Cairo University Faculty of Computers and Information



**CS352 – Software Engineering II**

**Phase 2 Template**

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Contents

[Project Team 2](#_Toc480921698)

[Your Restful API 3](#_Toc480921699)

[User Services 3](#_Toc480921700)

[Login 3](#_Toc480921701)

[Register Student 4](#_Toc480921702)

[Register Teacher 5](#_Toc480921703)

[Course Controller 6](#_Toc480921704)

[Show Courses 6](#_Toc480921705)

[showTeacherCourses 7](#_Toc480921706)

[Show Student Courses 8](#_Toc480921707)

[Class diagram design 10](#_Toc480921708)

[Subsystems 10](#_Toc480921709)

[Achievement 11](#_Toc480921710)

[Course 12](#_Toc480921711)

[Game 13](#_Toc480921712)

[Level 14](#_Toc480921713)

[User 15](#_Toc480921714)

[Sequence Diagrams 16](#_Toc480921715)

[Register 16](#_Toc480921716)

[Login 16](#_Toc480921717)

[Play Game 17](#_Toc480921718)

[Show Courses 18](#_Toc480921719)

[Create Course 18](#_Toc480921720)

[Create Game 19](#_Toc480921721)

[Show Games in specific course 20](#_Toc480921722)

[Entity Relationship Diagram – ERD 20](#_Toc480921723)

[Trello workspace screenshot 21](#_Toc480921724)

[Github repository link 21](#_Toc480921725)

# Your Restful API

* **Your restful API should provide read and write to your social network data**
* **In this section you should describe each service in your RESTful API**
* **For each service you list service Name input type (GET or POST), Service URL, parameters and description for each parameter, Example request, Example response**
* **For example: check description of one service from twitter Rest API here**

[**https://dev.twitter.com/rest/reference/get/statuses/mentions\_timeline**](https://dev.twitter.com/rest/reference/get/statuses/mentions_timeline)

* **Use the following table to describe each service**

## User Services

### Login:

|  |  |
| --- | --- |
| **Service name** | Login |
| **Input type** | **POST** |
| **Service URL** | **/edugame/login** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **User u** | **User object containing username and password.** | |
| **Example request** | **POST**  **/edugae/login**  **{ “username” : “IsmailAhmed” , “password” : “12345678”** |
| **Example response** | **{**  **"name": "Ismail Ahmed",**  **"gender": "Male",**  **"age": 21,**  **"email": "ismail@ismail.edu",**  **"username": "Ismail\_Ahmed",**  **"password": "12345678",**  **"identity": "Teacher"**  **}** |

### Register Student:

|  |  |
| --- | --- |
| **Service name** | Register Student |
| **Input type** | **POST** |
| **Service URL** | **/edugame/register/student** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **Student s** | **Student object containing all his/her information.** | |
| **Example request** | **POST**  **/edugame/register/student**  **{**  **"name": "Alaa Atef",**  **"gender": "Female",**  **"age": 20,**  **"email": "alaa@alaa.com",**  **"username": "AlaaAtef",**  **"password": "12345678",**  **"identity": "Student"**  **}** |
| **Example response** | **{**  **"name": "Alaa Atef",**  **"gender": "Female",**  **"age": 20,**  **"email": "alaa@alaa.com",**  **"username": "AlaaAtef",**  **"password": "12345678",**  **"identity": "Student"**  **}** |

### Register Teacher:

|  |  |
| --- | --- |
| **Service name** |  |
| **Input type** | **POST** |
| **Service URL** | **/edugame/register/teacher** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **Teacher t** | **Teacher object containing all his/her information.** | |
| **Example request** | **POST**  **/edugame/register/teacher**  **{**  **"name": "Alaa Atef",**  **"gender": "Female",**  **"age": 20,**  **"email": "alaa@alaa.edu",**  **"username": "AlaaAtef",**  **"password": "12345678",**  **"identity": "Teacher"**  **}** |
| **Example response** | **{**  **"name": "Alaa Atef",**  **"gender": "Female",**  **"age": 20,**  **"email": "alaa@alaa.edu",**  **"username": "AlaaAtef",**  **"password": "12345678",**  **"identity": "Teacher"**  **}** |

## Course Services

### Show Courses

|  |  |
| --- | --- |
| **Service name** | Show Courses |
| **Input type** | **GET** |
| **Service URL** | **/edugame/courses** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | |  |  | |
| **Example request** | **GET**  **/edugame/courses** |
| **Example response** | **[**  **{**  **"courseName": "C++",**  **"courseOwner": {**  **"name": "Alaa Atef",**  **"gender": "Female",**  **"age": 20,**  **"email": "alaa@alaa.edu",**  **"username": "AlaaAtef",**  **"password": "12345678",**  **"identity": "Teacher"**  **},**  **"description": "C++ Course for dummies",**  **"students": []**  **},**  **{**  **"courseName": "Java",**  **"courseOwner": {**  **"name": "Ismail Ahmed",**  **"gender": "Male",**  **"age": 21,**  **"email": "ismail@ismail.edu",**  **"username": "Ismail\_Ahmed",**  **"password": "12345678",**  **"identity": "Teacher"**  **},**  **"description": "Java Course for dummies",**  **"students": []**  **}**  **]** |

