CS 2263 - 01: Advncd Object-Oriented Prog (26157), Spring 2021

Preliminaries

- Ensure that you have Gradle (most recent version) installed on your system
- Verify that you can run it from the command line

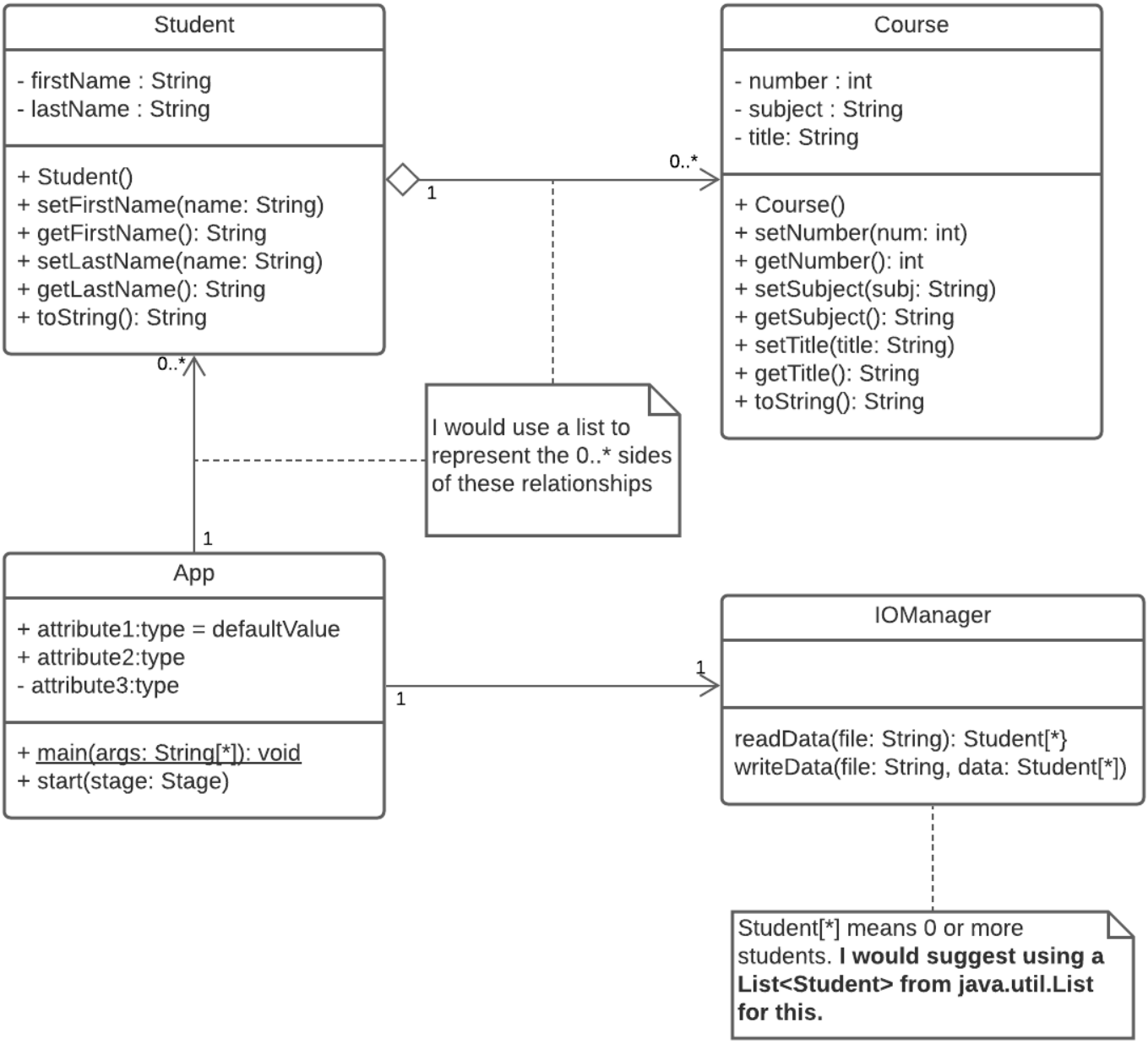
Gradle

1. Create a new GitHub Repo called "gradle-skilldrill"
2. Clone your repo on your local machine
3. At the command line, initialize the newly clone repo to be a gradle **Java Applicaiton** project
   - set the base package name to be "edu.isu.cs.cs2263"
   - use JUnit Jupyter as the testing framework
4. Verify that you can test and run your code using the appropriate gradle commands
5. Commit and push your changes to GitHub
6. Create a release calling this version "v1.0.0" of your repo, then push to GitHub

