



This UML sequence diagram illustrates the process of a student completing a course and receiving a certificate by coordinating actions across five system components. It shows how the Student initiates lesson and quiz completion, triggering internal grading and progress updates, followed by a certificate generation request that is stored and returned. The diagram captures both control flow and data persistence, highlighting the roles of CourseService, QuizService, JsonDatabaseManager, and Certificate in fulfilling the student's request.