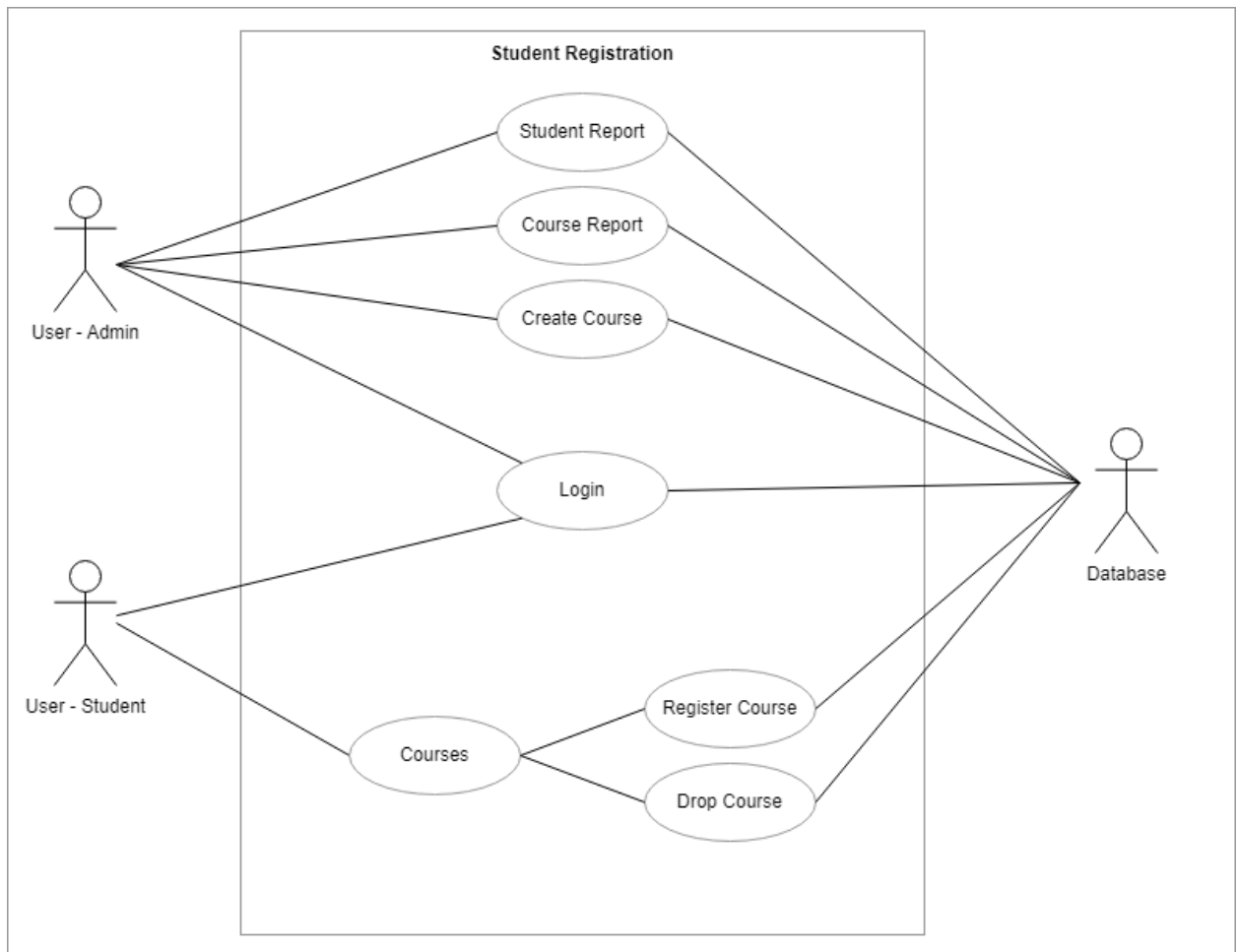
