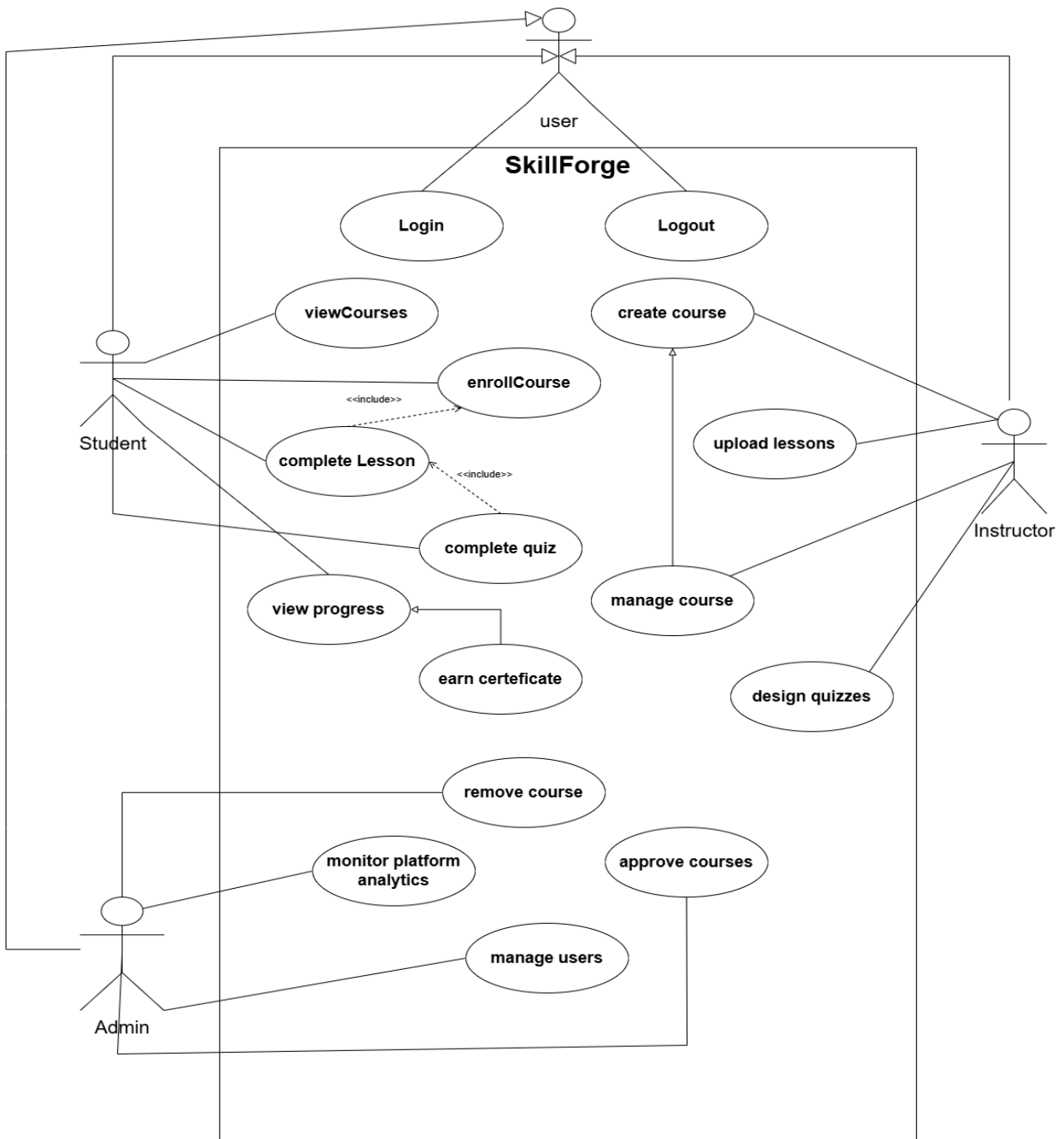