### Show Teacher Courses:

|  |  |
| --- | --- |
| **Service name** | Show Teacher Courses |
| **Input type** | **GET** |
| **Service URL** | **/edugame/Courses/{teacherUsername}** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **PathVariable: String teacherUsername** | **Teacher username to show his/her courses** | |  |  | |
| **Example request** | **GET**  **/edugame/Courses/Ismail\_Ahmed** |
| **Example response** | **[**  **{**  **"courseName": "Java",**  **"courseOwner": {**  **"name": "Ismail Ahmed",**  **"gender": "Male",**  **"age": 21,**  **"email": "ismail@ismail.edu",**  **"username": "Ismail\_Ahmed",**  **"password": "12345678",**  **"identity": "Teacher"**  **},**  **"description": "Java Course for dummies",**  **"students": []**  **}**  **]** |

### Show Student Courses:

|  |  |
| --- | --- |
| **Service name** | Show Student Courses |
| **Input type** | **GET** |
| **Service URL** | **/edugame/enrolledCourses/{studentUsername}** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **PathVariable: String username** | **Student Username to show courses in which he/she enrolled.** | |  |  | |
| **Example request** | **GET**  **/edugame/enrolledCourses/KarimEhab** |
| **Example response** | **[**  **{**  **"courseName": "Java",**  **"courseOwner": {**  **"name": "Ismail Ahmed",**  **"gender": "Male",**  **"age": 21,**  **"email": "ismail@ismail.edu",**  **"username": "Ismail\_Ahmed",**  **"password": "12345678",**  **"identity": "Teacher"**  **},**  **"description": "Java Course for dummies",**  **"students": [**  **{**  **"name": "Karim Ehab",**  **"gender": "Male",**  **"age": 20,**  **"email": "karim@karim.com",**  **"username": "KarimEhab",**  **"password": "12345678",**  **"identity": "Student"**  **}**  **]**  **}**  **]** |

### Get Course:

|  |  |
| --- | --- |
| **Service name** | Get Course |
| **Input type** | **GET** |
| **Service URL** | **/edugame/courses/{courseName}** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **PathVariable:**  **String courseName** | **Course Name to get** | |  |  | |
| **Example request** | **GET**  **/edugame/courses/Java** |
| **Example response** | **{**  **"courseName": "Java",**  **"courseOwner": {**  **"name": "Ismail Ahmed",**  **"gender": "Male",**  **"age": 21,**  **"email": "ismail@ismail.edu",**  **"username": "Ismail\_Ahmed",**  **"password": "12345678",**  **"identity": "Teacher"**  **},**  **"description": "Java Course for dummies",**  **"students": []**  **}** |

### Add Course:

|  |  |
| --- | --- |
| **Service name** | Add Course |
| **Input type** | **POST** |
| **Service URL** | **/edugame/courses/{teacherUsername}/addCourse** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **PathVariable: String teacherUsername** | **Teacher username: the owner of the course** | | **Cource c** | **The course to be added** | |  |  | |
| **Example request** | **POST**  **/edugame/coursesIsmail\_Ahmed/addCourse**  **{**  **"name": "Java",**  **"description": "Java Course for dummies"**  **}** |
| **Example response** | **{**  **"courseName": "Java",**  **"courseOwner": {**  **"name": "Ismail Ahmed",**  **"gender": "Male",**  **"age": 21,**  **"email": "ismail@ismail.edu",**  **"username": "Ismail\_Ahmed",**  **"password": "12345678",**  **"identity": "Teacher"**  **},**  **"description": "Java Course for dummies",**  **"students": []**  **}** |

### Enroll Student:

|  |  |
| --- | --- |
| **Service name** | Enroll Student |
| **Input type** | **GET** |
| **Service URL** | **/edugame/courses/{courseName}/enroll/{studentUsername}** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **PathVariable: String courseName** | **Course Name.** | | **PathVariable: String studentUsername** | **Student Name.** | |  |  | |
| **Example request** | **GET**  **/edugame/courses/Java/enroll/KarimEhab** |
| **Example response** | **true** |

### Get Unenrolled Courses:

|  |  |
| --- | --- |
| **Service name** | Get unenrolled Courses |
| **Input type** | **GET** |
| **Service URL** | **/edugame/unenrolledCourses/{studentUsername}** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **PathVariable:**  **String studentUsername** | **Student Username to show course in which he/she hasn’t enrolled yet.** | |  |  | |
| **Example request** | **GET**  **/edugame/unenrolledCourses/KarimEhab** |
| **Example response** | **{**  **"courseName": "C++",**  **"courseOwner": {**  **"name": "Alaa Atef",**  **"gender": "Female",**  **"age": 20,**  **"email": "alaa@alaa.edu",**  **"username": "AlaaAtef",**  **"password": "12345678",**  **"identity": "Teacher"**  **},**  **"description": "C++ Course for dummies",**  **"students": []**  **}** |