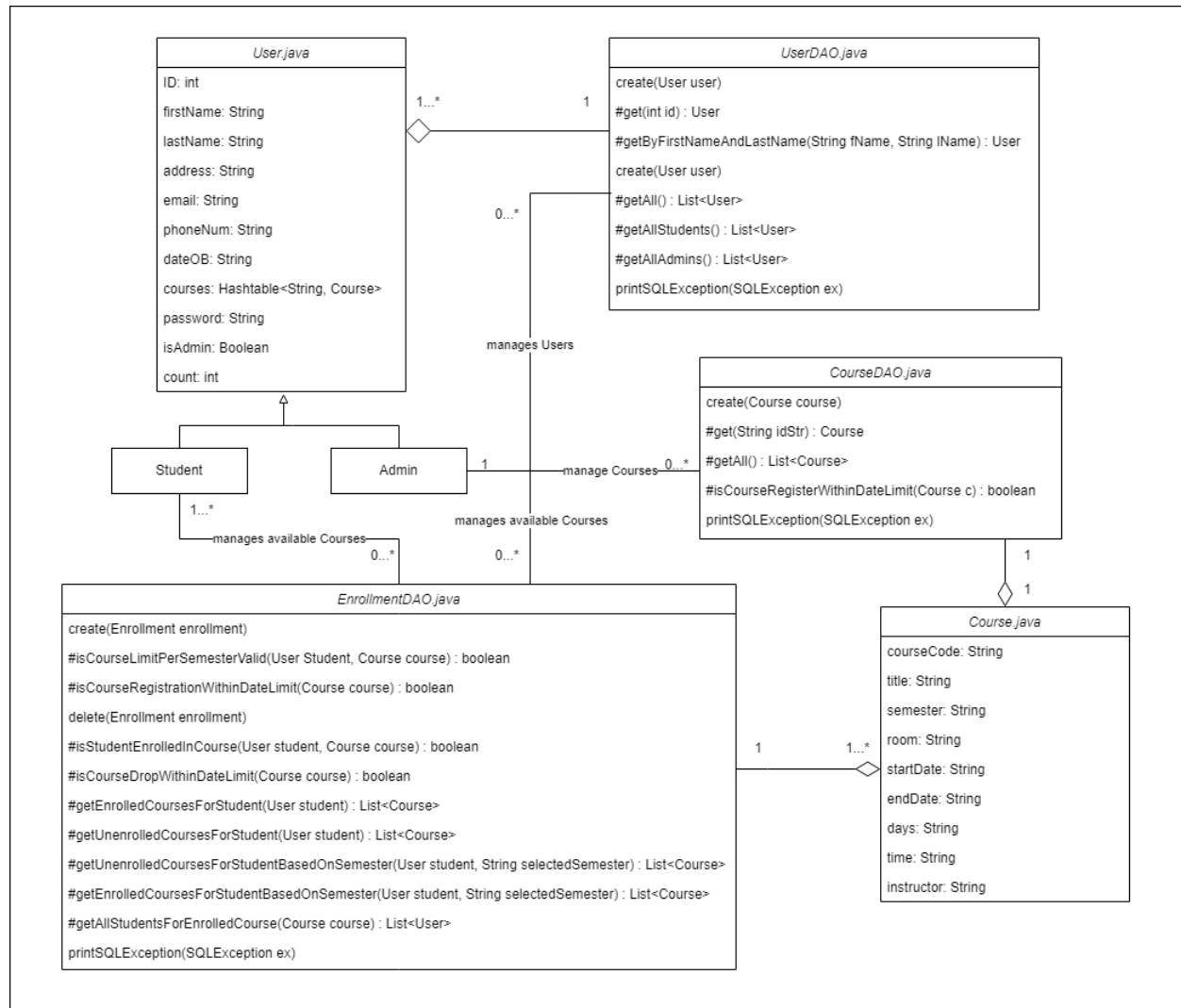


