Sequence Diagram – in class activity

Your task is to read the User Story below and create a class diagram and sequence diagrams to support the scenario.

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User Story

Registration Staff must be able to create classes as needed by the business. For example, the owners of Pro TKD are thinking about expanding into the Parkour marketplace and will have to create classes for different age ranges and skill levels.

Acceptance Criteria:

1. Must be able to query classes by age range and skill levels
2. Must be able to schedule the classes is 0.5 increments.

Use Case Descriptions

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case Name | Create a class | | |
| Triggering Event | Demand for a new class | | |
| Brief Description | Allows the Registration Staff to create a new class | | |
| Actors | Registration Staff | | |
| Related Use Cases |  | | |
| Preconditions | Registration Staff has opened the class and schedule menu | | |
| Post Conditions | Class is created and ready to schedule | | |
| Flow of activities | Actor | | System |
|  |  | Selects the Class Menu | Displays a list of classes including Class identifier, class name and the date the class was last run.  System prompts to add a class |
|  |  | Requests to add a class | Displays a class entry form, prompting for class name, class description, length of class in 0.5 hour increments, suggested age range and skill level. Displays a list of age ranges and skill levels |
|  |  | Enters class name, class description, length of class, selects age range, from a list and skill level from a list | Accepts input  Data Validation:  Class name must be entered  Description must be entered  Length of class must be entered and divisible by 30.  Age range must be selected  Skill level must be selected  Data is valid, unique class identifier is created  Prompts to save the data. |
|  |  | Requests to save | Saves data  Displays a confirmation message |
| Exception Conditions | * Actor chooses to cancel adding the class | | |

Diagram

Description automatically generated

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Description automatically generated

Diagram

Description automatically generated

Public class EntityManager(){

get(){

//retrieves from the data source

}

persist(){

//saves to the data source

}

}

Public class DomainController(){

getClasses(){

//works on backend to run the query to get class

}

addClass(){

//works on backend to add a new class object

}

calcClassID(){

//works on backend to enter data to the source by creating an object

}

save(){

//works on the backend to save the object created by given data

}

}

Public class UIController(){

selectClass(){

//prompts the user to select class

}

addClass(){

//prompts the user to add class

}

enterClass(){

//prompts the user to enter class data

}

save(){

//prompts the user to save class data

}

}

Public class Class(){

int classID;

string name;

string description;

int length;

int dateLastRun;

AgeRange ageRange;

SkillLevel skillLevel;

getClasses(){

// works on backend to run the query to get class

}

create(){

// creates a new object of this class

}

}

Public class AgeRange(){

int ageRangeID;

getAgeRanges(){

// works on backend to run the query to get Age Ranges

}

create(){

// creates a new object of this class

}

}

Public class SkillLevel(){

int skillLevelID;

getSkillLevels(){

// works on backend to run the query to get skill levels

}

create(){

// creates a new object of this class

}

}