## Game Services

### Get Game

|  |  |
| --- | --- |
| **Service name** | Get Game |
| **Input type** | **GET** |
| **Service URL** | **/edugame/courses/games/{gameName}** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **PathVariable String gameName** | **Game Name that we want to get its data.** | |  |  | |
| **Example request** |  |
| **Example response** |  |

### Add game

|  |  |
| --- | --- |
| **Service name** | Add Game |
| **Input type** | **POST** |
| **Service URL** | **/edugame/courses/{teacherUsername}/{courseName}/games/addGame** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **PathVariable String teacherUsername** | **Username of the teacher (owner) of the game.** | | **PathVariable String courseName** | **Course Name that we wish to add the game in.** | | **Body: Game g** | **The game itself.** | |  |  | |
| **Example request** |  |
| **Example response** |  |

### Get Games of Course:

|  |  |
| --- | --- |
| **Service name** | Get Games of Course |
| **Input type** | **GET** |
| **Service URL** | **/edugame/courses/{courseName}/games** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **PathVariable String courseName** | **The course to get its games.** | |  |  | |
| **Example request** |  |
| **Example response** |  |

## Level Services

### Get Level

|  |  |
| --- | --- |
| **Service name** | Get level |
| **Input type** | **GET** |
| **Service URL** | **/edugame/courses/games/{gameName}/levels/{levelno}** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **PathVariable String gameName** | **Game Name that the level belongs to.** | | **PathVariable int levelNo** | **Level number in the game.** | |  |  | |
| **Example request** |  |
| **Example response** |  |

### Get Levels

|  |  |
| --- | --- |
| **Service name** | Get levels |
| **Input type** | **GET** |
| **Service URL** | **/edugame/courses/games/{gameName}/levels/** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **PathVariable String gameName** | **Game Name that we want to get its levels.** | |
| **Example request** |  |
| **Example response** |  |

## Achievement Services

### Show Achievements

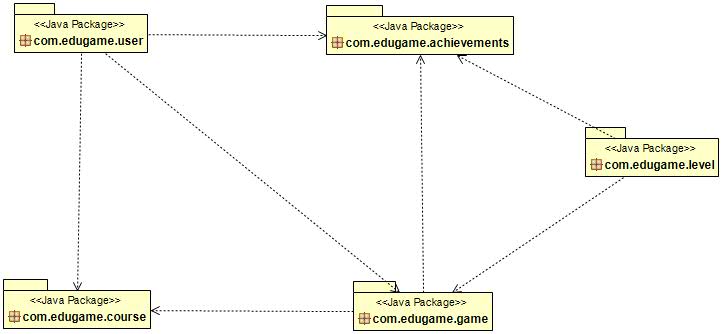
|  |  |
| --- | --- |
| **Service name** | Show Achievements |
| **Input type** | **GET** |
| **Service URL** | **/edugame/achievements/{username}** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **PathVariable String username** | **Username of the user that we want to get his/her achievements.** | |
| **Example request** |  |
| **Example response** |  |

### Add achievements

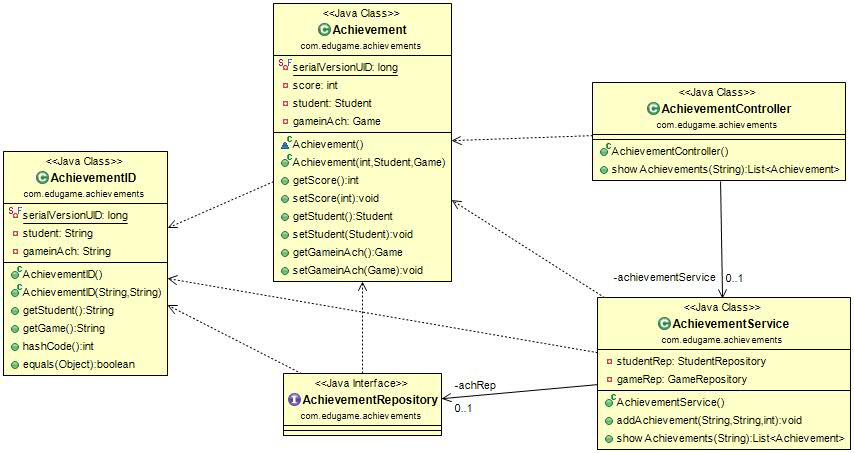
|  |  |
| --- | --- |
| **Service name** | Get level |
| **Input type** | **GET** |
| **Service URL** | **/edugame/courses/games/{gameName}/levels/{levelno}** |
| **Parameters** | |  |  | | --- | --- | | **NAME** | **Description** | | **PathVariable String gameName** | **Game Name that the level belongs to.** | | **PathVariable int levelNo** | **Level number in the game.** | |  |  | |
| **Example request** |  |
| **Example response** |  |