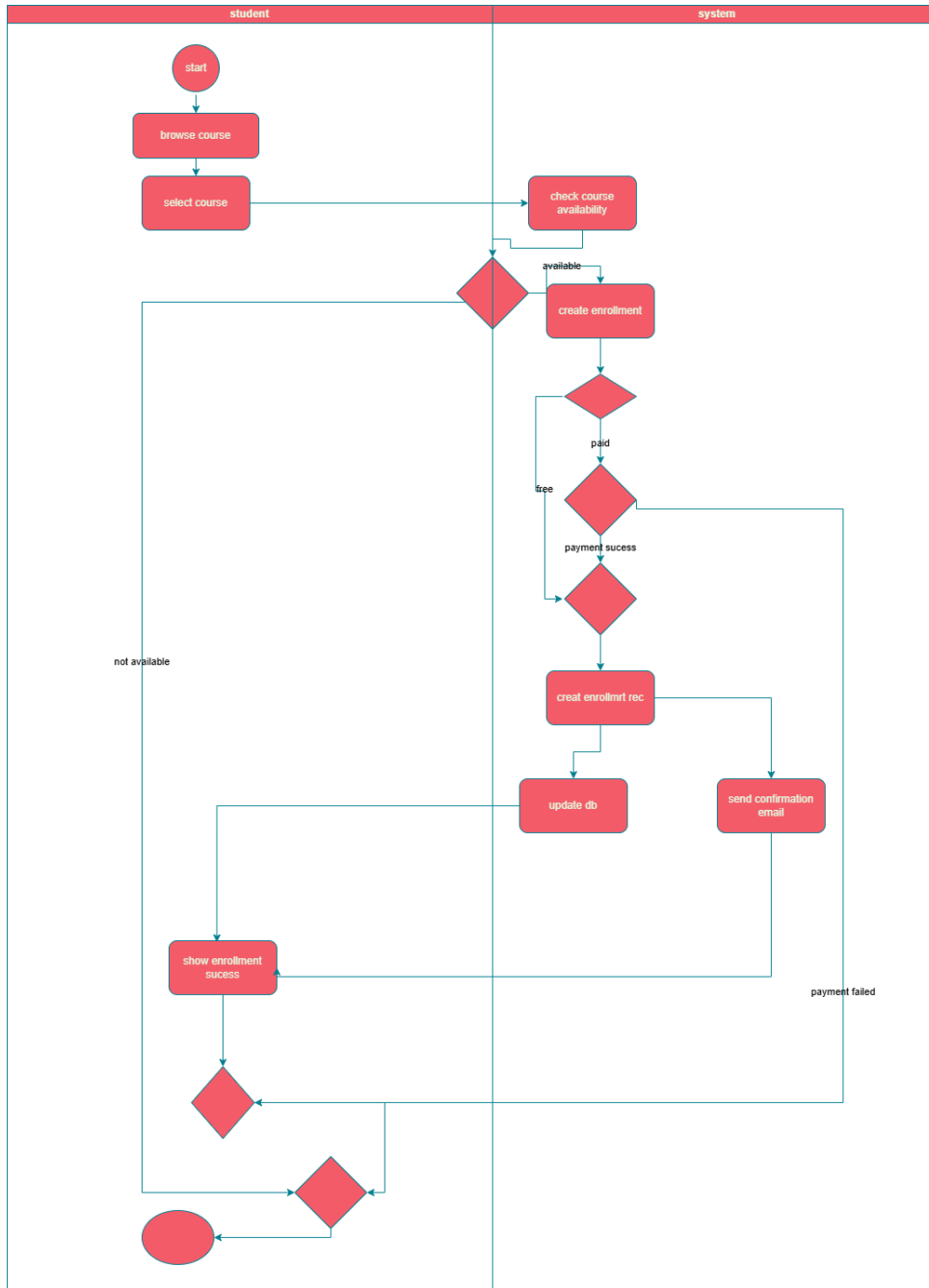