UML Sequence Diagram

Participants:
- S: Student
- U: UserService
- C: CourseService
- J: JsonDataBase Manager

Flow:

S → U: login

U → J: getInfo

alt
- [Info valid]
  - J ⇢ U: read successful
  - U ⇢ S: log in success
- [Else]
  - J ⇢ U: read failed
  - U ⇢ S: log in fail

S → C: browse_available_courses

C → J: getCourse

alt
- [Courses found]
  - J ⇢ C: <Courses>
  - C ⇢ S: display_available_courses
- [Else]
  - J ⇢ C: Courses not found
  - C ⇢ S: no available courses found

S → C: buyCourse

C → J: getPrice

frame
- [Sufficient funds]
  - J ⇢ C: <Courses>
  - C ⇢ S: confirmation
  - S → C: enroll_course
- [Else]
  - C ⇢ S: Insufficient funds

The diagram above shows the student enrollment process in the SkillForge platform using the Sequence Diagram.
it shows the flow of methods and messages between the classes over time to show the order and the logic of them and help visualise how the student, userservice,courseservice and the JsonDataBase manager behaved and interacted with each other