# Class diagram design

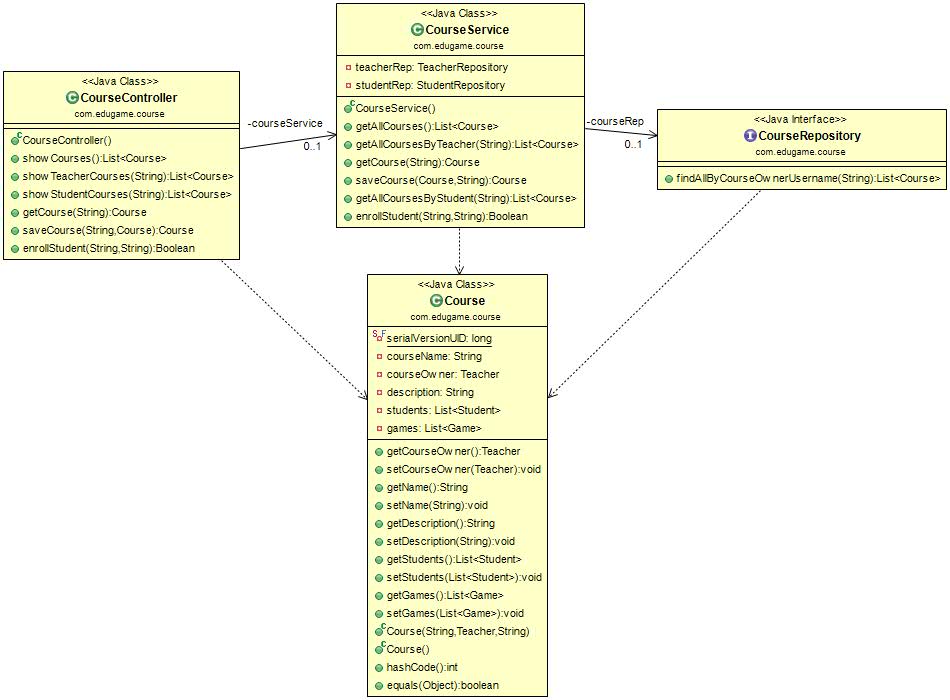
## Subsystems



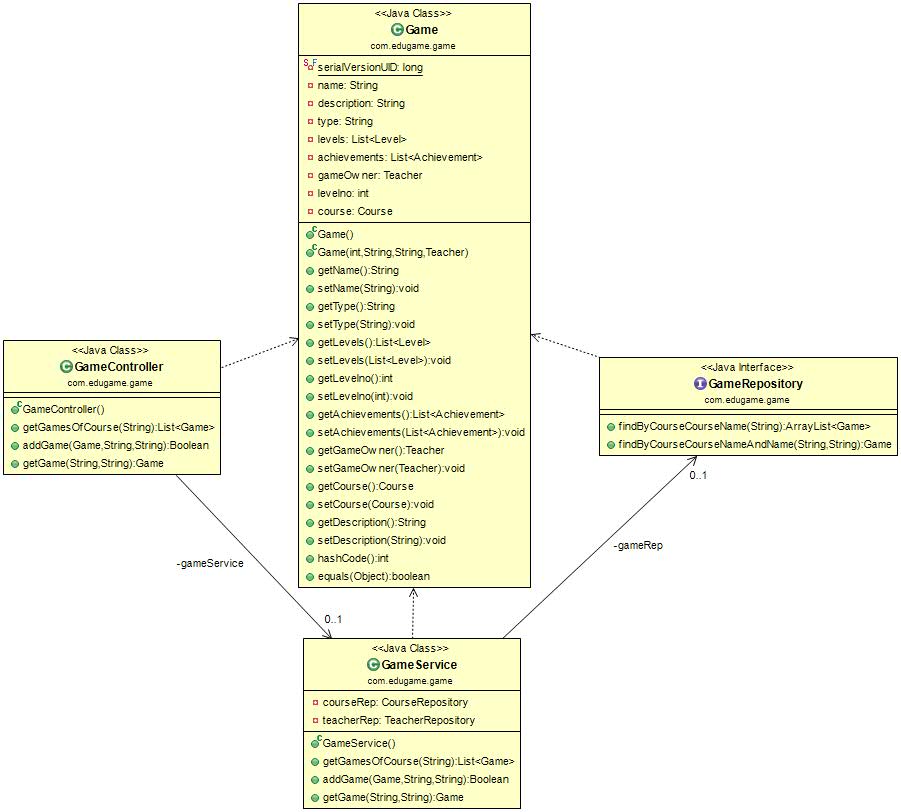
## Achievement



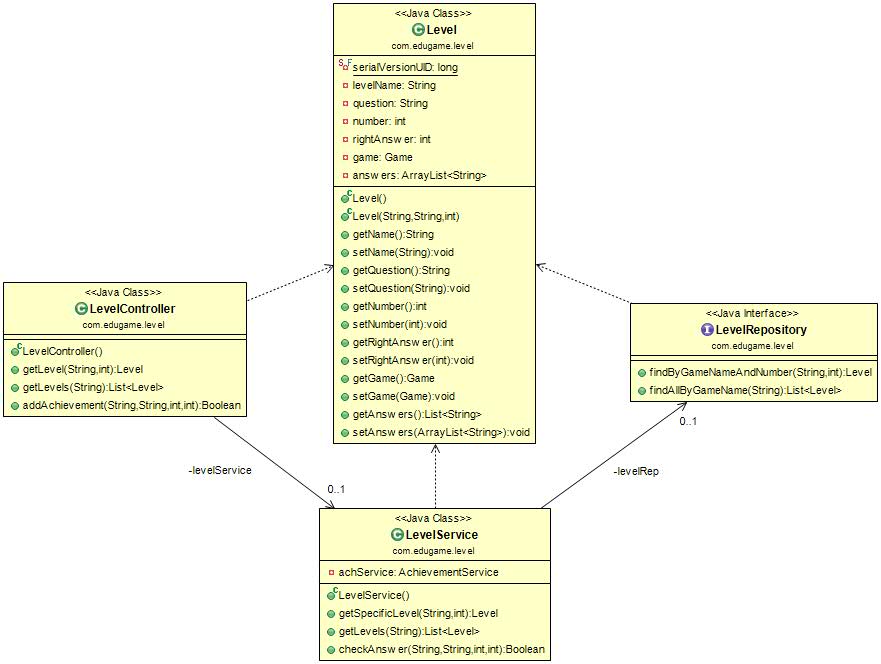
