Cairo University  
Faculty of Computers and Information



**CS251**

**Software Engineering I**

Project Name

Software Requirements Specifications

Team Names

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Month & Year

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# Team

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# Document Purpose and Audience

This document will show and analyze our project (website) that it will explain how this website works and also it will show the all functionalities of this website .

The expected audience of this document is our PM.

# Introduction

## Software Purpose

The main purpose of this software is to help students to learn some educational things by an easy and entertaining way that the website it is about some interesting games which will be played by the students .

## Software Scope

Our project is about website (EGW) that support multiple kinds of educational games for students , it will be available at any time but it requires creating a special account and it will be very simple to make user can deal with it easily.

EGW support 4 categories for games : Programming ,logic ,math and memory games.

## Definitions, acronyms, and abbreviations

|  |  |
| --- | --- |
|  | Definitions |
| PM | Project manager |
| EGW | Educational games web |

# Requirements

## Functional Requirements

**Sign up:** It’s a required step to use the website for the first time , student or teacher must have an account to use the website.

**Sign in:** User must sign in with his account to use the website.

**List of games:** It’s an educational game website so , it must have a list of games that user able to use. Student allowed to do some functions and the teacher also has special functions could be used.

**Choose category of the game:** It’s a required function must be done by student if he want to play a game or teacher if he want to create or update or try a game , these categories are programming ,logic ,math and memory games.

**Play game:** allowed use for student and teachers after choosing the category and the game they could play the game now.

**Rate game:** After playing a game the student can rate this game by choosing one of the available choices interest , normal or boring.

**Update game:** The teacher creator of the game can update the game by edit and provide it with more features or he can delete it.

**Save score:** After finishing playing the game the last score the player got will by saved by the system.

**Show score:** After finishing playing the game the last score the player got will by saved by the system and then will be shown to the player.

**Create new game:** This option is allowed to the teachers, they can create new game or student to play it.

**Try game:** The teacher can try his own game to determine if it need any develops or not.

**Write comments:** It consist of two options : write comment and it’s for student who want to ask for any thing about the game or say any comment about it, reply to a comment it’s for teacher or student who want to reply for a comment written by anyone.

This website lists all games to user and user can choose any game , also each student can rate the game , after that he will start playing and he can know his score . After finishing the game , the system will automatically save the score of the student . Also student can write comments .

Teacher can create a new game , he can try game and also he can respond the students comments .

## Non Functional Requirements

|  |  |
| --- | --- |
|  | **Details** |
| **Performance** | Login operation will be done within 10 second |
| **security** | The login operation it will be done by entering the name and the password and the using of password makes the account secured . |
| **Availability** | The website is available for users 24 hours a day |
| **Authentication** | No one can use the website without having a special account |
| **Scalability** | The system is able to support about 45,000 users at the same time. |
| **usability** | This website is very simple and any user can use it easily |

# System Models

## Use Case Model

## 7.PNGUse Case Tables

|  |  |  |
| --- | --- | --- |
| Use case ID : | 1 | |
| Use Case Name: | Log in | |
| Actors: | Teacher and student | |
| Pre-conditions: |  | |
| Post-conditions: | Can use the website. | |
| Flow of events: | **User Action** | **System Action** |
| 1-user choose type |  |
| 2-user log in with entering data | 2- System verify user data. |
|  | 3- System prepare options which user is allowed to use. |
| Exceptions: | **User Action** | **System Action** |
| 1. User entered invalid data. |  |
|  | 2-system print error message and ask user to try again if the data not valid. |
| Includes: | 1-user choose type  2-user log in with entering data  3-system verify user data | |
| Notes and Issues: | User refers to Student or Teacher | |

