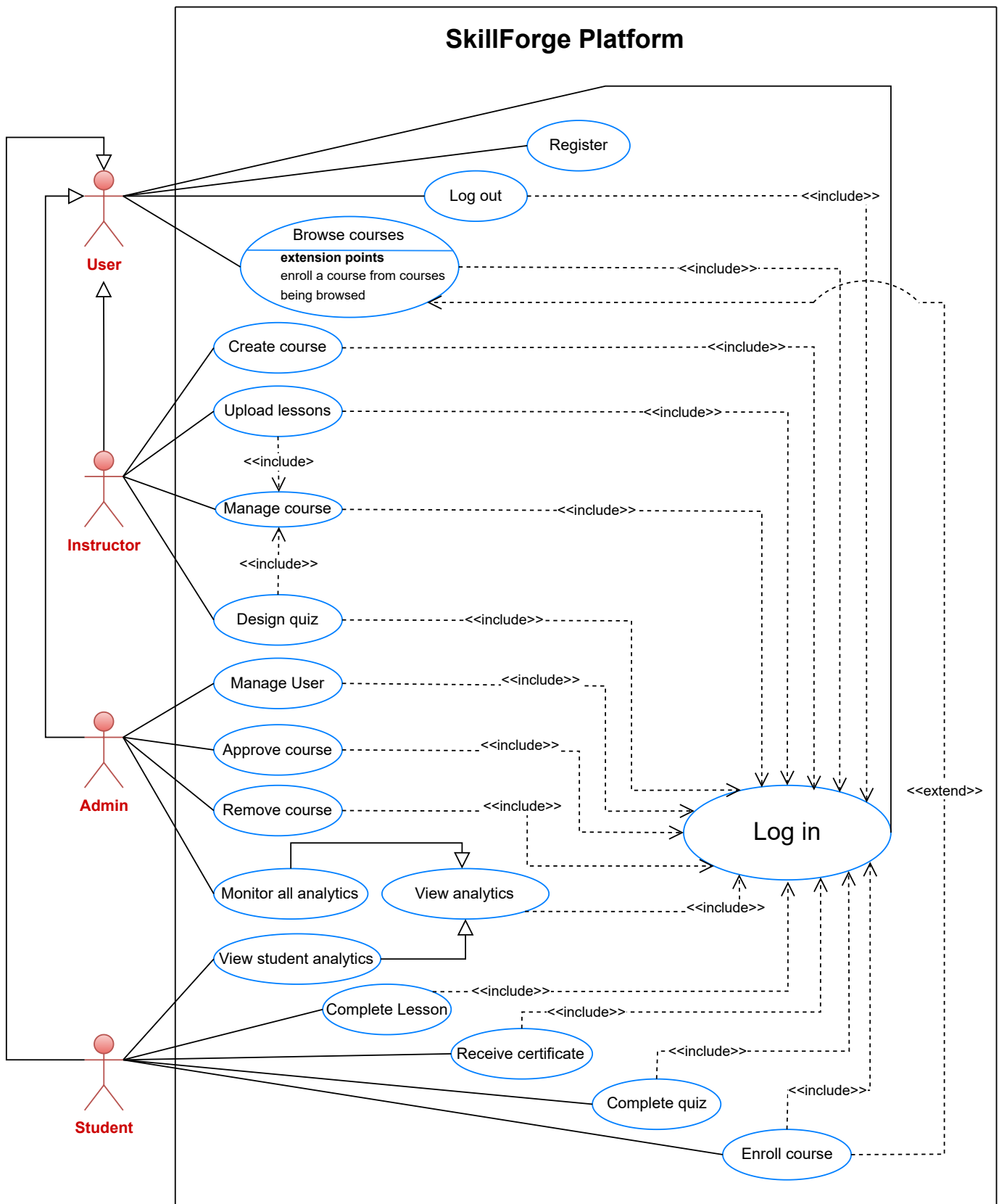


Use case diagram

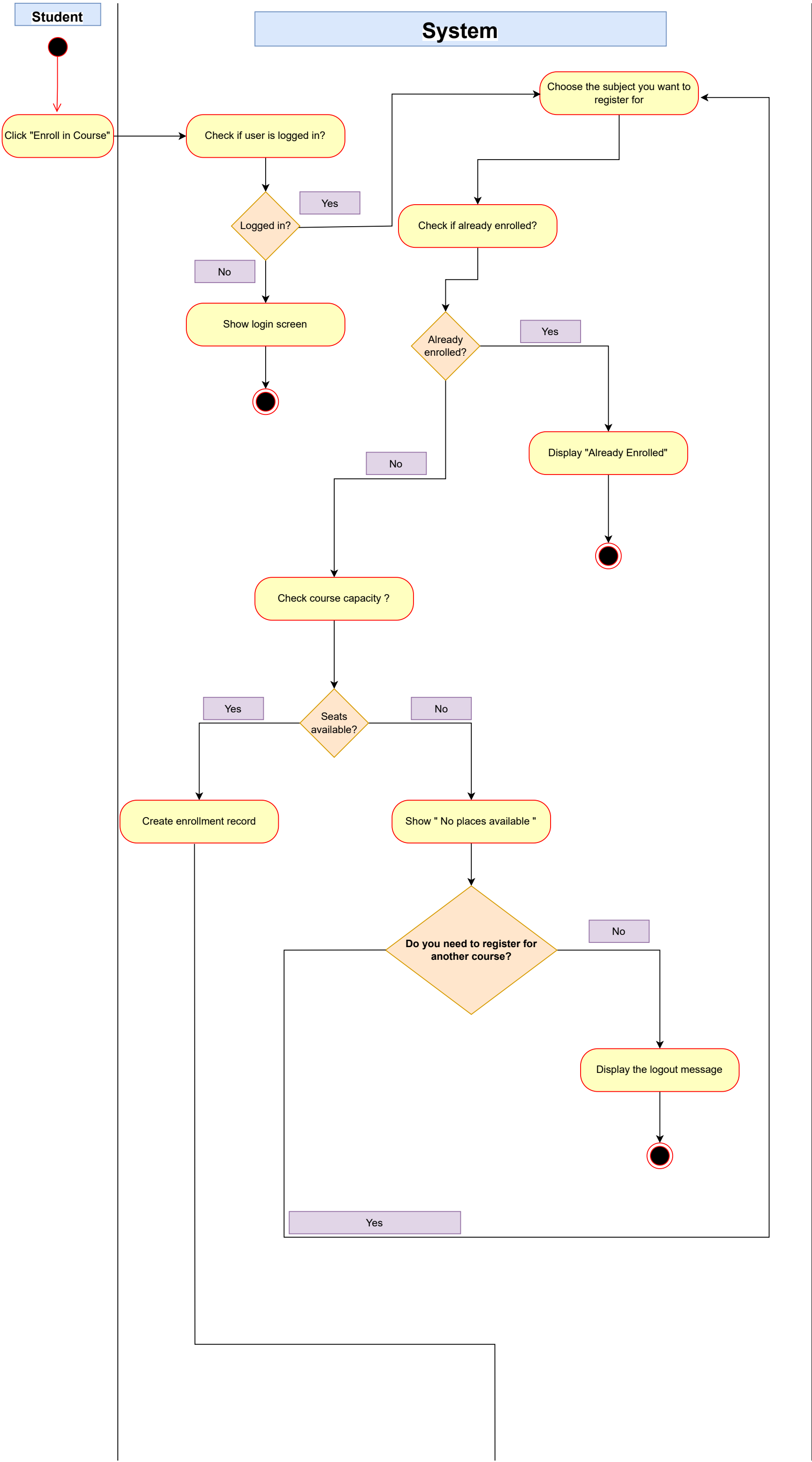


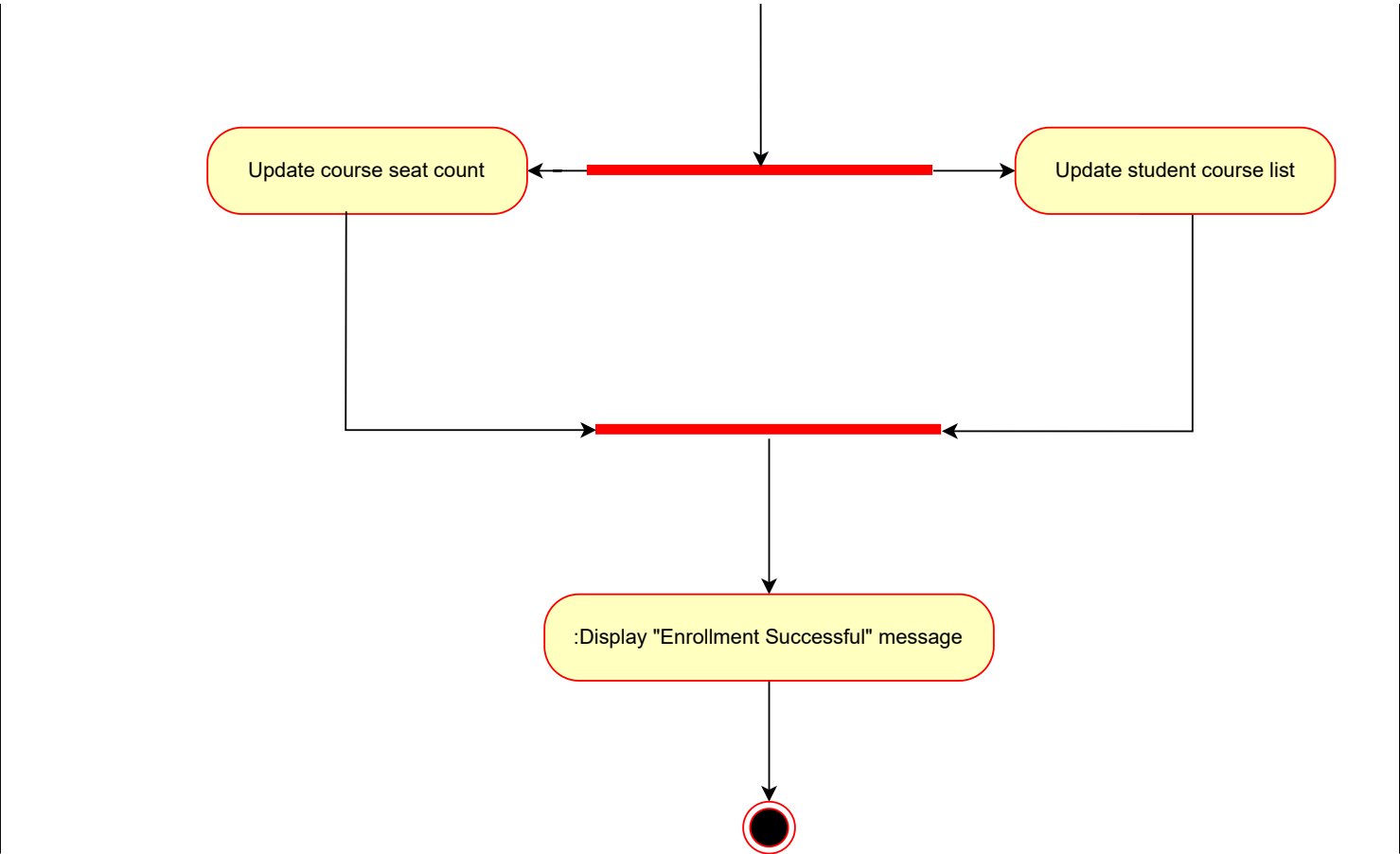
Brief description for each use case

1. **Register:** Allows a new user to create a SkillForge account by providing required fields, validate availability of fields that should be unique & updates the user database
2. **Log in:** Authenticate credentials after reading from user database and allow processes/operations in case of valid access
3. **Log out:** Allows previously logged in user to log out from their account
4. **Browse courses:** Allows both registered and unregistered users to browse the available courses after reading from courses database
5. **Enroll course:** Allows a logged-in student to register for a specific course to gain access to its content.
6. **Complete Lesson:** Allows an enrolled student to view lesson content & complete it.
7. **Complete quiz:** Allows an enrolled student to take a quiz and receive a grade.
8. **Receive Certificate:** Allows a student who has successfully completed all course receive their generated certificate.
9. **View student analytics:** Allows a student to view their personal progress (Grades, time spent and completed lessons).
10. **Create course:** Allows an instructor to add a new course to the platform, defining its title, description, and other details.
11. **Manage course:** Allows an instructor to edit the settings and metadata of a course they have already created.
12. **Upload lessons:** Allows an instructor to add or modify lesson content within a specific course.
13. **Design quiz:** Allows an instructor to create or edit a quiz & its questions.
14. **Manage User:** Allows an admin to create, edit, delete, or change the permissions of any user account on the platform.
15. **Approve course:** Allows an admin to review a new course submitted by an instructor and make it visible to students and update the courses database.
16. **Remove course:** Allows an admin to permanently delete a course from the platform and update the courses database.
17. **Monitor all analytics:** Allows an admin to view students analytics.
18. **View Analytics:** A generalized use case that requires a user to be logged in and displays analytics of student(s).

