Cairo University  
Faculty of Computers and Information



**CS251**

**Software Engineering I**

X-GAME

Software Requirements Specifications

Team Names

November & 2016

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# 1-Team

|  |  |  |  |
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# 2-Document Purpose and Audience

**This document describes software requirements for educational website; it is intended for the team that will develop this website.**

## 3-Introduction

## 3.1- Software Purpose

**This website is offering sample games for students to learn educational concept in field like math, science and technology.**

## 3.2-Software Scope

* **There are three components in this software: student, teacher and games.**
* **For student the major features: can play any game to learn a new field, rate for this game and leave comment for this game.**
* **For teachers the major features: can try any game , create any game and able to edit or remove and game he created it before and be able to respond on students comments for games created by him.**
* **For games the major features: can be played by one student and will be created by teacher , Each game should belong to one category , there is three games in this website these games classified as multiple choices game.**
* **And for all this components can create an account and register their information.**

# 4-Requirements

## 4.1Functional Requirements

1. **For students, teachers and developers:**

**1.1. Login:**

* + 1. **Logging in need e-mail and his password**
  1. **Sign up**
     1. **sign up need entering some information ( his name , last name , age , gender , e-mail, phone number , new password and achievements )**
  2. **Leave a comment ant replay**
     1. **There is a space for the user to leave his comment**
  3. **Choose from categories of games**
     1. **website categorize games into (Programming, mathematics and science)**
  4. **Join game**
     1. **User can't join a game without logging in**
  5. **Make the game favorite**
     1. **User can add a game to his favorite list**
  6. **Game result** 
     1. **Game result shown up after game's end**

1. **For students:**
   1. **Rate the game**
      1. **he can rate the game from 1 to 5**
2. **For teachers and developers:**
   1. **Make a game**
      1. **Website provides the tools to make the game he want or upload it**
   2. **Edit the game he made** 
      1. **If he made the game then he have the right to edit it for any reason**
   3. **Remove the game he made**
      1. **If he made the game then he have the right to remove it**
   4. **Rate other games** 
      1. **He can't rate his game**

## 4.2-Non Functional Requirements

**Simple to play:**

The user interface and the rules of playing must be intuitive.

It will be user friendly and we make Video tutorial when you play the game for the first time

All relevant information of the X-GAME must be visible to the player. This includes the Game rules

Security:

Authentication:

Authentication addresses the question: who are you? It is the process of uniquely identifying the clients of your applications and services. These might be end users, other services, processes, or computers. In security parlance, authenticated clients are referred to as principals.

Authorization:

Authorization addresses the question: what can you do? It is the process that governs the resources and operations that the authenticated client is permitted to access

Fail securely:

If an application fails, do not leave sensitive data accessible. Return friendly errors to end users that do not expose internal system details. Do not include details that may help an attacker exploit vulnerabilities in your application.

Programming language:

X-GAME must be implemented in Java.

The executable X-GAME must be available over the web.

Different game types:

The X-GAME must be have games deferent fields like (math, programing and science)

**Privacy:**

Protecting personal information and undesired access to personal space.

# 5-System Models

## 5.1-Use Case Model

## 

## 

## 5.2-Use Case Tables

|  |  |
| --- | --- |
| **Use case ID :** | **1** |
| **Use case name :** | Login |
| **Actors :** | Student & teacher |
| **Pre-conditions :** | The website is open |
| **Post-conditions**  **:** | The student / teacher can use the website Fully |
| **Flow of events :** | User action system action |
|  | 1-The user insert his name and email 2-system check this information 3- user insert his password 4-system check in theData Base |
| **Exceptions:** | User action system action |
|  | 1-User insert his username and password 2-password or name is invalid  3-system reject sign in |
| **Includes :** |  |
| **Notes and** |  |

|  |  |
| --- | --- |
| **Use case ID :** | **2** |
| **Use case name**  **:** | Join game |
| **Actors :** | student |
| **Pre-conditions :** | The student has created an account on the website |
| **Post-conditions**  **:** | The student can comment and rate this game after play |
| **Flow of events :** | User action system action |
|  | 1-the student select the category 2-system list all game in category  3-student select the game he want 4-system load this game to play |
| **Exceptions:** | User action system action |
|  |  |
| **Includes :** |  |
| **Notes and** |  |