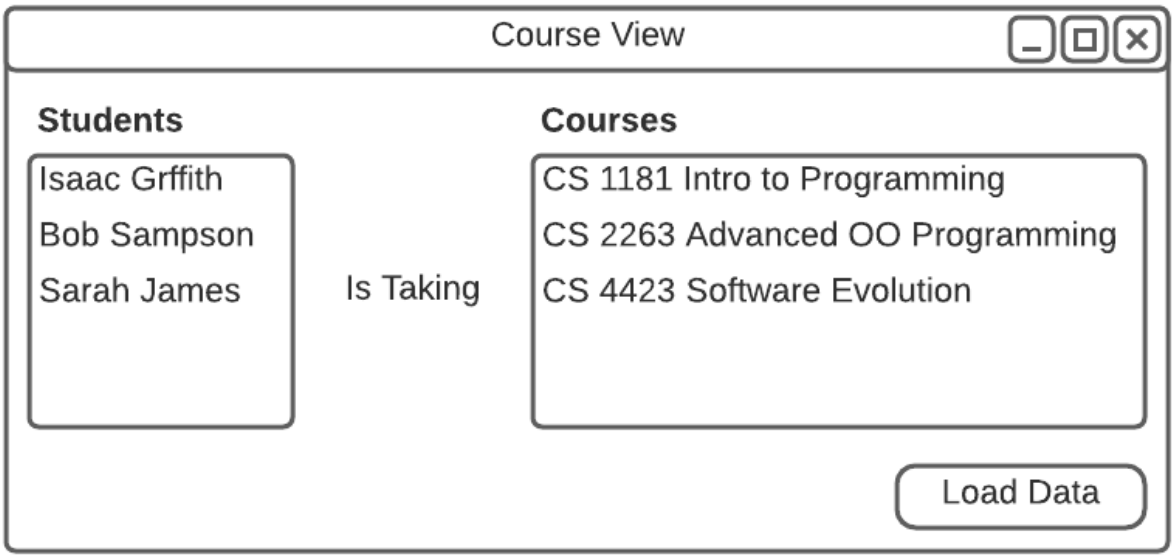
JavaFX and Gson

1. In the same repo, update your gradle build to include JavaFX and Gson
2. Run the build to verify everything still works
3. Let's build a quick application using JavaFX and Gson
   - Create two classes, Student and Course (as depicted in the Class Diagram below)
   - Create a class IOManger as shown below which will read in a list of Students (where each student contains a list of Courses) from JSON using Gson
   - Update the App.java class to create a JavaFX application with two lists, a label, and a button. Such that when you click the button it will load a Json file to create a list of students (using the IOManger). When a student name is clicked in the Left list on the UI, the associated list of courses is loaded. You will need to create the data to be read in.
4. Commit and Push your changes to GitHub
5. Create a release "v2.0.0" and push all tags to GitHub

Class Diagram


Student
- firstName : String
- lastName : String
+ Student()
+ setFirstName(name: String)
+ getFirstName(): String
+ setLastName(name: String)
+ getLastName(): String
+ toString(): String
Course
- number : int
- subject : String
- title: String
+ Course()
+ setNumber(num: int)
+ getNumber(): int
+ setSubject(subj: String)
+ getSubject(): String
+ setTitle(title: String)
+ getTitle(): String
+ toString(): String
0..*
1
0..*
1
I would use a list to represent the 0..* sides of these relationships
App
+ attribute1:type = defaultValue
+ attribute2:type
- attribute3:type
+ main(args: String[*]): void
+ start(stage: Stage)
1
1
IOManager
readData(file: String): Student[*}
writeData(file: String, data: Student[*])
Student[*] means 0 or more students. I would suggest using a List<Student> from java.util.List for this.

UI Diagram



Resources

- You can find all sorts of examples and tutorials for JavaFX at http://tutorials.jenkov.com/javafx/index.html

Submission

- Submit your repository URL to Moodle by no later than Sunday 01/24 at 11:00 pm

Submission status

This assignment will accept submissions from **Wednesday, January 20, 2021, 5:00 PM**

Submission status	No attempt
Grading status	Not graded
Due date	Sunday, January 24, 2021, 11:00 PM
Time remaining	4 days 7 hours
Last modified	-
Submission comments	▸ Comments (0)

◀ Video: Lecture 05 - Intro to UML (1:08:31)

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Homework 01 ▶