

Cairo University  
Faculty of Computers and Information



# CS251

## Software Engineering I

Time to Learn

Software Design

TenCent .1\$

December2016



# CS251: Phase 3– <TenCent .1\$> Project: <Time To Learn>

## Software Design Specification

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## Software Design Specification

### Team

ID	Name	Email	Mobile
20140049	Adham Ayman Elmasry	Adham.a.elmasry@hotmail.com	01066446071
20140308	Hamsa Saber Mobarez	<a href="mailto:hamsa.saber96@gmail.com">hamsa.saber96@gmail.com</a>	01121736295
20140041	Ahmed Mohamed Fathallah	Afathallah50@gmail.com	01147737879

### Document Purpose and Audience

This document is a description of the project in details, it shows all the steps that we will use to implement the project; also it shows the class diagram of the system and the relations between the classes, and description for each class and the relations between them. As well as it describe the sequence diagram of the system and lists all the requirements. The target audience Doctor and TA



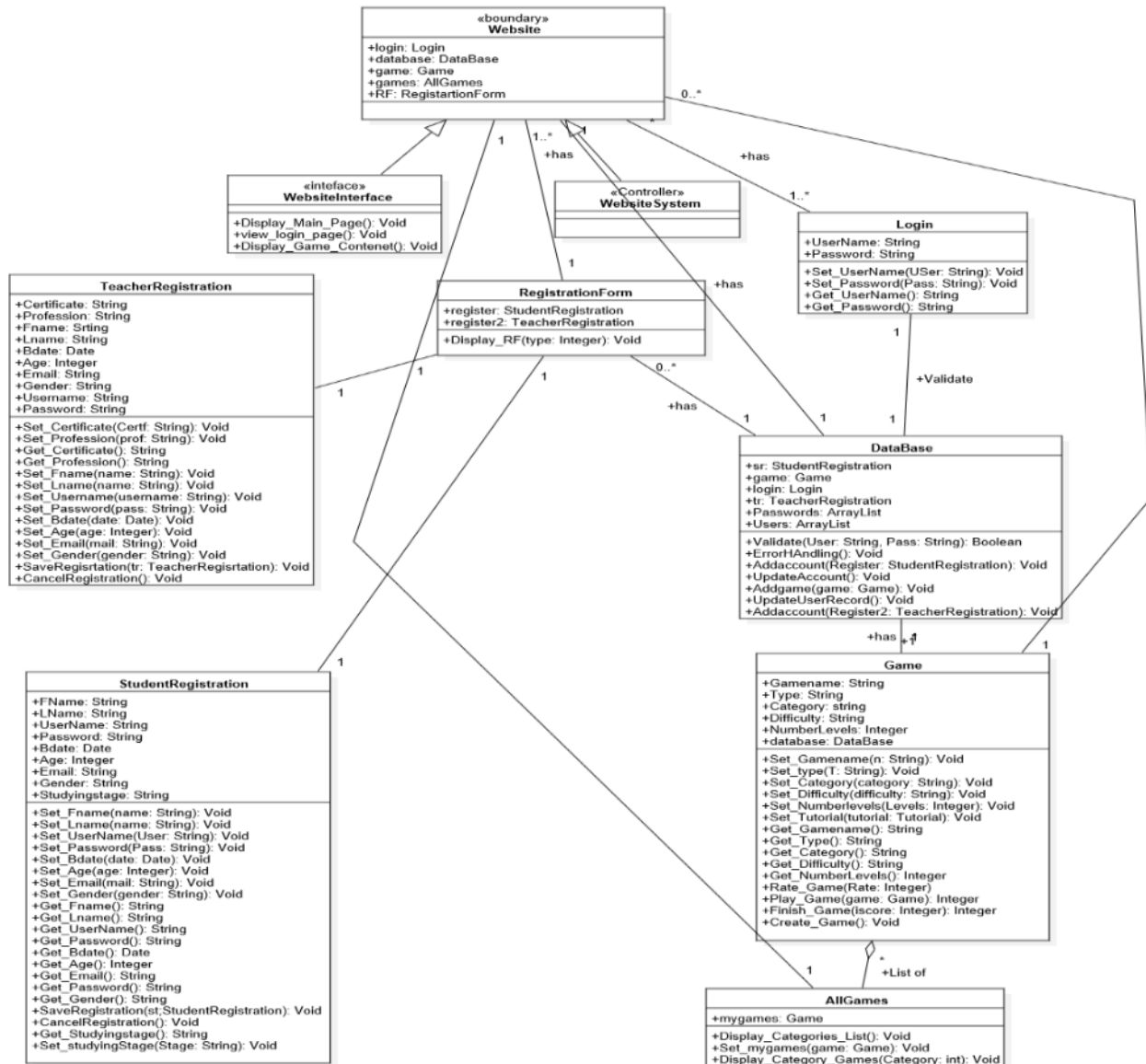
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#### System Models

