Student Success Tracking

The goal of the project is to provide an easy and convenient way to track the success of the students. The system is valid for authorized users and provides them with an access to such actions: view the success of a particular student or group, view the subjects and lecturers lists, give marks for the subjects (provided by the Lecturer), and manage their own account.

Roles: Guest, Student, Lecturer, Admin.

Role	Description
Guest	User who isn't logged in. Can sing up and log in.
Student	User who can view own info, own marks, marks of the group, list of the subjects, list of the lecturers. Can change his/her password.
Lecturer	User who can view list of the subjects, list of the groups, student marks. Can give the marks from the subject he/she teaches. Can change password.
Admin	User who has access to the Student and Lecturer information and can change it. Can manage the registration application. Can change his/her password.

Account Management System

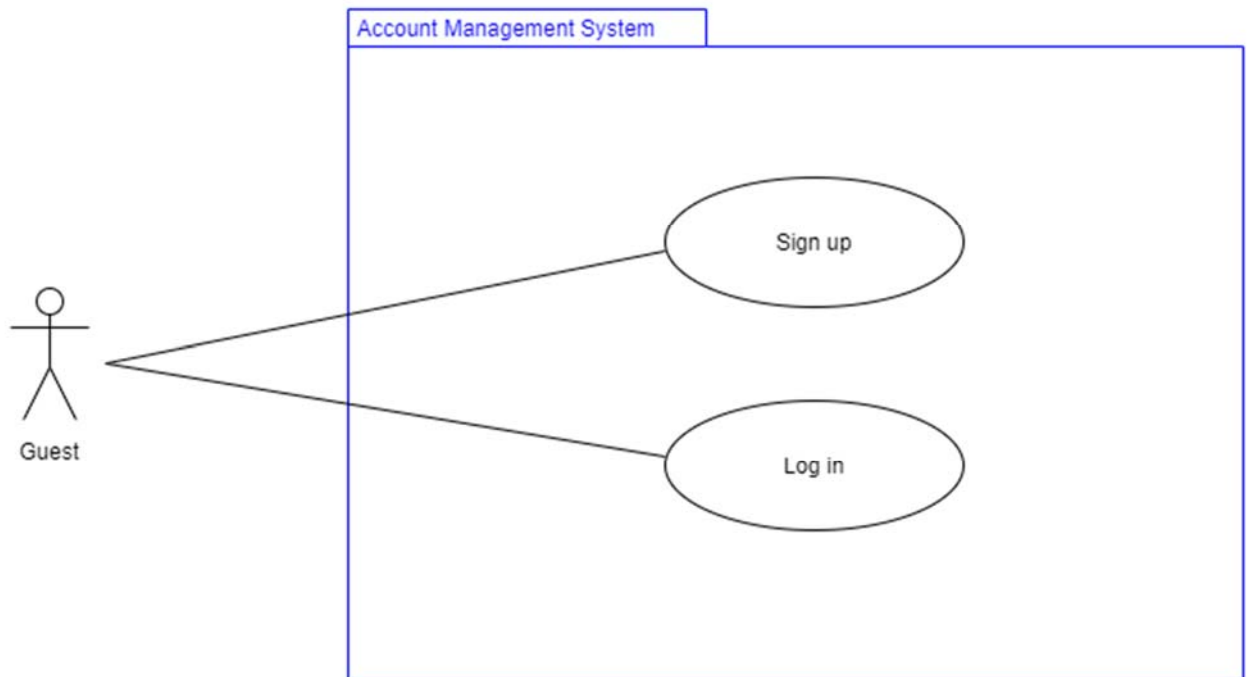| №	Role	Use case	Description
1	Guest	Sign up	Sign up in system.
2		Log in	Log in to the system.
3	Student/ Lecturer/ Admin	Log out	Log out from the system.
4		Manage account	Manage own account.
5		Change password	User can change own password.