|  |  |  |
| --- | --- | --- |
| Use case ID : | 2 | |
| Use Case Name: | Update game | |
| Actors: | Teacher | |
| Pre-conditions: | Log in | |
| Post-conditions: | System notify to students that there are new updates to the game. | |
| Flow of events: | **User Action** | **System Action** |
| 1-user open game |  |
|  | 2- System shows options allowed to the teacher. |
|  | 3-user select from (edit – remove) options and start this process. |  |
|  |  | 4- System notify to students that there are new updates to the game. |
| Exceptions: | **User Action** | **System Action** |
| 1-user edit game |  |
| 2-user remove game |  |
| Includes: | System notify to students that there are new updates to the game. | |
| Notes and Issues: | User refers to teacher | |

|  |  |  |
| --- | --- | --- |
| Use case ID : | 3 | |
| Use Case Name: | Create new game | |
| Actors: | Teacher | |
| Pre-conditions: | Login with valid data | |
| Post-conditions: | Student can use this new game | |
| Flow of events: | **User Action** | **System Action** |
| 1-Teacher choose category of game |  |
| 2-Teacher can create game with many features. |  |
| 3- Finish creation of game. |  |
|  | 4- System checks if implementation of the game is well done. |
|  | 5-System adds the game to the games in selected category. |
|  |  | 6- System will notify to the students that’s there is new gamed added to the website. |
| Exceptions: | **User Action** | **System Action** |
| 1- There is an error in the basic implementation of the game (coding) |  |
|  | 2- System will tell the teacher that game cannot be run successfully. |
| Includes: | Teacher can try game after creating it. | |
| Notes and Issues: | We assumed that try game function is available for the games the teacher created only. | |

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| --- | --- | --- |
| Use case ID : | 4 | |
| Use Case Name: | Comment on game | |
| Actors: | Student | |
| Pre-conditions: | Log in – play game | |
| Post-conditions: | Teacher own this game may reply for the student’s comment. | |
| Flow of events: | **User Action** | **System Action** |
| 1-After playing game student can comment on it. |  |
|  | 2- System notifies the teacher about this comment. |
|  |  |  |
| Exceptions: | **User Action** | **System Action** |
| 1-Teacher may reply to student’s comment |  |
|  | 2- System notifies the student about teacher’s reply. |
| Includes: |  | |
| Notes and Issues: |  | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 5 | |
| Use Case Name: | Play game | |
| Actors: | Student | |
| Pre-conditions: | Log in | |
| Post-conditions: | 1-show score  2-save score | |
| Flow of events: | **User Action** | **System Action** |
| 1-select game with specific features and relates to specific field or subject in real life |  |
|  | 2-list all related games to this specific subject |
| 3- Choose a game from selected category |  |
|  |  | 4-Start game |
|  | 5- Play game |  |
|  | 6- End game |  |
|  |  | 7- System saves score then shows it to the student. |
| Exceptions: | **User Action** | **System Action** |
|  |  |
| Includes: | 1-Choose multiple choices games category then choose specific game.  2-After the end of game system saves student score.  3-System shows student score | |
| Notes and Issues: |  | |

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| --- | --- | --- |
| Use Case ID: | 6 | |
| Use Case Name: | Rate game | |
| Actors: | Student | |
| Pre-conditions: | Play game | |
| Post-conditions: | End game | |
| Flow of events: | **User Action** | **System Action** |
| 1-End game |  |
|  | 2-System shows list of rates to student (Interest-Normal-Boring) |
|  | 3- Student choose rate from the list of rates. |  |
|  |  | 4- System saves student's rate. |
| Exceptions: | **User Action** | **System Action** |
| Student can choose one of three rates:  1-choose boring  2-choose interesting  3-choose normal |  |
| Includes: | System saves rate selected by the student. | |
| Notes and Issues: | This process is optional for student. | |

# Ownership Report

|  |  |
| --- | --- |
| **Item** | **Owners** |
| Functional and nonfunctional requirements | *Aya Tarek [left the team]*  *-Final edits by all members of the team-* |
| Use case 1 –use case 2 | *Ahmed Gamal* |
| Use case 3 –use case 4 | *Esraa Ahmed* |
| Use case 5 –use case 6 | *Sara Adel* |
| Scope ,purpose ,audience and use case diagram | *All team members* |