Use case diagram helps define the interaction between actors (i.e. users or external subsystems) with the main system functions & services in an abstract way, this modelling hides any internal implementation details & emphasizes the relation between different goals (inclusion, extension & generalization).

In general, it helps the system design ensure supporting the user requirements.

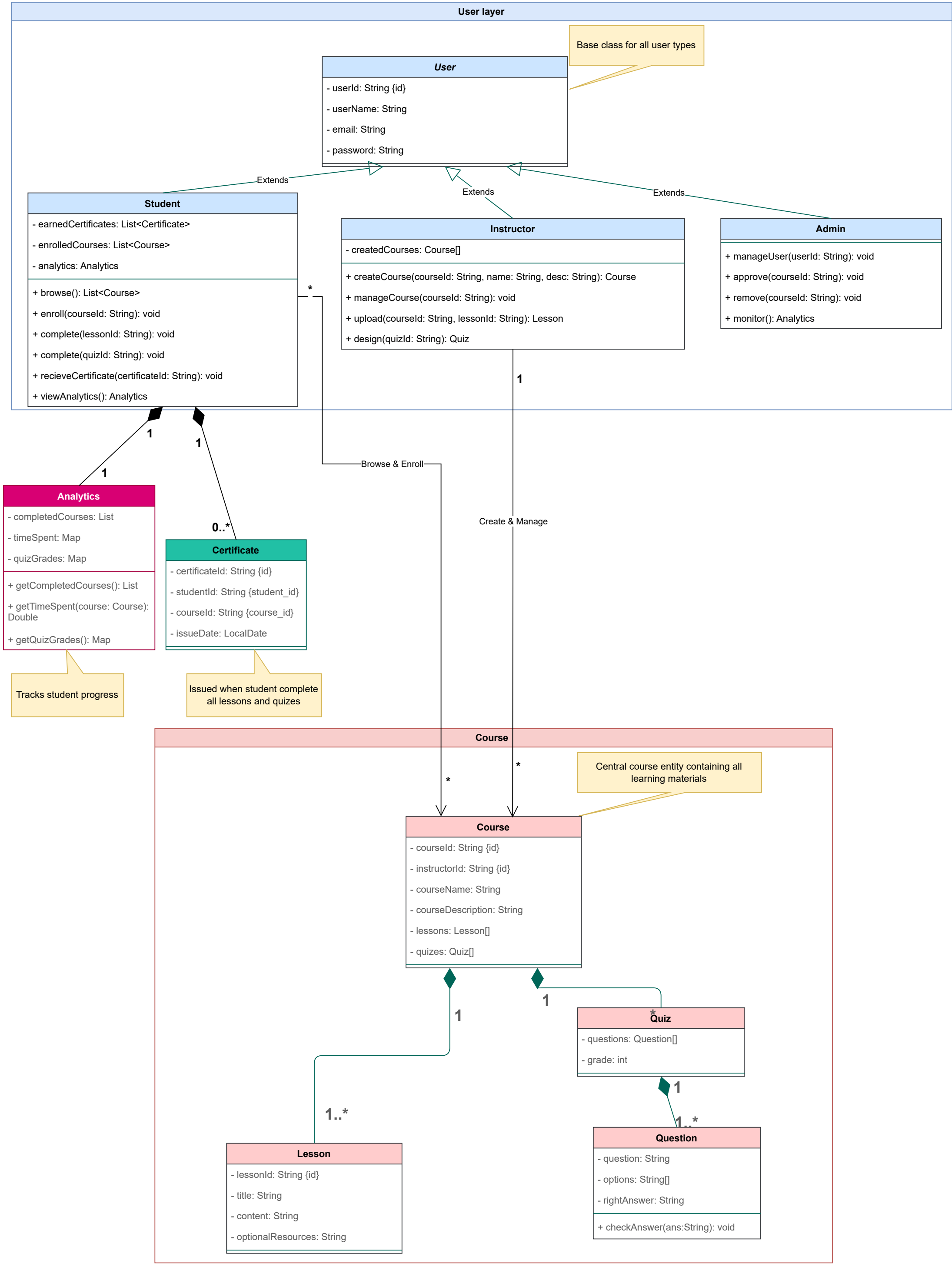


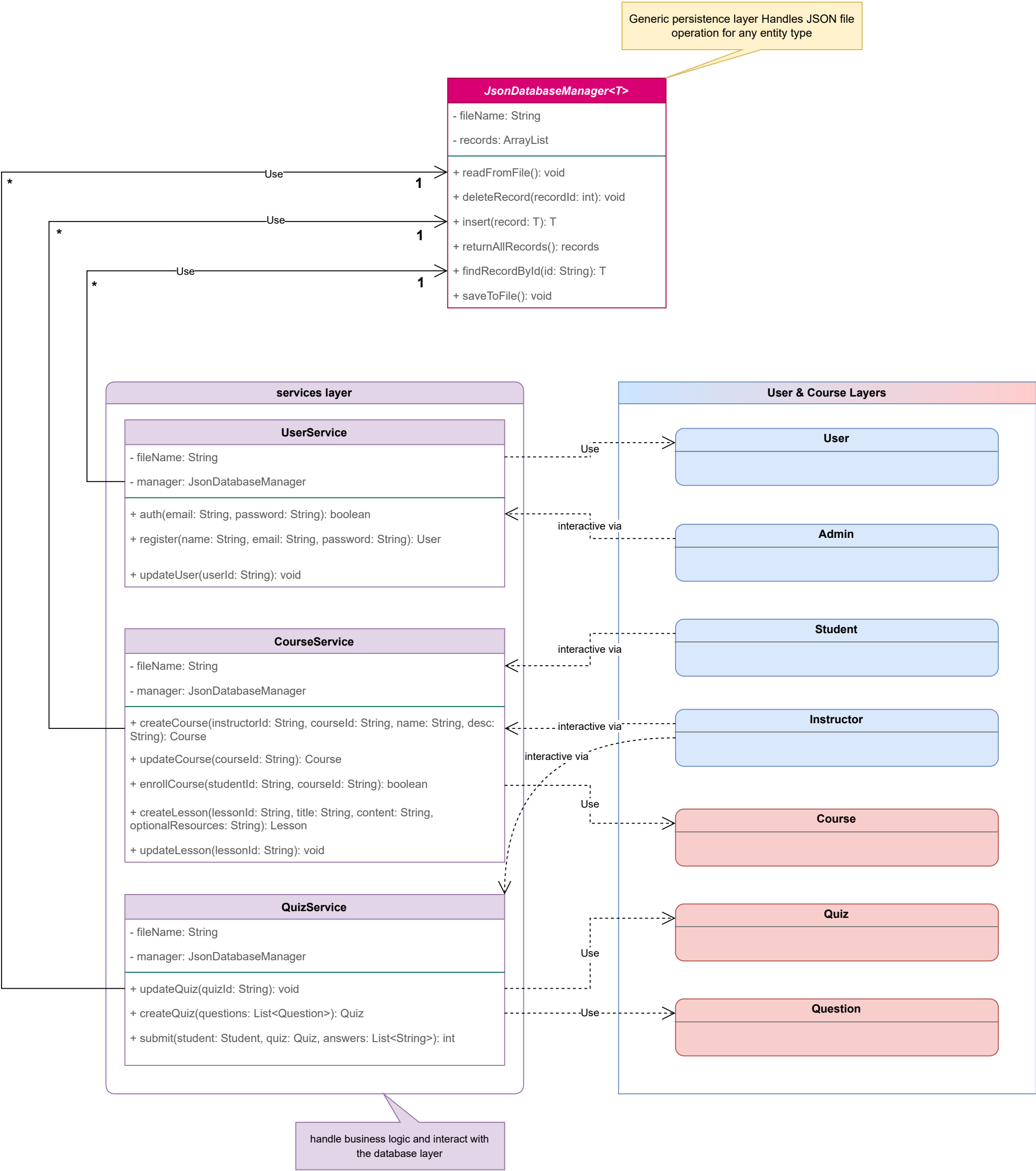


The process checks if a student is logged in and enrolled in the desired course.

If seats are available, it creates an enrollment record and updates the student's course list.

