Cairo University  
Faculty of Computers and Information



**CS251**

**Software Engineering I**

Project Name

Software Requirements Specifications

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# Team

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# Document Purpose and Audience

* **Expected Audience : Faculty Administration, Faculty Staff and Students**

# Introduction

## Software Purpose

* **It is a web application which provides a reliable environment for students and faculty staff (Doctors & Teacher assistants) and allows them to communicate.**

## Software Scope

* **Registration System**
* **Notification System**
* **Rating System**
* **Attendance System**
* **Grading System**
* **Offering System**
* **Hub Menu**

## Definitions, acronyms, and abbreviations

* **None**

# 

# Requirements

## Functional Requirements

* Admin user will add any type of users
* Admin user will remove any type of users
* Students will register courses
* Admin user will assign courses to doctors and teacher assistants
* System will notify students with exams, assignments and schedule timing
* System will notify doctors and teacher assistants with their lectures and sections schedule
* System will notify any user with incoming messages
* Students will rate both of doctors and teacher assistants
* Doctors and teacher assistants will assign attendance grades to students
* System will calculate grades and GPA
* Teacher assistants will add grades
* Admin user will add final grades
* X will offer students with courses and internships

## Non Functional Requirements

* **Security**
  + **Access permissions for application data**
  + **Password requirements: length, characters**
  + **Inactivity timeouts**
* **Performance**
  + **Access time: 5 secs**
  + **Processing time: 5 secs**
  + **Withdraw operation will be done within 20 second**
* **Capacity** 
  + **Year-on-year growth 50% +**
  + **Storage: Hostage size -> 5 GB**
* **Maintenance**
  + **Holidays: Summer Time**
* **Scalability**
  + **System should be able to support up to 1000 simultaneous game players.**

# System Models

## Use Case Model

## 

## Use Case Tables

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 1 | |
| Use Case Name: | Sign in | |
| Actors: | Students – Teachers – Administrators | |
| Pre-conditions: | User Starts app | |
| Post-conditions: | User directed to his page | |
| Flow of events: | **User Action** | **System Action** |
| 1- User Enter Username and password |  |
|  | 2- System Verify user data  3- System direct user to his page |
| Exceptions: | **User Action** | **System Action** |
| 1- User Enter username and Password. |  |
|  | 2- Wrong username or password  3- System asks user to re-enter username and password |
| Includes: |  | |
| Notes and Issues: |  | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 2 | |
| Use Case Name: | Sign out | |
| Actors: | Students –Administrators – Teachers | |
| Pre-conditions: | User is logged in | |
| Post-conditions: | User directed to startup page | |
| Flow of events: | **User Action** | **System Action** |
| 1- User press sign out button |  |
|  | 2- System direct user to startup page |

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| --- | --- | --- |
| Use Case ID: | 3 | |
| Use Case Name: | View courses | |
| Actors: | Students– Administrators – Teachers | |
| Pre-conditions: | User is logged in | |
| Post-conditions: | Courses viewed to the user | |
| Flow of events: | **User Action** | **System Action** |
| 1-User press view courses button |  |
|  | 2- System shows the user’s courses |

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| --- | --- | --- |
| Use Case ID: | 4 | |
| Use Case Name: | Assign courses | |
| Actors: | Administrators | |
| Pre-conditions: | Admin is logged in | |
| Post-conditions: | Admin assigns the courses to doctors and TAs. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Admin press assign courses button |  |
|  | 2- System view available courses |
|  | 3- Admin assign courses to doctors and TAs. |  |
| Exceptions: | **User Action** | **System Action** |
| Assign course | Doctor or TA exceeded available courses number or having another course at the same time. |

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| --- | --- | --- |
| Use Case ID: | 5 | |
| Use Case Name: | Add courses | |
| Actors: | Administrators | |
| Pre-conditions: | Admin is logged in | |
| Post-conditions: | Admin add course(s) to the faculty | |
| Flow of events: | **User Action** | **System Action** |
| 1- Admin press add course button |  |
|  | 2- System allow admin to enter the course name and ID |
| Exceptions: | **User Action** | **System Action** |
| Admin enters course name and ID |  |
|  | System founds the course name and ID already exist.  System allow admin to re-enter the course name and ID |

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| --- | --- | --- |
| Use Case ID: | 6 | |
| Use Case Name: | Register course | |
| Actors: | Students– Administrators | |
| Pre-conditions: | User is logged in | |
| Post-conditions: | User register course | |
| Flow of events: | **User Action** | **System Action** |
| 1- User press register course button |  |
|  | 2- System view available courses |
|  | 3- Student choose the course and register it  4- Admin choose the student and the course |  |