Use Case Diagram of the system:



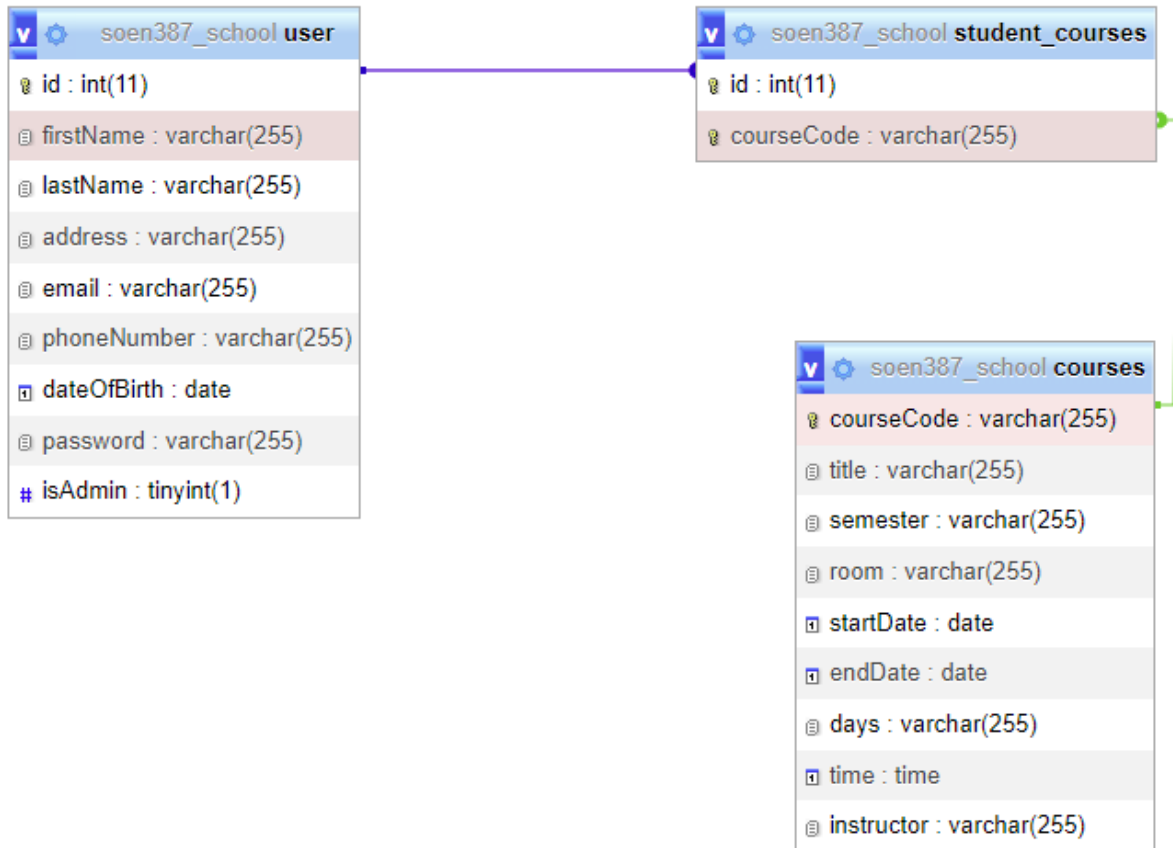
- All types of *Users* will be able to 'Login', in which the *Database* verifies the *User's* authentications.
- An *Admin* type *User* will be able to 'Create a Course' that will update the *Database*, or see a 'Course Report' or a 'Student Report' where the *Database* will retrieve the information for either option.
- A *Student* type *User* will be able to look through the 'Courses' and choose which to 'Register' or 'Drop', in which both options will update the *Database*.

Class Diagram of the System:



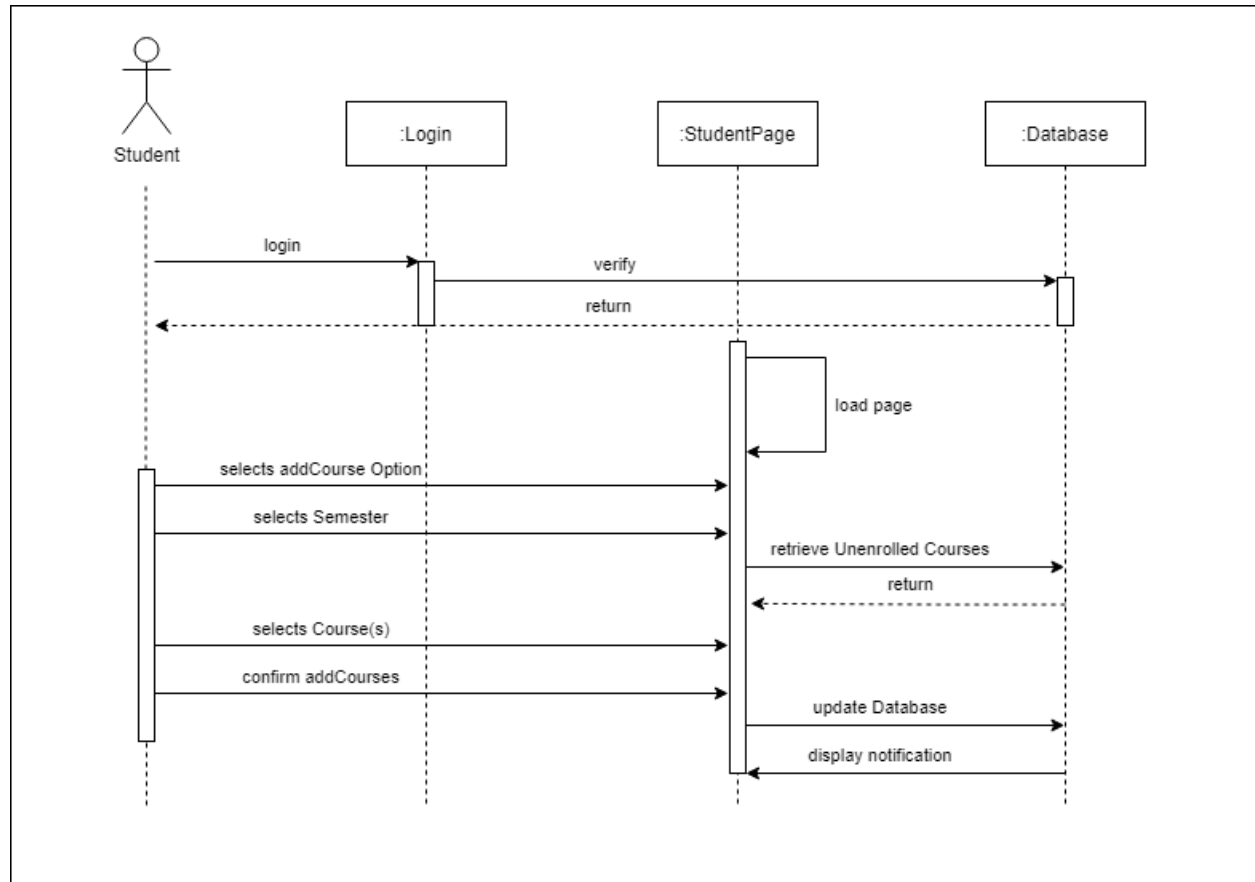
- A *User* is split into either a *Student* & an *Admin*, which is separated by the 'isAdmin' attribute.
- The *Student User* manages the available *Courses*, in which they can choose to 'create' or 'delete' as many 'Enrollments'.
 - Where an 'Enrollment' involves 1 or many 'Courses'.
- The *Admin User* can do multiple things:
 1. 'Manage other Users', which involves 1 or many 'Users'.
 2. 'Manage Courses', which involves 1 or many 'Courses'.
 3. 'Manage Available Courses', which creates the 'Student Report' or 'Course Report', which involves 1 or many 'Courses'.

ER Diagram:



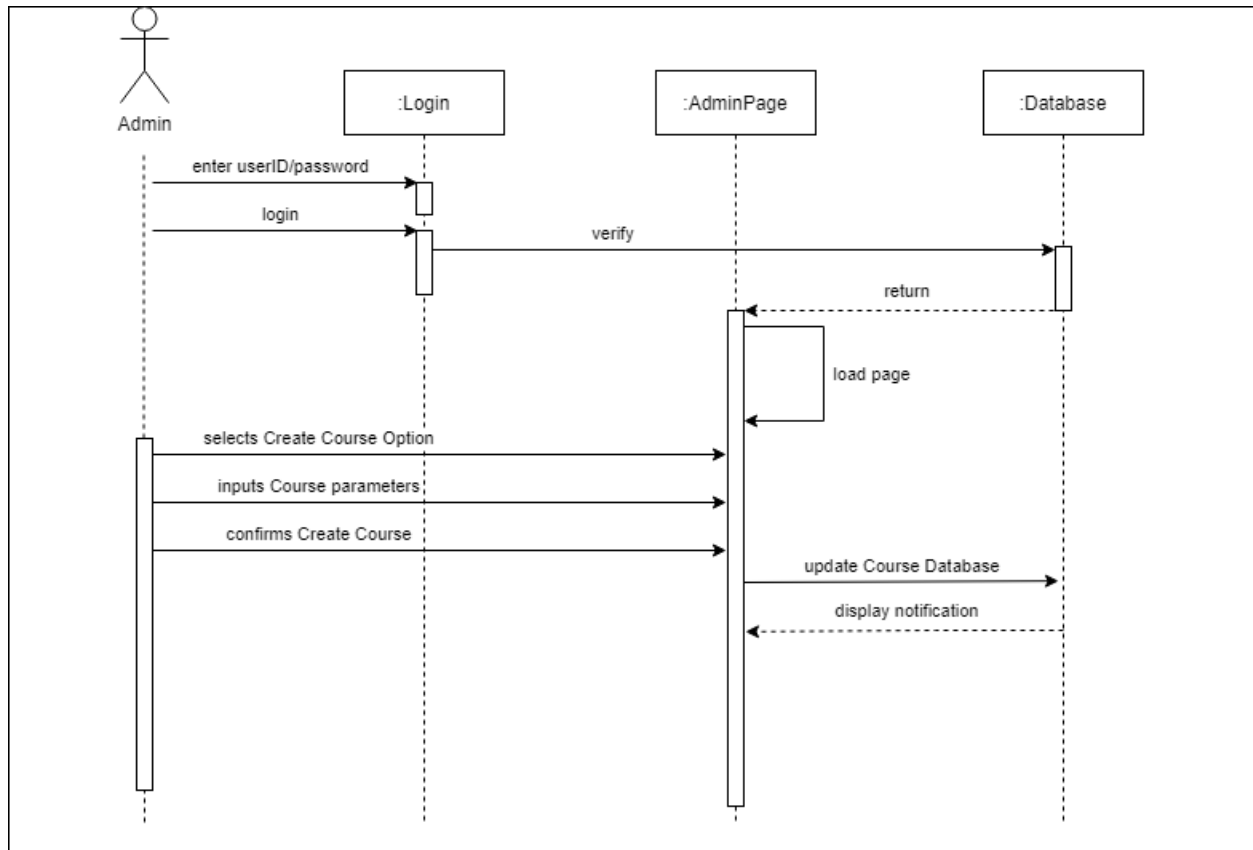
- User 'id' is the *primary key* of the *user* table.
- 'courseCode' is the *primary key* of the *courses* table.
- 'id' & 'courseCode' are *foreign keys* of the *student_courses* table.

Sequence Diagram when a Student adds a Course:



- Here a *Student User* will 'login' into the main page, where the application will verify that the *User's* inputted 'id' & 'password' are verified & found within the *Database*.
- If successful, then the *Student page* will 'load'.
- Then, the *Student User* selects the 'Register Courses' option & selects the appropriate 'semester'.
 - The application will search the *Database* for the 'unenrolled classes' of this *Student User* within that selected 'semester'.
- The *Student User* will then select which of these 'courses' to enroll into.
 - When finished, the *Student User* will confirm their selection.
 - The application will update the *Database* and finally display a result notification.

Sequence Diagram when an Admin creates a Course:



- Here an *Admin User* will 'login' into the main page, where the application will verify that the *User's* inputted 'id' & 'password' are verified & found within the *Database*.
- If successful, then the *Admin page* will 'load'.
- Then, the *Admin User* selects the 'Create Course' option.
 - They fill in the parameters of a *Course*.
 - When finished, they confirm the course creation.
- The application will update the 'courses' *Database*, by creating a new row.
 - Finally it will display a result notification.