##### I. Class diagrams





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Class ID	Class Name	Description & Responsibility
1	Website	Acts like a bridge between the system and User
2	WebInterface	It allows the user to interact with the system
3	WebSystem	Controls all interactions between user and system
4	Login	Take the username and password to enter his account
5	RegistrationForm	Displays the Student Or Teacher Form the User has to fill to have an account
6	Registration	Contains all needed Information about User, it specifies the information I need about User , allows the user to save his registration Or Cancel it if he don't want to continue
7	StudentRegistration	Contains all needed Information about Student, it specifies the information I need about User , allows the user to save his registration Or Cancel it if he don't want to continue and Contains extra needed Information about Student study
8	TeacherRegistration	Contains all needed Information about Teacher, it specifies the information I need about teacher , allows the user to save his registration Or Cancel it if he don't want to continue and Contains extra needed Information about teacher profession
9	DataBase	Contains all System Database all accounts , Usernames , Passwords , Games any needed data have to be saved is saved inside it also validate login username and password , update account data , add new account to accounts and handle any exception or error happen during displaying website
10	Game	Describes the game type, Category, difficulty, number of levels and tutorial of each game and allow user to Play game , Finish game, Create game and Rate game
12	AllGames	Contain all games available in the website , display games related to each category and display categories of subjects



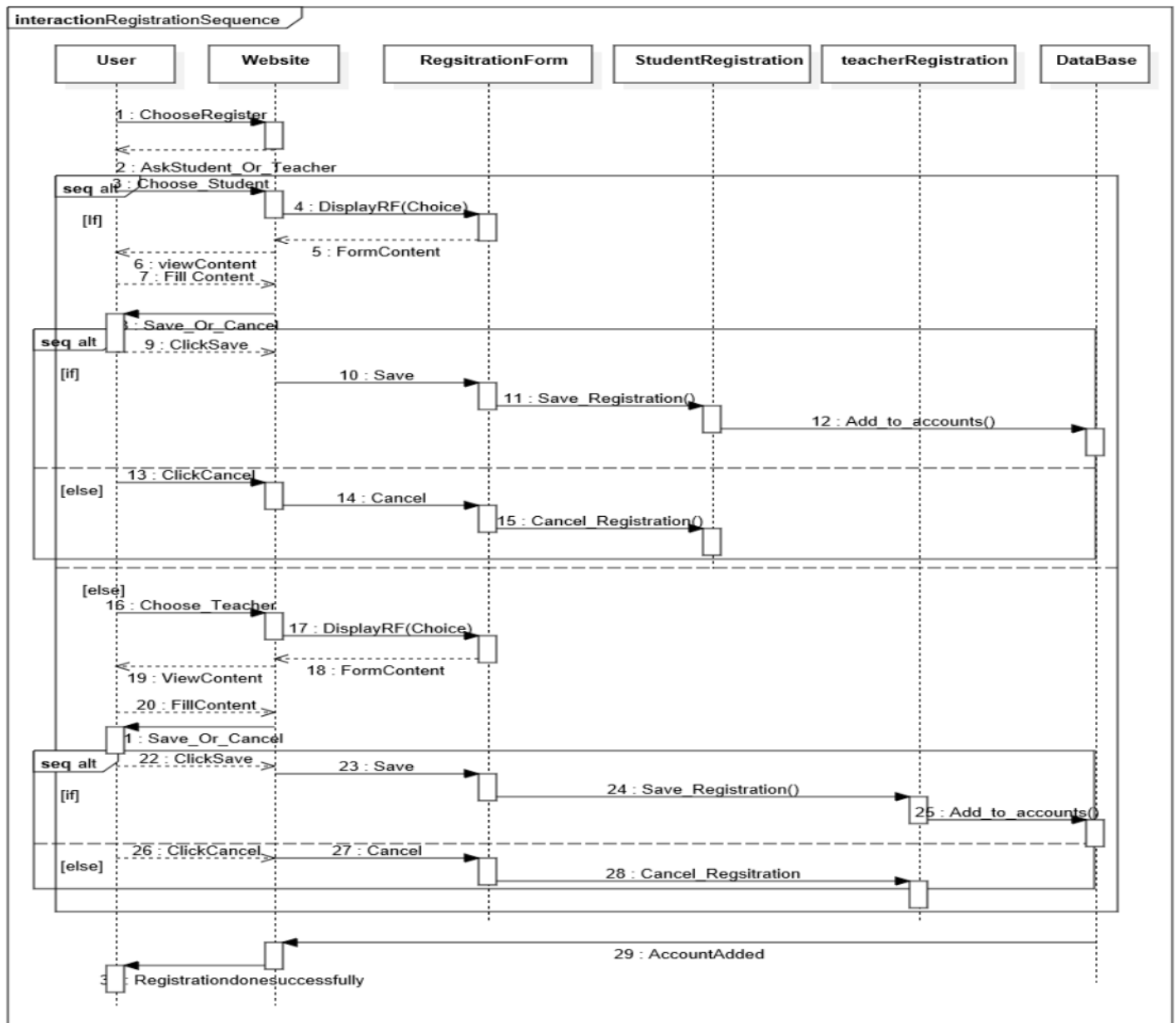
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#### II. Sequence diagrams