|  |  |
| --- | --- |
| **Use case ID :** | **3** |
| **Use case name :** | Rate game |
| **Actors :** | student |
| **Pre-conditions :** | The student has played a game on the website |
| **Post-conditions**  **:** | The student can try any game or leave a comment on this game |
| **Flow of events :** | User action system action |
|  | 1-the student select the rate option 2-system record this rate  3-system save in data base |
| **Exceptions:** | User action system action |
|  |  |
| **Includes :** |  |
| **Notes and** |  |
| **Use case ID :** | **4** |
|  |  |
| **Use case name :** | Comment on a game |
| **Actors :** | student |
| **Pre-conditions :** | The student has played a game on the website |
| **Post-conditions**  **:** | The student can try any game or sign up from the website |
| **Flow of events :** | User action system action |
|  | 1-the student write comment 2-system record this comment  3-system display the comment to teachers |
| **Exceptions:** | User action system action |
|  |  |
| **Includes :** | 5 |
| **Notes and** |  |

|  |  |
| --- | --- |
| **Use case ID :** | **5** |
| **Use case name :** | Respond on comment |
| **Actors :** | Teacher |
| **Pre-conditions :** | The student has write a comment on the game |
| **Post-conditions**  **:** | The student can reply on the teacher comment |
| **Flow of events :** | User action system action |
|  | 1-the teacher reply on the comment 2-system record this reply  3-system display this reply |
| **Exceptions:** | User action system action |
|  |  |
| **Includes :** |  |
| **Notes and** |  |

|  |  |
| --- | --- |
| **Use case ID :** | **6** |
| **Use case name**  **:** | Try a game |
| **Actors :** | Teacher |
| **Pre-conditions :** | The teacher has created an account on the website |
| **Post-conditions**  **:** | The teacher can edit this game that he create it |
| **Flow of events :** | User action system action |
|  | 1-the teacher select try for any game 2-system load the game to try  3- teacher strat play the game |
| **Exceptions:** | User action system action |
|  |  |
| **Includes :** |  |
| **Notes and** |  |

|  |  |
| --- | --- |
| **Use case ID :** | **7** |
| **Use case name**  **:** | Make a game |
| **Actors :** | Teacher |
| **Pre-conditions :** | The teacher has created an account on the website |
| **Post-conditions**  **:** | Student can play this game |
| **Flow of events :** | User action system action |
|  | 1-the teacher sign in the website 2-system check the password  3- teacher strat use the tools to create a new game 4-system add this game in  D.B |
| **Exceptions:** | User action system action |
|  |  |
| **Includes :** |  |
| **Notes and** |  |

|  |  |
| --- | --- |
| **Use case ID :** | **8** |
| **Use case name**  **:** | Edit a game he made |
| **Actors :** | Teacher |
| **Pre-conditions :** | The teacher has created a game |
| **Post-conditions**  **:** | Student can play this game after editing |
| **Flow of events :** | User action system action |
|  | 1-the teacher sign in the website 2-system check the password 3- teacher strat use the tools to edit a game he created 4-system edit this game  in D.B after editing |
| **Exceptions:** | User action system action |
|  |  |
| **Includes :** |  |
| **Notes and** |  |

|  |  |
| --- | --- |
| **Use case ID :** | **9** |
| **Use case name**  **:** | Remove a game he made |
| **Actors :** | Teacher |
| **Pre-conditions :** | The teacher has created a game |
| **Post-conditions**  **:** | Student can't play this game |
| **Flow of events :** | User action system action |
|  | 1-the teacher sign in the website 2-system check the password  3- teacher strat use the tools to remove a game he created 4-system remove this game from D.B |
| **Exceptions:** | User action system action |
|  |  |
| **Includes :** |  |
| **Notes and** |  |

|  |  |
| --- | --- |
| **Use case ID :** | **10** |
| **Use case name**  **:** | Sign up |
| **Actors :** | Student & Teacher |
| **Pre-conditions :** | The student and teacher has Finished |
| **Post-conditions**  **:** | The student and teacher can login again |
| **Flow of events :** | User action system action |
|  | 1-the student & teacher finished using the website  2-system Display the login interface again |
| **Exceptions:** | User action system action |
|  |  |
| **Includes :** |  |
| **Notes and** |  |

|  |  |
| --- | --- |
| **Use case ID :** | **11** |
| **Use case name**  **:** | Make Game Favorite |
| **Actors :** | Student |
| **Pre-conditions :** | The student has played a game on the website and like it |
| **Post-conditions**  **:** | The student can try any game or sign up from the website |
| **Flow of events :** | User action system action |
|  | 1-student select the game to add in his favorite 2-system add the game  3-student can found this game in his favorite list |
| **Exceptions:** | User action system action |
|  |  |
| **Includes :** |  |
| **Notes and** |  |

# 6-Ownership Report

|  |  |
| --- | --- |
| **Item** | **Owner** |
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| Non- Functional Requirements | Mostafa Saied |
| Use case Model | Mostafa Mahfouz |
| Use case Table | Soliman Gamaa |