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| --- | --- | --- |
| Use Case ID: | 7 | |
| Use Case Name: | Cancel course | |
| Actors: | Administrators - Student | |
| Pre-conditions: | User is logged in | |
| Post-conditions: | User Cancel course(s) | |
| Flow of events: | **User Action** | **System Action** |
| 1- User press cancel course button |  |
|  | 2- System view courses registered or assigned to doctors and TAs |
|  | 3-Admin cancel the course(s) |  |
| Exceptions: | **User Action** | **System Action** |
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| --- | --- | --- |
| Use Case ID: | 8 | |
| Use Case Name: | Add user | |
| Actors: | Administrators | |
| Pre-conditions: | Admin is logged in | |
| Post-conditions: | Admin added user(s) | |
| Flow of events: | **User Action** | **System Action** |
| 1- Admin press add user button |  |
|  | 2- System direct admin to add user page |
|  | 3- Admin add user |  |
| Exceptions: | **User Action** | **System Action** |
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| --- | --- | --- |
| Use Case ID: | 9 | |
| Use Case Name: | Remove user | |
| Actors: | Administrators | |
| Pre-conditions: | Admin is logged in | |
| Post-conditions: | Admin remove user(s) | |
| Flow of events: | **User Action** | **System Action** |
| 1- User press remove user button |  |
|  | 2- System direct admin to users page |
|  | 3-Admin choose the user(s) to remove |  |
| Exceptions: | **User Action** | **System Action** |
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| --- | --- | --- |
| Use Case ID: | 10 | |
| Use Case Name: | View grades | |
| Actors: | Administrators – Student- Teachers | |
| Pre-conditions: | User is logged in | |
| Post-conditions: | Grades are viewed | |
| Flow of events: | **User Action** | **System Action** |
| 1- User press view grades button |  |
|  | 2- System view grades to the user |
| Exceptions: | **User Action** | **System Action** |
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| Use Case ID: | 11 | |
| Use Case Name: | Edit grades | |
| Actors: | Administrators - Teachers | |
| Pre-conditions: | User is logged in | |
| Post-conditions: | User edited the grades | |
| Flow of events: | **User Action** | **System Action** |
| 1- User press edit grade button |  |
|  | 2- System view grades to the user |
|  | 3-User edit the grades |  |
| Exceptions: | **User Action** | **System Action** |
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| --- | --- | --- |
| Use Case ID: | 13 | |
| Use Case Name: | Add grades | |
| Actors: | Administrators - Teachers | |
| Pre-conditions: | User is logged in | |
| Post-conditions: | User added the grades | |
| Flow of events: | **User Action** | **System Action** |
| 1- User press add grade button |  |
|  | 2- System view the courses |
|  | 3-User choose the course to add grades in |  |
| Exceptions: | **User Action** | **System Action** |
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| --- | --- | --- |
| Use Case ID: | 14 | |
| Use Case Name: | View notification | |
| Actors: | Administrators – Teachers - Student | |
| Pre-conditions: | User is logged in | |
| Post-conditions: | Notifications are viewed | |
| Flow of events: | **User Action** | **System Action** |
| 1- User press view notification button |  |
|  | 2- System view notifications to the user |
| Exceptions: | **User Action** | **System Action** |
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| --- | --- | --- |
| Use Case ID: | 15 | |
| Use Case Name: | Clear Notifications | |
| Actors: | Administrators – Teachers - Student | |
| Pre-conditions: | View Notifications | |
| Post-conditions: | View Notifications | |
| Flow of events: | **User Action** | **System Action** |
| 1- User press clear notifications |  |
|  | 2- System clear the notifications selected by the user from the database |
| Exceptions: | **User Action** | **System Action** |
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| --- | --- | --- |
|  | 15 | |
| Use Case Name: | Edit grades | |
| Actors: | Administrators - Teachers | |
| Pre-conditions: | User is logged in | |
| Post-conditions: | User edited the grades | |
| Flow of events: | **User Action** | **System Action** |
| 1- User press edit grade button |  |
|  | 2- System view grades to the user |
|  | 3-User edit the grades |  |
| Exceptions: | **User Action** | **System Action** |
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|  | 17 | |
| Use Case Name: | Rate teacher | |
| Actors: | Student | |
| Pre-conditions: | User open teacher page | |
| Post-conditions: | Teacher is rated | |
| Flow of events: | **User Action** | **System Action** |
| 1- User select stars he wish |  |
|  | 2- System calculate cumulative  3-System submit the new rate to the database |
|  |  |  |
| Exceptions: | **User Action** | **System Action** |
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# Ownership Report

* **Remove the following notes and any red notes**
* **For every item in this document, write the owners. If someone is owner of something, s/he understands it 100%**
* **Team leader must verify the table with the team members.**

|  |  |
| --- | --- |
| **Item** | **Owners** |
|  |  |
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