##### 1-Registration Sequence (ID = 1):

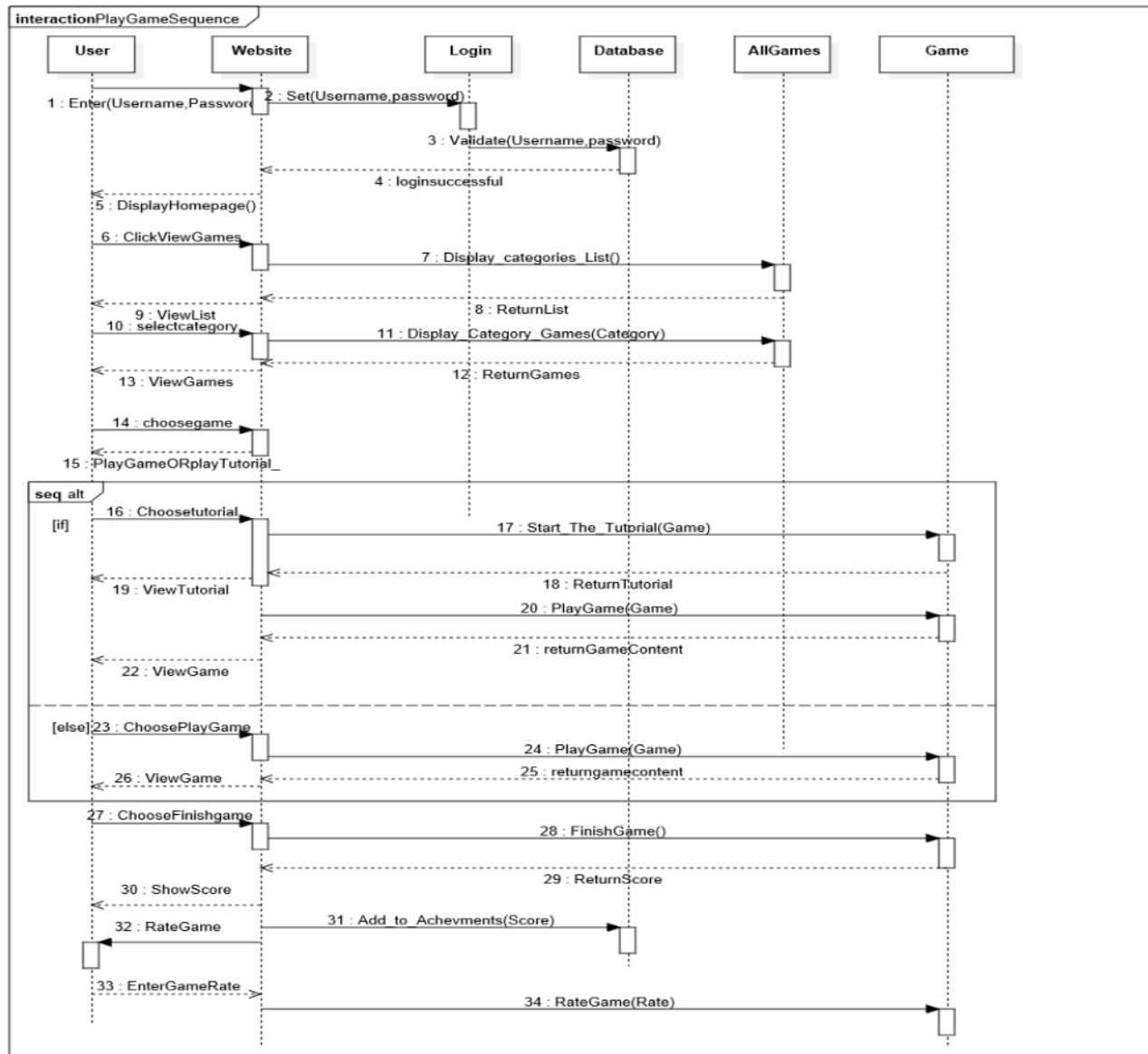




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2-Play Game Sequence (ID = 2):