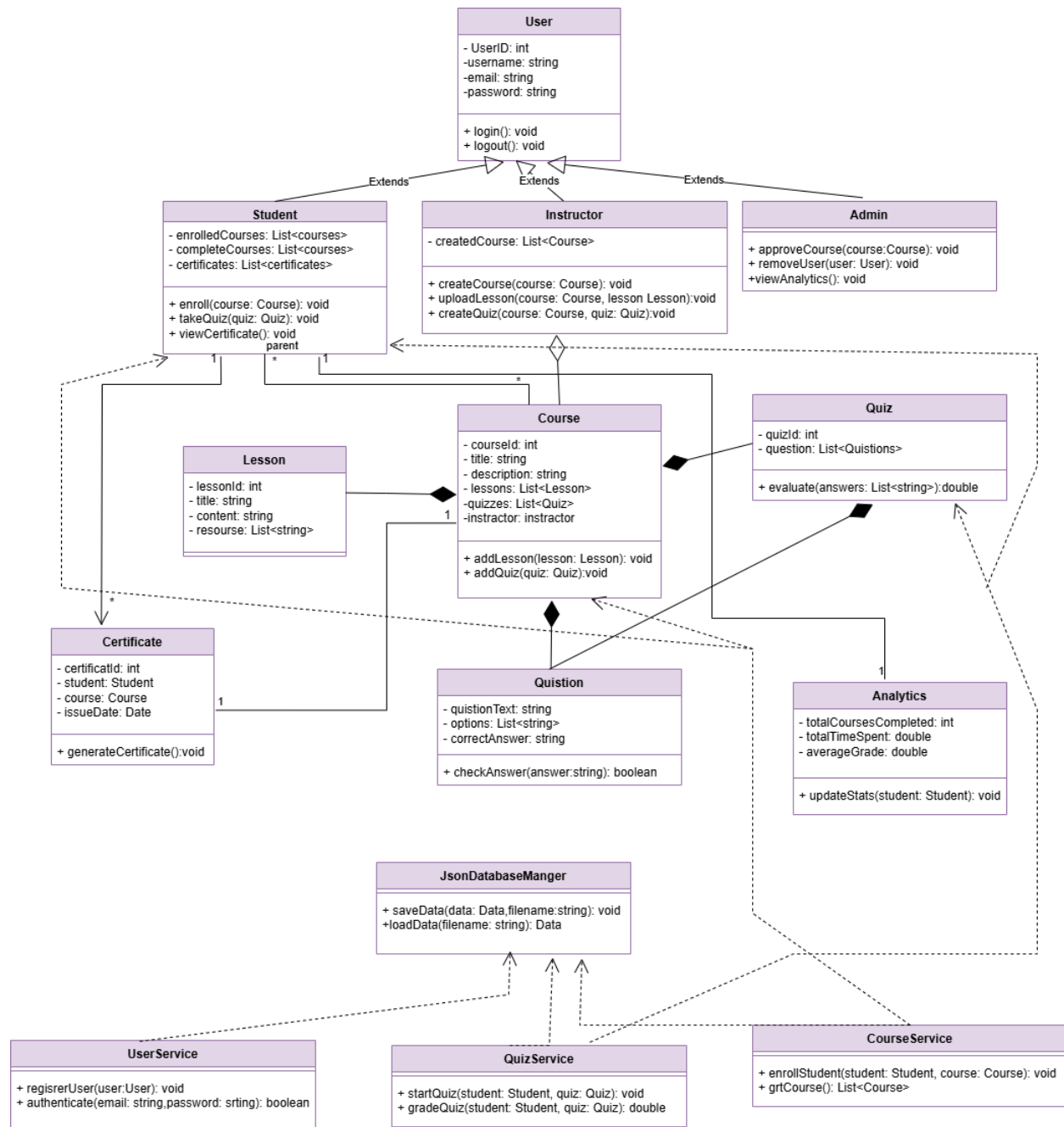1.UseCase Diagram