## Course



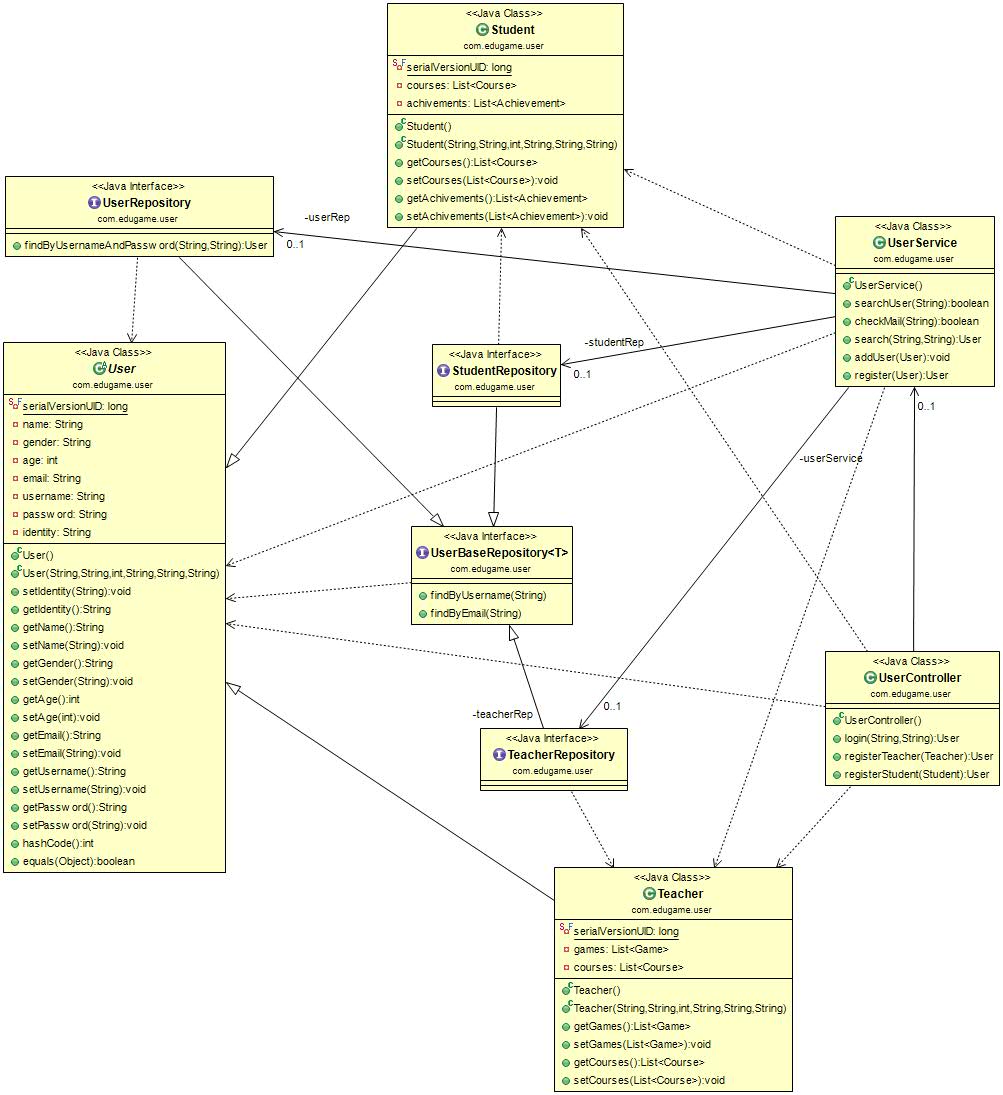
## Game



## Level

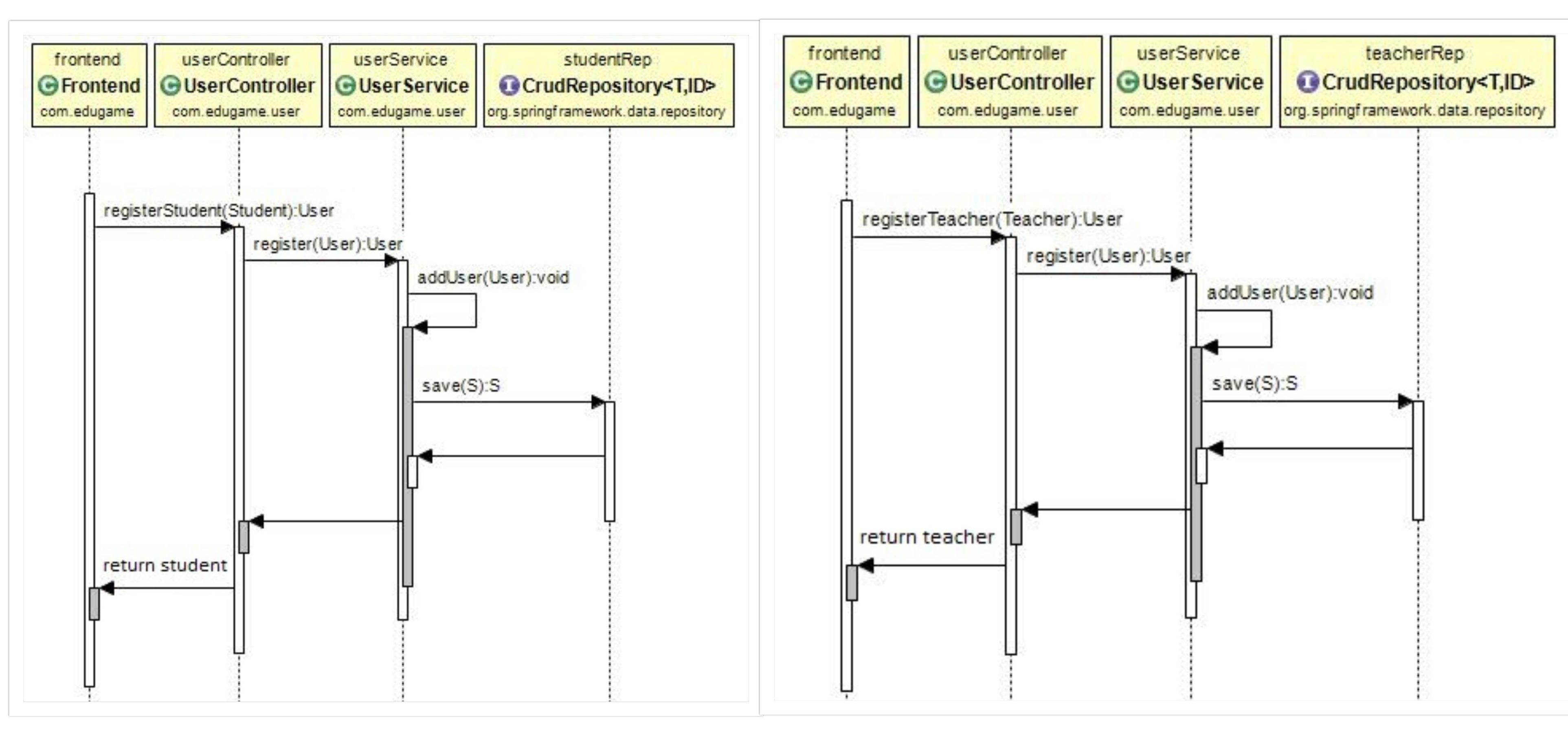


## User

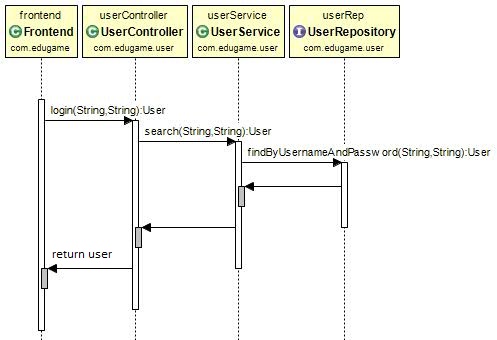


