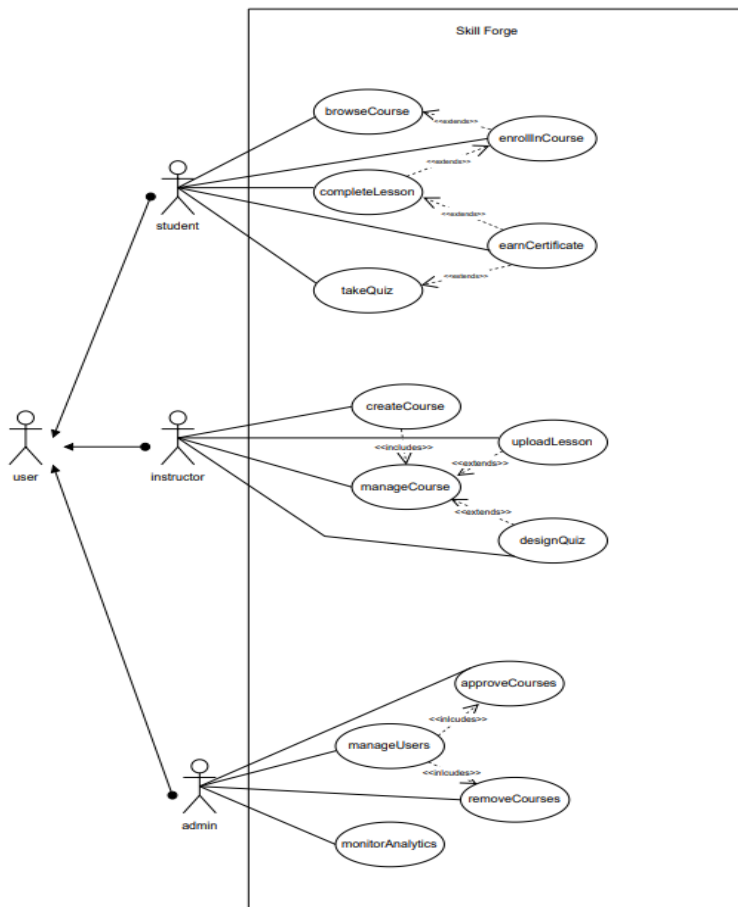


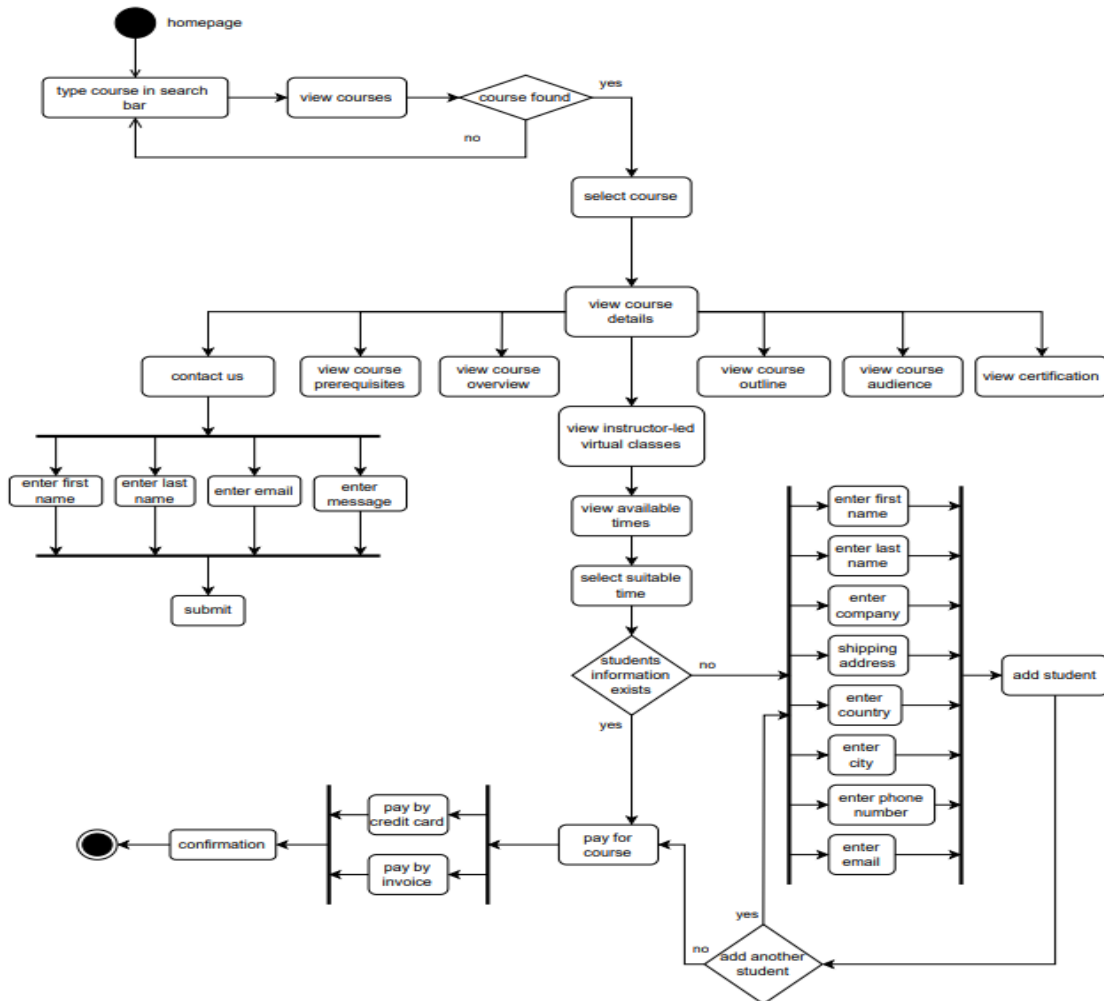
## 1. Use Case Diagram:

This Use Case Diagram represents the main interactions between users and the SkillForge learning platform. It shows how Students, Instructors, and Admins perform key actions such as enrolling in courses, managing content, and overseeing users. This diagram is important because it provides a clear overview of the system's functional requirements and user roles.



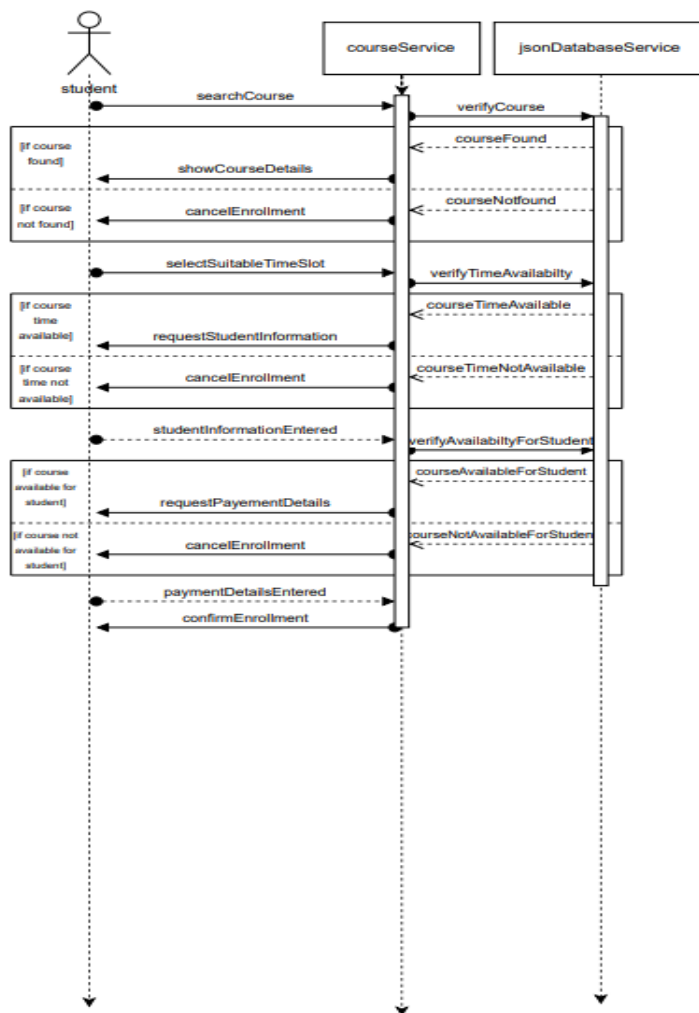
## 2. Activity Diagram:

This activity diagram models the "Enroll in a Course" process. It starts by looking up the desired course, viewing its various information, then entering the information of the students enrolling in it, and finally, paying the due amount. This diagram is used when implementing the GUI, ensuring a good user experience.



### 3. Sequence Diagram:

This “Enroll in a Course” sequence diagram illustrates the step-by-step interaction between the Student actor and the CourseService and JsonDatabaseService objects as a student searches for, verifies, and successfully enrolls in a course. It shows how the system handles different conditions—such as course availability, time conflicts, and payment confirmation—to ensure only valid enrollments are processed. This diagram is important in the system design because it clarifies the message flow, helps developers understand the required logic and decision points, and ensures consistent behavior across the enrollment process.



#### 4. Class Diagram:

This Class Diagram represents the structural design of the SkillForge system. It defines the main classes such as Student, Instructor, Admin, Course, and Lesson, along with their attributes, methods, and relationships. This diagram is important because it serves as a blueprint for implementation, showing how data and functionality are organized and how different system components interact.