This case diagram shows how Students, Instructors, and Admins interact with the SkillForge System, all inherited from the general User actor. It highlights each role's main functions and illustrates that every action requires a successful Login, ensuring secure access and proper system functionality.

2. Activity Diagram

student | **system**

start → browse course → select course → check course availability

available → create enrollment

paid / free

payment sucess

creat enrollmrt rec → update db / send confirmation email

not available
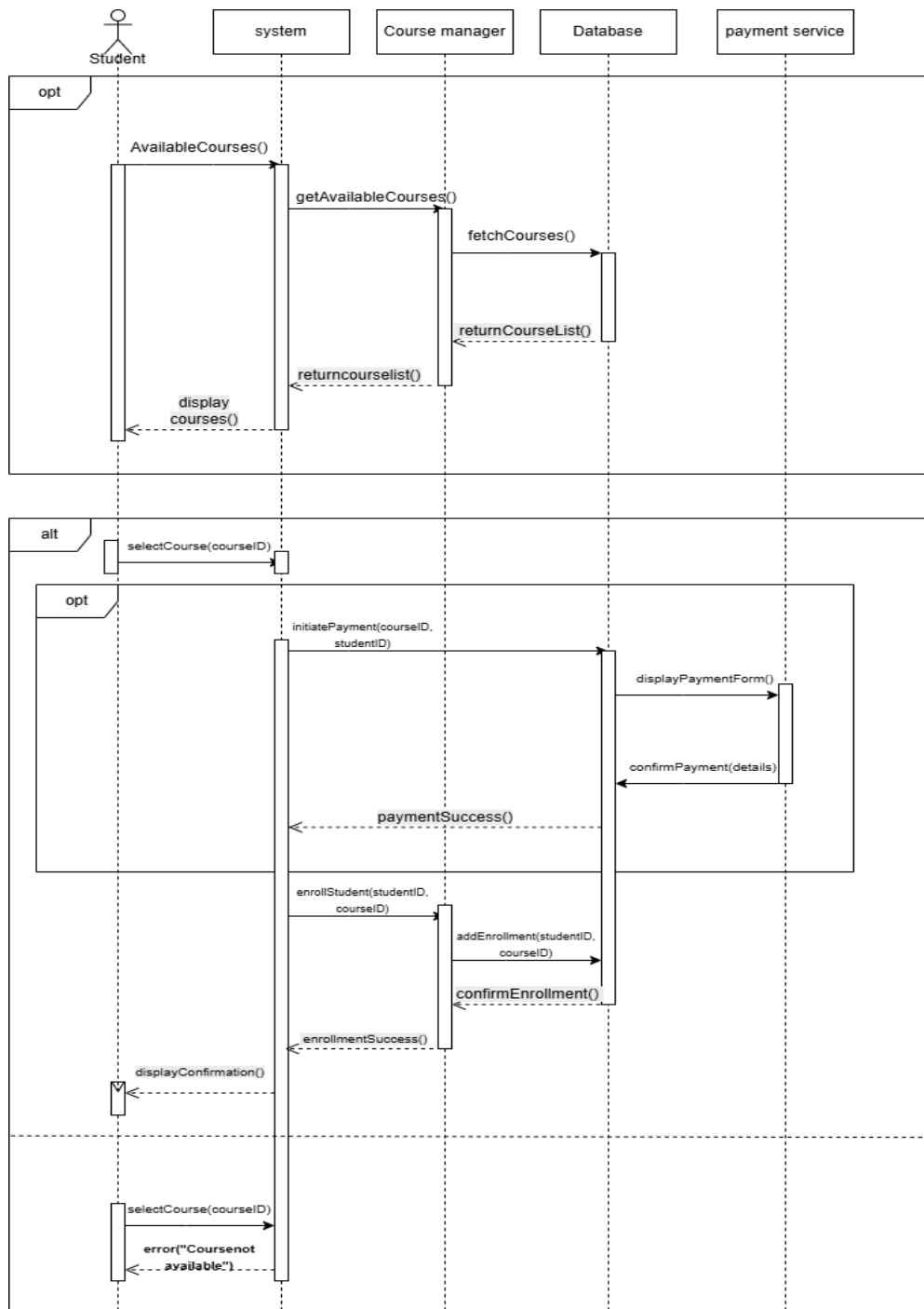
show enrollment sucess

payment failed

This activity diagram illustrates the overall workflow of the course enrollment process from the student's perspective. It shows decision-making points such as course availability and payment success, as well as system actions like database updates and confirmation emails. This diagram is important because it visualizes the control flow and logical sequence of actions across both the student and system swimlanes.

3. Class Diagram

This class diagram represents the static structure of the SkillForge system, showing classes such as User, Student, Instructor, Admin, Course, Lesson, and Quiz, along with their relationships and key methods. Inheritance and associations clearly define how objects interact and share functionality. It is important because it provides a blueprint for system implementation and helps identify the main entities and their connections.

4. Sequence Diagram

This diagram models the dynamic interaction between the Student, System Interface, Course Manager, Database, and Payment Service during course enrollment. It includes optional and alternative fragments for viewing courses, handling payments, and course availability responses. This diagram is important because it details the exact message flow and timing of operations within the enrollment process.