Cairo University  
Faculty of Computers and Information



**CS251**

**Software Engineering I**

Project Name

Software Requirements Specifications

Team Names

Month & Year

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# Team

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# Document Purpose and Audience

* This document is a software project for game platform between teacher and student.
* This document contains: purpose, scope, requirements and use case model.
* CEO, Project Manager, Customer.

# Introduction

## Software Purpose

The purpose of this project to preview a game platform that made by professor. This platform will help student to understand basic educational concepts while they will be playing simple games. These concepts will be related to subjects like science, technology and math.

## Software Scope

* Contains four categories (Science, technology, math …) of games each category has specific rules and each game should belong to one category.
* This is a website not application phone.
* The code of this website will writing using java language.

## 

# Requirements

## Functional Requirements

This website should able to:

* Play the game.
* Rate any game.
* Enables student to write comments for each game.
* Enables teacher to respond on students comments.
* Enables teacher to create a game.
* Enables teacher to try any game.
* Enables teacher to edit or remove.
* Each game should belong to one category.
* Game’s category may be “Match pictures”, “Multiple Choices game”, “Run code game”.
* Add coding games to help students understand basic programming concepts.

## Non Functional Requirements

|  |  |
| --- | --- |
|  | **Details** |
| **Usability** | * Website is easy to use through minimize the number of clicks to use any components. * The user interface and the rules of playing is intuitive. * All relevant information of the game is visible to the student. |
| **Availability** | * Website is available 24 hours, at any time give you the required result. |
| **Performance** | * Time response at most 3 seconds. * Load time of website page will done within 5 seconds. |
| **Security** | * Every user has username and password. * No one cannot access any data belongs to others. * There is time out for each user if he don’t take any action through ten minutes he/she will need login again. |
| **Scalability** | * Website will be used by more than 100,000 user. |
| **Robustness** | * The system can tolerate temperatures up to 90 C. |
| **Interface Requirements** | * Website has simple interface and suitable colors. |
| **Supportability** | * Website solve the problems of users within 24 hours. |

# 

# System Models

## Use Case Model

## 

## Use Case Tables

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 1 | |
| Use Case Name: | Create account | |
| Actors: | Student and teacher | |
| Pre-conditions: | No condition | |
| Post-conditions: | Available account | |
| Flow of events: | **User Action** | **System Action** |
| 1- Enter username and Password. |  |
|  | 2- System Verify user password. |
| 3- Enter password again. |  |
|  | 4- Show message “Creating account successfully”. |
|  |  |
| Exceptions: | **User Action** | **System Action** |
| 1- User Enter Password. |  |
|  | 2- Show message “Invalid password” |
| Includes: |  | |
| Notes and Issues: |  | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 2 | |
| Use Case Name: | Sign in | |
| Actors: | Student and teacher | |
| Pre-conditions: | Create account | |
| Post-conditions: | Create game | |
| Flow of events: | **User Action** | **System Action** |
| 1- User Enter username and password. |  |
|  | 2- System Verify username and password. |
| 3- User choose what he/she want to do. |  |
|  | 4- Reasons the user required. |
| Exceptions: | **User Action** | **System Action** |
| 1- User Enter username and Password. |  |
|  | 2- show message “ username and password no matching “ |
| Includes: | This use case includes from 1. | |
| Notes and Issues: |  | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 3 | |
| Use Case Name: | Create game | |
| Actors: | Teacher | |
| Pre-conditions: | Sign in | |
| Post-conditions: | Try game | |
| Flow of events: | **User Action** | **System Action** |
| 1- Write the code of game. |  |
|  | 2- Website test this code. |
| 3- Design the user interface for this game. |  |
|  | 4- Show the user interface. |
|  |  |
| Exceptions: | **User Action** | **System Action** |
| 1- Enter the code of game. |  |
|  | 2- Show message “ coding errors ” |
| Includes: | This use case includes 4. | |
| Notes and Issues: |  | |
|  |  | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 4 | |
| Use Case Name: | Try game | |
| Actors: | Teacher | |
| Pre-conditions: | Create game | |
| Post-conditions: | Edit or remove game | |
| Flow of events: | **User Action** | **System Action** |
| 1- Open game. |  |
|  | 2- Show the interface of this game. |
| 3- Start to play. |  |
|  | 4- Show the result. |
| 5- Take an action depend on the result. |  |
|  |  | 6-website will response to this action. |
| Exceptions: | **User Action** | **System Action** |
| 1- Start to play. |  |
|  | 2-Crashing happens,  Network get off. |
| Includes: | This use case is include from 3. | |
| Notes and Issues: |  | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 5 | |
| Use Case Name: | Edit or remove game | |
| Actors: | Teacher | |
| Pre-conditions: | Try game | |
| Post-conditions: | Play game | |
| Flow of events: | **User Action** | **System Action** |
| 1- Try game |  |
|  | 2- Website show result. |
| 3- Teacher take an action depend on this result will choose edit or remove this game. |  |
| Exceptions: | **User Action** | **System Action** |
| 1- Teacher doesn't want edit or remove this game. |  |
| Includes: | This use case extend from 4. | |
| Notes and Issues: |  | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 6 | |
| Use Case Name: | Play game | |
| Actors: | Student | |
| Pre-conditions: | Try game | |
| Post-conditions: | Rate game and write comment | |
| Flow of events: | **User Action** | **System Action** |
| 1- Choose game. |  |
|  | 2- Website show the interface of this game. |
| 3-Start to play |  |
|  | 4- Show result. |
| and so on |  |
| Exceptions: | **User Action** | **System Action** |
| 1- Open game. |  |
|  | 2-Failed network. |
| Includes: |  | |
| Notes and Issues: |  | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 7 | |
| Use Case Name: | Rate game | |
| Actors: | Student | |
| Pre-conditions: | Play game | |
| Post-conditions: | Write comment | |
| Flow of events: | **User Action** | **System Action** |
| 1- Press rate button. |  |
|  | 2-give me rate window. |
| 3- Rate this game. |  |
|  | 4- Save rate. |
| Exceptions: | **User Action** | **System Action** |
| 1- Student don’t want rate this game or write comments. |  |
| Includes: | This use case extend from 6. | |
| Notes and Issues: |  | |
|  |  | |
| Use Case ID: | 8 | |
| Use Case Name: | write comment | |
| Actors: | Student | |
| Pre-conditions: | Rate comment | |
| Post-conditions: | Teacher response on comments | |
| Flow of events: | **User Action** | **System Action** |
| 1- Press button comment. |  |
|  | 2- Show comment window. |
| 3- Write comment. |  |
|  |  | 4-save comment. |
| Exceptions: | **User Action** | **System Action** |
| 1- Student don’t want to write comments. |  |
| Includes: | This use case extend from 6. | |
| Notes and Issues: |  | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 9 | |
| Use Case Name: | Response on students comments | |
| Actors: | Teacher | |
| Pre-conditions: | Write comments | |
| Post-conditions: | No condition | |
| Flow of events: | **User Action** | **System Action** |
| 1- Student Write comments. |  |
|  | 2- Show this comment to teacher. |
| 3- Teacher Response on this comments. |  |
| Exceptions: | **User Action** | **System Action** |
| 1- Student don’t want to write comments. |  |
| Includes: | This use case includes 4. | |
| Notes and Issues: |  | |

# 

# Ownership Report

|  |  |
| --- | --- |
| **Item** | **Owners** |
|  | *Ledia Abd El Maseeh Massoud* |
|  | *Neveen reda* |