# Sequence Diagrams

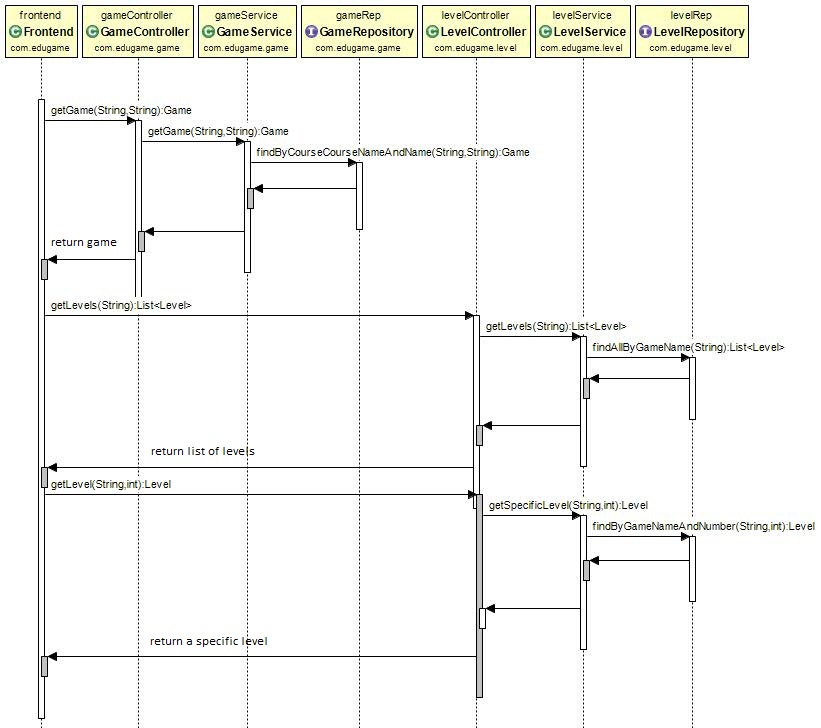
## Register



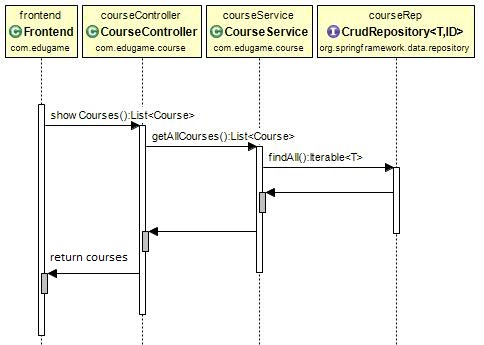
## Login



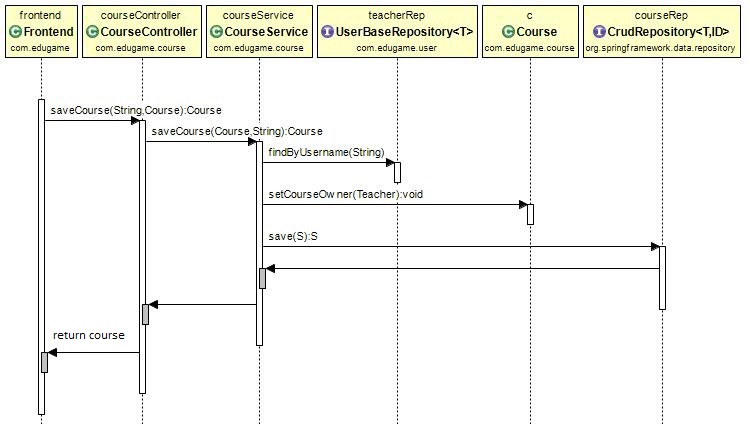
## Play Game



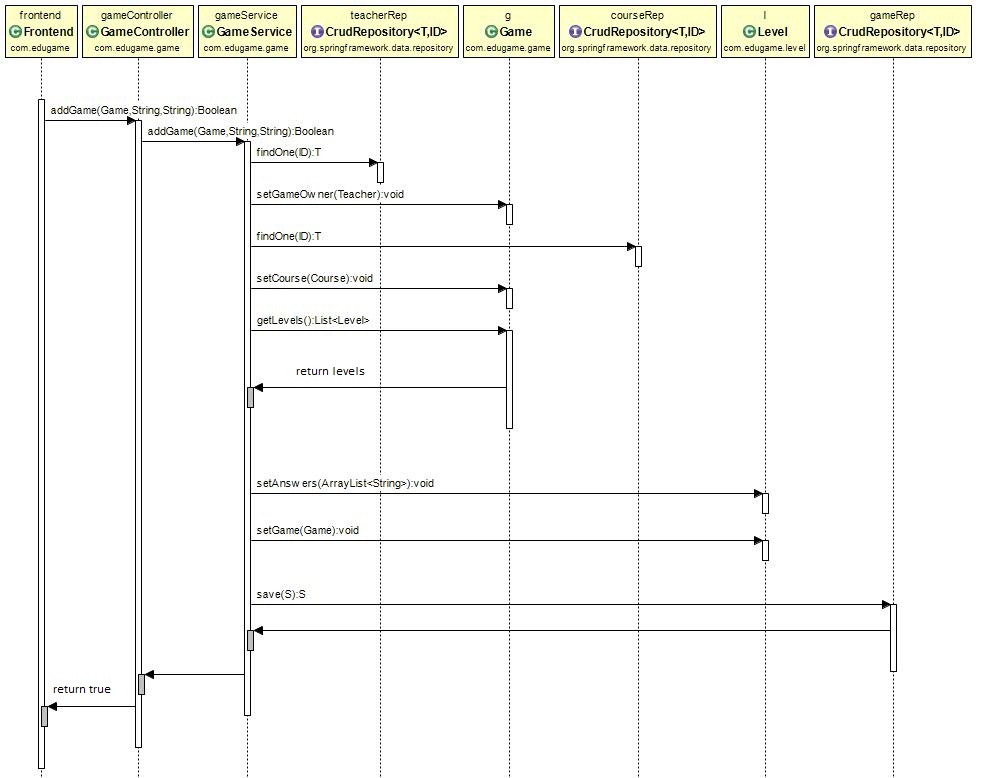