If not, it shows a "No places available" message and can prompt for another course registration.

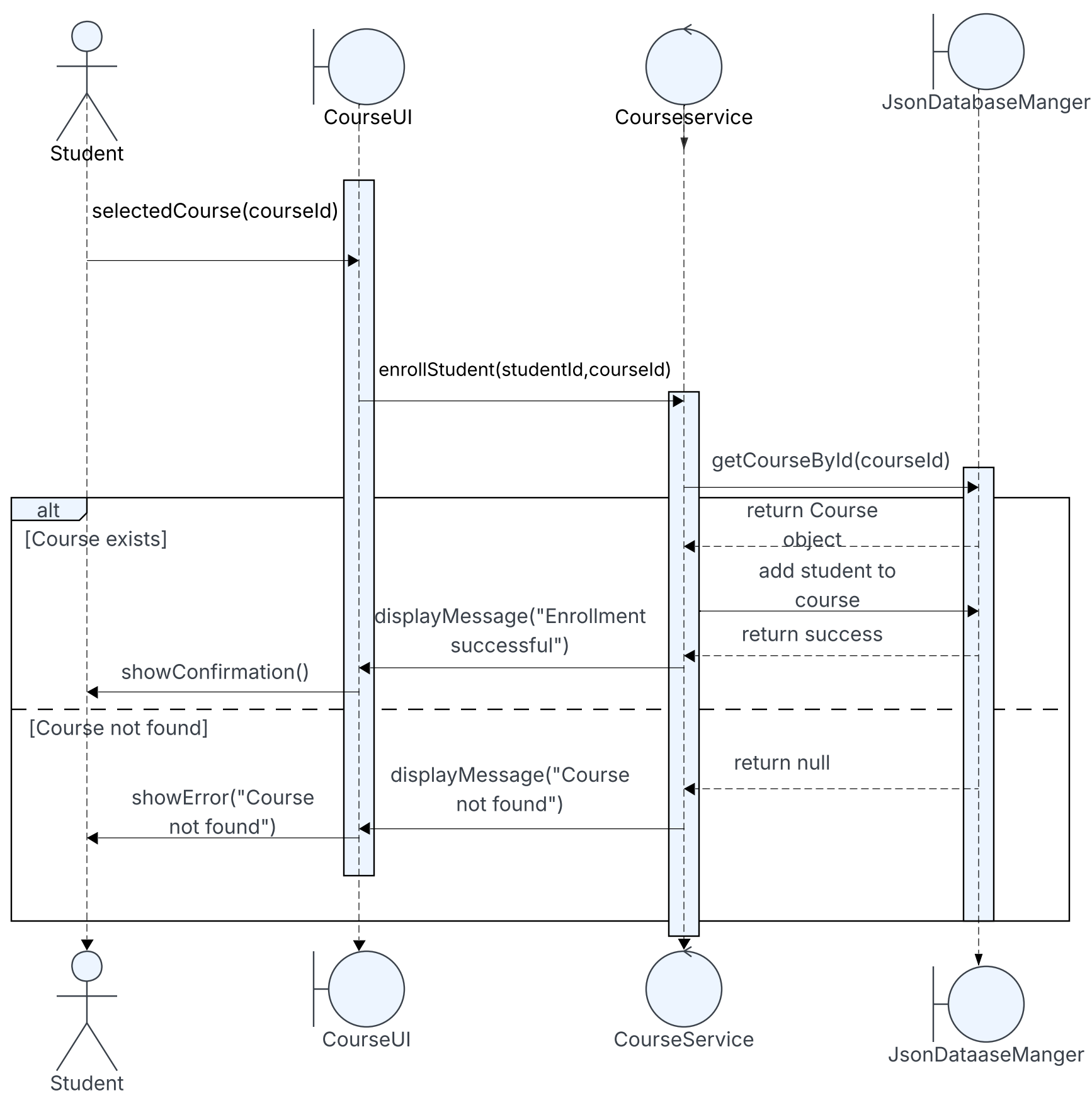




The class diagram describes the classes [User, Course, Services...etc.] and their interrelationships.

Class diagram provide a conceptual model of the system in terms of entities and their relationships.

Sequence Diagram_Enroll Course



This sequence diagram illustrates the student course enrollment process.

It shows how the CourseUI interacts with CourseService and JsonDatabaseManager to verify course existence before enrollment.