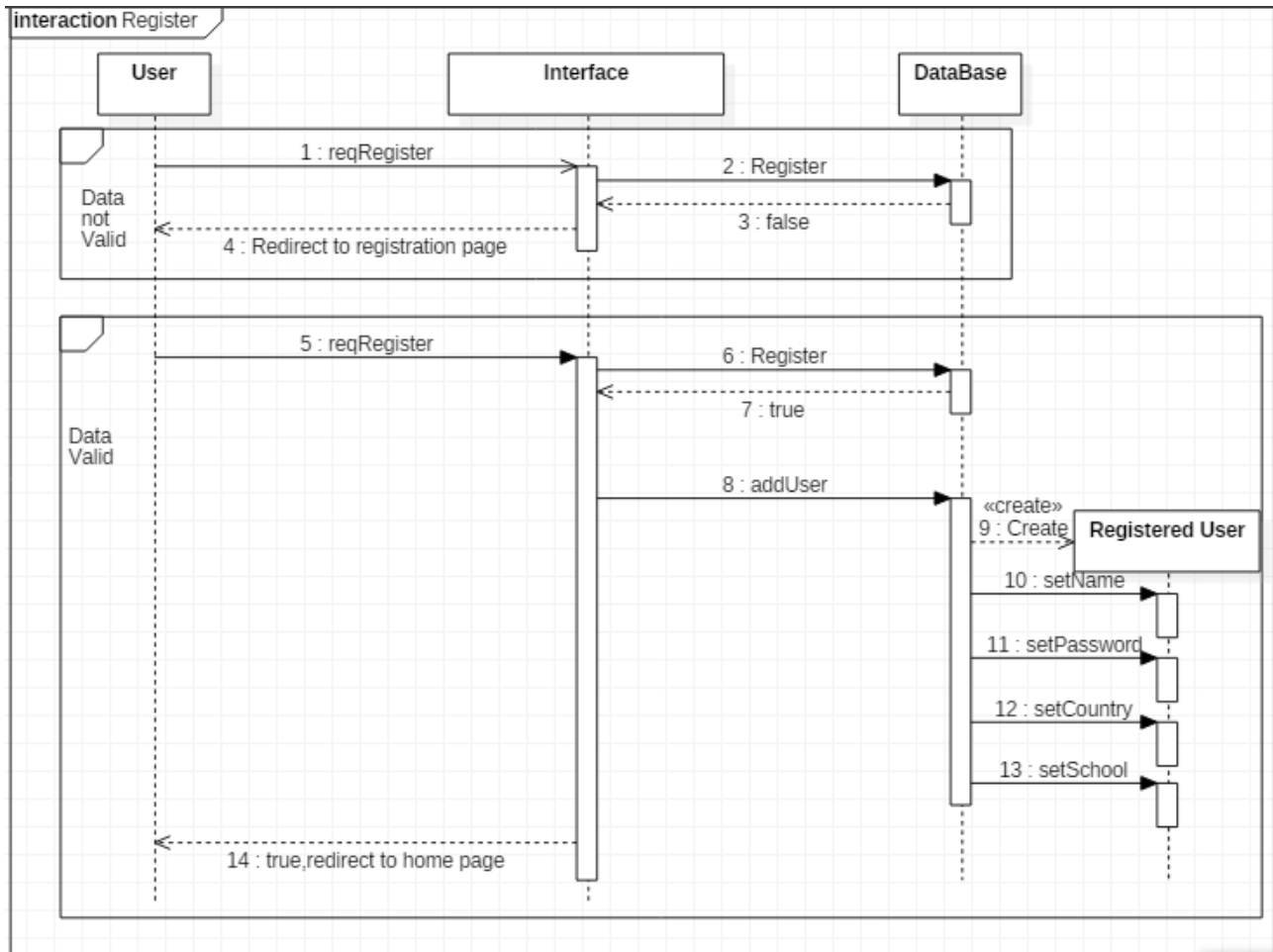# Project: <EduGaming>

Software Design Specification

interaction AddGame

Teacher | Interface | DataBase

false
1 : reqLogin
2 : Login
3 : Redirect to login page

true
4 : Login
5 : Login
6 : Redirect to Home Page

7 : req Create
8 : redirect to Creation page
9 : reqAdd
10 : AddGame
«create»
11 : Create → Game
12 : setName
13 : setID
14 : setCID
15 : setPath
16 : Game Added
17 : Game Added

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Software Design Specification

Class - Sequence Usage Table

Class Name	Sequence Diagrams	Overall used methods
DataBase	1 , 2 , 3	Login, CreateGame, SelectCalegory, LoadGame, Register
Interface	1,2,3	reqLogin, reqGame, reqCategory, reqCreate, reqAdd, reqRegister
Student	1	
Teacher	2	

Software Design Specification

Class Name	Sequence Diagrams	Overall used methods
User	3	

Ownership Report

Item	Owners
Class Diagram	*Remon Atef – Khaled Yousef*
Class Tables	*Rami Mohamed*
Sequence Diagram-1	*Islam Emam*
Sequence Diagram-2	*Islam Emam-Rami Mohamed*
Sequence Diagram-3	*Khaled Yousef-Remon Atef*
Class sequence Usage Table	*Rami Mohamed – Remon Atef*