## Show Courses



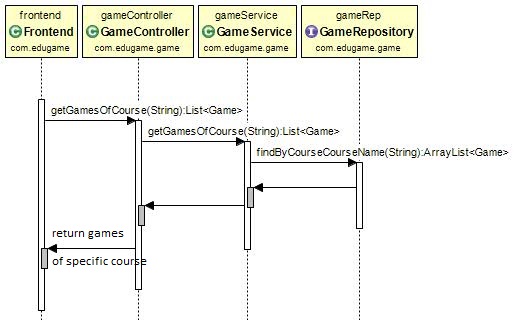
## Create Course



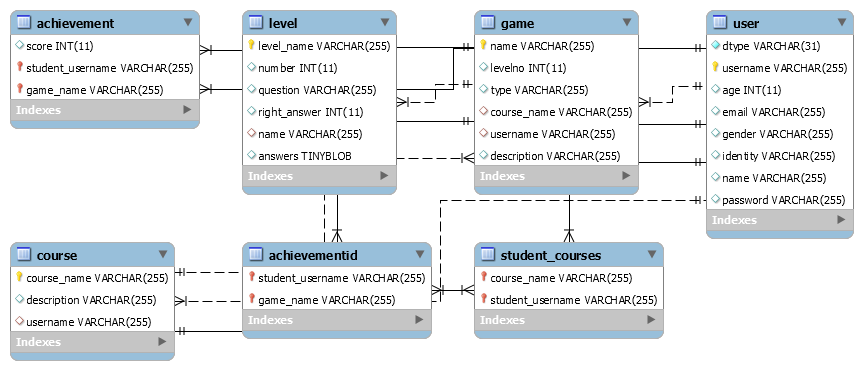
## Create Game



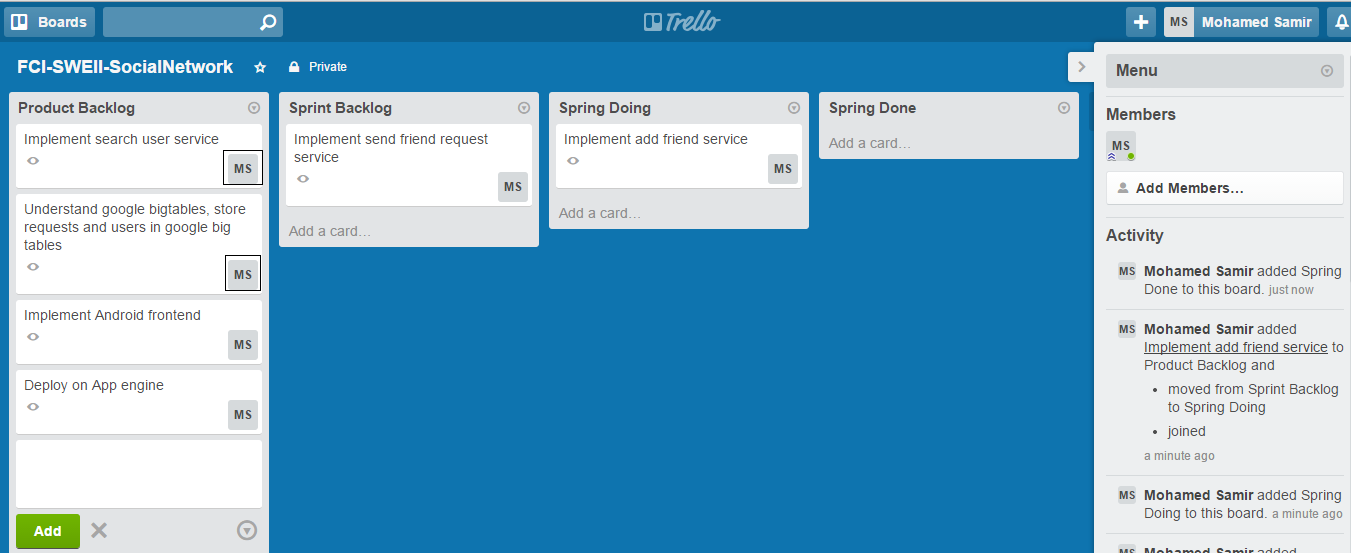
## Show Games in specific course



# Entity Relationship Diagram – ERD



# Trello workspace screenshot

****

# Github repository link

***https://github.com/AlaaBadr/SWE2-Project***