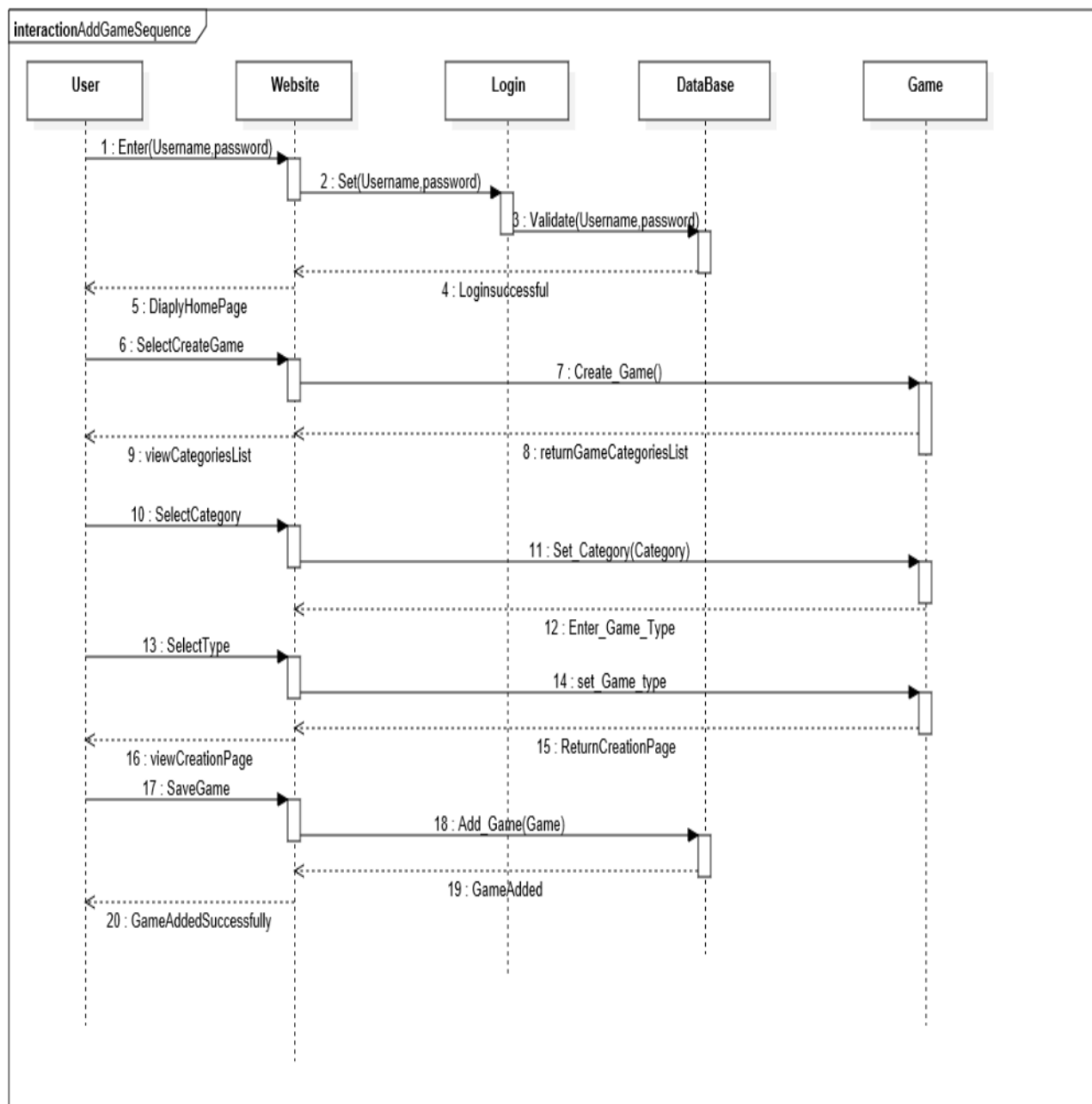


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#### 3-Add Game Sequence (ID = 3):







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### Class - Sequence Usage Table

Class Name	Sequence Diagrams	Overall used methods
Website	1 , 2, 3	viewRF, viewcategorieslist, displayhomepage , viewgames, viewtutorial, viewGame, showscore
Login	2, 3	Set(Username ) , Set(Password)
RegistrationForm	1	DisplayRF
StudentRegistration	1	SaveRegistration
TeacherRegistration	1	SaveRegistration
DataBase	1 , 2 , 3	Addaccount ,Add game ,Addtoacheivments , validate(username,password)
Game	2 , 3	Create game , set category, set game type , Start the tutorial , play game , finish game , rate game
All Games	2	Display Categories list , display category games(category)

### Ownership Report

Item	Owners
Class diagram	Hamsa , Adham , Ahmed
Sequence diagrams	Hamsa, Adham , Ahmed

### GitHub link:

[https://github.com/HamsaMobarez/SoftWare\\_Project](https://github.com/HamsaMobarez/SoftWare_Project)