Cairo University  
Faculty of Computers and Information



**CS251**

**Software Engineering I**

LearnPlaying Website

Software Requirements Specifications

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# Team

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# Document Purpose and Audience

* This document is designed to give the reader an accurate, concrete understanding of what “LearnPlaying” will cover and what the reader can gain from using our website. By introducing step-by-step explanation of how “LearnPlaying” works and how to make learning process more fun!
* This paper intended for parents at homes, teachers at schools and/or students with educational challenges that want to know how “LearnPlaying” works.

# Introduction

## Software Purpose

* Educational games are games that are designed to help people to learn about certain subjects, expand concepts, reinforce development, understand an historical event or culture, or assist them in learning a skill as they play.
* “LearnPlaying” website intended for those people who have the passion to learn and helping them making educational attainment as easy as playing a game.
* We aspire to facilitate the *Smart Learning Methodology* among readers in the easiest way possible and Spread awareness about *Smart Learning Methodology*.

## 

## Software Scope

This website will consist of creating an educational game based upon the *Smart Learning Methodology.* Modules of the game will include a variety of learning games for topics including Mathematics and English language. Some of these games will be designed based on existing games or new innovative games that designed specifically for learning purposes.

**Note**: It can be expanded to cover more topics in the future without any commitment on website builders

**Definitions, acronyms, and abbreviations**

|  |  |
| --- | --- |
| Abbreviation/Definition | Meaning |
| **LearnPlaying** | LearnPlaying resembles our website name, which divided into two parts; **Learn:** which indicate the main purpose of the website as a learning tool.  **Playing:** which indicate the new way of learning is by playing. |
| **SmartLearning** | Smart learning is an educational method which uses technology as interactive teaching methods. Computers adapt the presentation of educational material according to students' learning needs, as indicated by their responses to questions and tasks. |
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# Requirements

## Functional Requirements

## The system stores basic information about students such as gender, grade, age and name.

* The system Also contains students’ achievements (Scores he/she get in each game).

## The system stores basic information about teachers such as gender, grade, age and name.

## The system enables the user to use the games included in the website through GUI.

## Non Functional Requirements

|  |  |
| --- | --- |
|  | **Details** |
| **Usability** | The system is based on easy-to-use graphical methods that facilitate the picking the games according to user’s interest. Making surfing the website as easy as opening a book. |
| **Performance** | Fast performance of the system is on our top priorities, taking into consideration high web traffic. |
| **Security** | Security is a legitimate right for any user; putting this into our minds we constructed the website as a safe place that maintains the privacy of each user. |
| **Maintainability** | A team of our specialists are assigned to analyze system performance and to communicate with users through their reports to make the website responsive at all times. |
| **Scalability** | System should be able to support simultaneous games at the same time. Also depending on the users’ reviews it can cover more topics and more games. |

# 

# System Models

## Use Case Model

## C:\Users\ZUMA\Desktop\14971026_1511920522156659_1448415041_o.png

## Actors:

## The actors for this model are “teacher” and “student”

* **Operations:**

1. Student and teacher can “create account” on website with basic information.
2. Student and teacher can “Login” into website.
3. Student and teacher can “play” e-games on website, Also it should contains students achievements (“Scores” he/she get in each game)
4. Student can “rate and comment”on any game.
5. Teacher can “create play” on this website, can “edit” or “remove” on the game that created, and can “respond” on any comment on this game.

## Use Case Tables

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 1 | |
| Use Case Name: | Create account | |
| Actors: | Teacher and student | |
| Pre-conditions: | User should create account after enter on website by enter basics information like name, age, gender, …., etc. | |
| Post-conditions: | User accounts will contain student’s basic information. | |
| Flow of event | **User Action** | **System Action** |
| 1- User Enter basic information of him. |  |
|  | 2- System stores this information. |
| Exceptions: | **User Action** | **System Action** |
| 1- User enters missing information. |  |
|  | 2- System requires entering the missing information through showing an error massage. |
| Includes: | User should enter basic information like gender, age, mail, ….etc. to create an account. | |
| Notes and Issues: |  | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 2 | |
| Use Case Name: | Login | |
| Actors: | Teacher and student | |
| Pre-conditions: | User should login email after enter on website by enter email and password | |
| Post-conditions: | System login into account of user. | |
| Flow of event | **User Action** | **System Action** |
| 1- User Enter email and password. |  |
|  | 2- System login into account of user. |
| Exceptions: | **User Action** | **System Action** |
| 1- User enters error email or password. |  |
|  | 2- System shows error massage for invalid password or email. |
| Includes: | User should create account to login into this account after this. | |
| Notes and Issues: |  | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 3 | |
| Use Case Name: | Play | |
| Actors: | Teacher and student | |
| Pre-conditions: | System shows the game to play. | |
| Post-conditions: | System stores score from any game. | |
| Flow of event | **User Action** | **System Action** |
|  | 1- System shows the game. |
| 2-User plays a game. | 3- System stores score. |
| Exceptions: | **User Action** | **System Action** |
| 1- Error in internet speed of user’s computer. |  |
|  | 2- System can’t show game. |
| Includes: | User should create account to play and to save his score. | |
| Notes and Issues: |  | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 4 | |
| Use Case Name: | Rate and comment | |
| Actors: | Student | |
| Pre-conditions: | User playing a game. | |
| Post-conditions: | User also can rate any game (interesting, normal, boring) and write comments for each game. | |
| Flow of event | **User Action** | **System Action** |
| 1- User can rate and comment for each game |  |
|  | 2- System saves this rate and this comment under game. |
| Exceptions: | **User Action** | **System Action** |
| 1- User don’t wont to rate or comment on game. |  |
|  |  |
| Includes: | User should play a game to determine rate and what comment on this game? | |
| Notes and Issues: |  | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 5 | |
| Use Case Name: | Create play | |
| Actors: | Teacher | |
| Pre-conditions: | User login into your account. | |
| Post-conditions: | User creates any new game, also able to edit or remove and game he/she created it before And also able to respond on students comments for games created by him/her. | |
| Flow of event | **User Action** | **System Action** |
| 1- User creates any new game. |  |
|  | 2- System saves this play on website. |
|  | 3- User able to edit or remove on this game. |  |
|  |  | 4- System saves changes. |
|  | 5- User can respond on any comment from student on this game. |  |
| Exceptions: | **User Action** | **System Action** |
| 1- Error on implementation of game. |  |
|  | 2- System will not save game. |
| Includes: | User should create account to be able to create game. | |
| Notes and Issues: |  | |

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# Ownership Report

|  |  |
| --- | --- |
| **Item** | **Owners** |
| Use case model and table. | *Hazem Emad* |
| Functionality and non-functionality. | *Hassan Ahmed* |
| Document purpose and introduction. | *Hossam Taha* |