Student Performance Tracking System

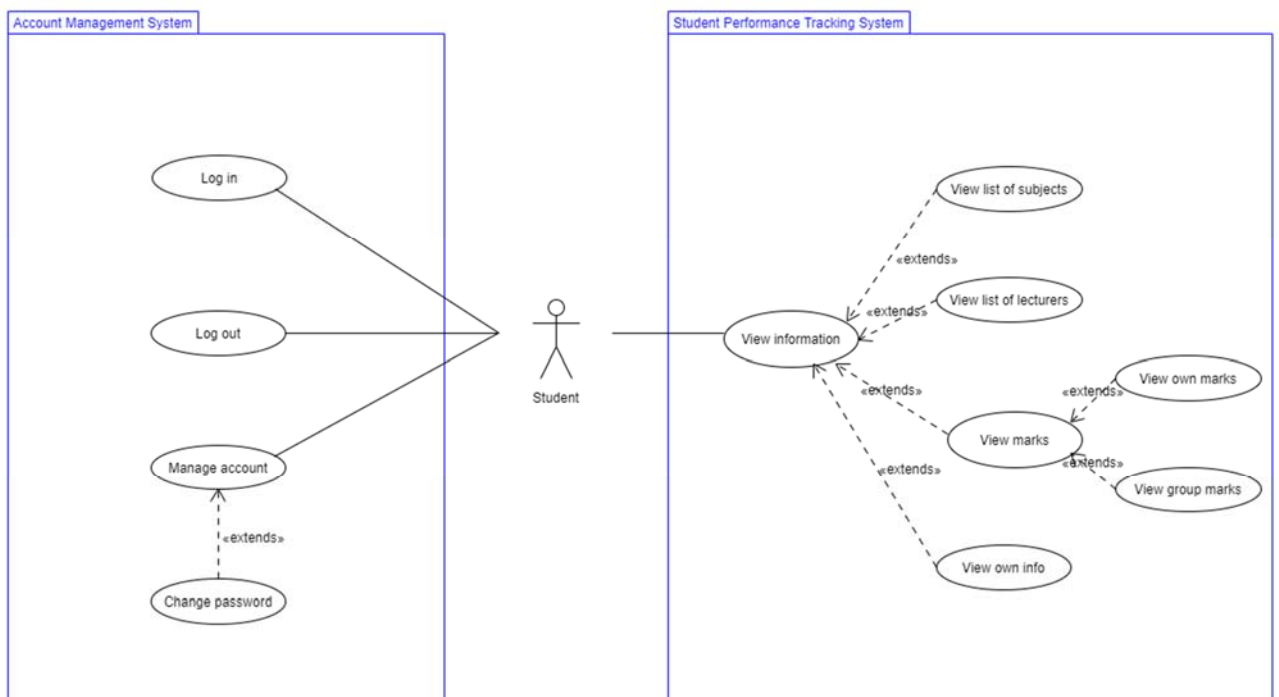| №	Role	Use case	Description
1	Student/ Lecturer/ Admin	View list of subjects	View the list of all the subjects in the system.
2		View own info	User can see own information.
3	Student/ Admin	View list of lecturers	View the list of all the lecturers in the system.
4	Student	View own marks	User can see the information about own marks.
5		View group marks	User can see the information about the marks in his/her group.
6	Lecturer/ Admin	View list of groups	View the list of all the groups.
7		View list of students	View the list of the students in each group.
8	Lecturer	View marks	View the information about the marks.
9		Give marks	Give marks from the subject he/she teaches.
10	Admin	Change information	Change all the information about the lists of the students, groups, lecturers and subjects.

Applications Management System

№	Role	Use case	Description
1	Admin	Manage applications	Manage the registration applications sent by the Guests.
2		View application	View the information about the Guest's application.
3		Accept	Accept the registration application.
4		Reject	Reject the registration application.

Use case diagrams

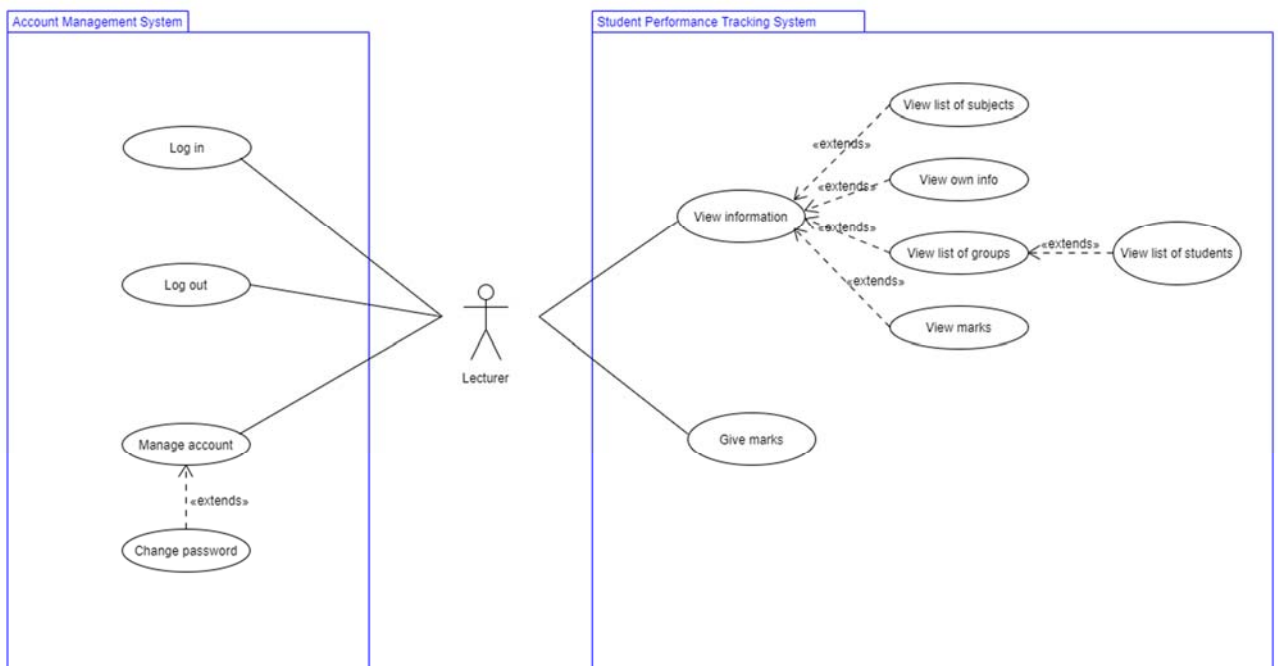Guest role use case diagram:

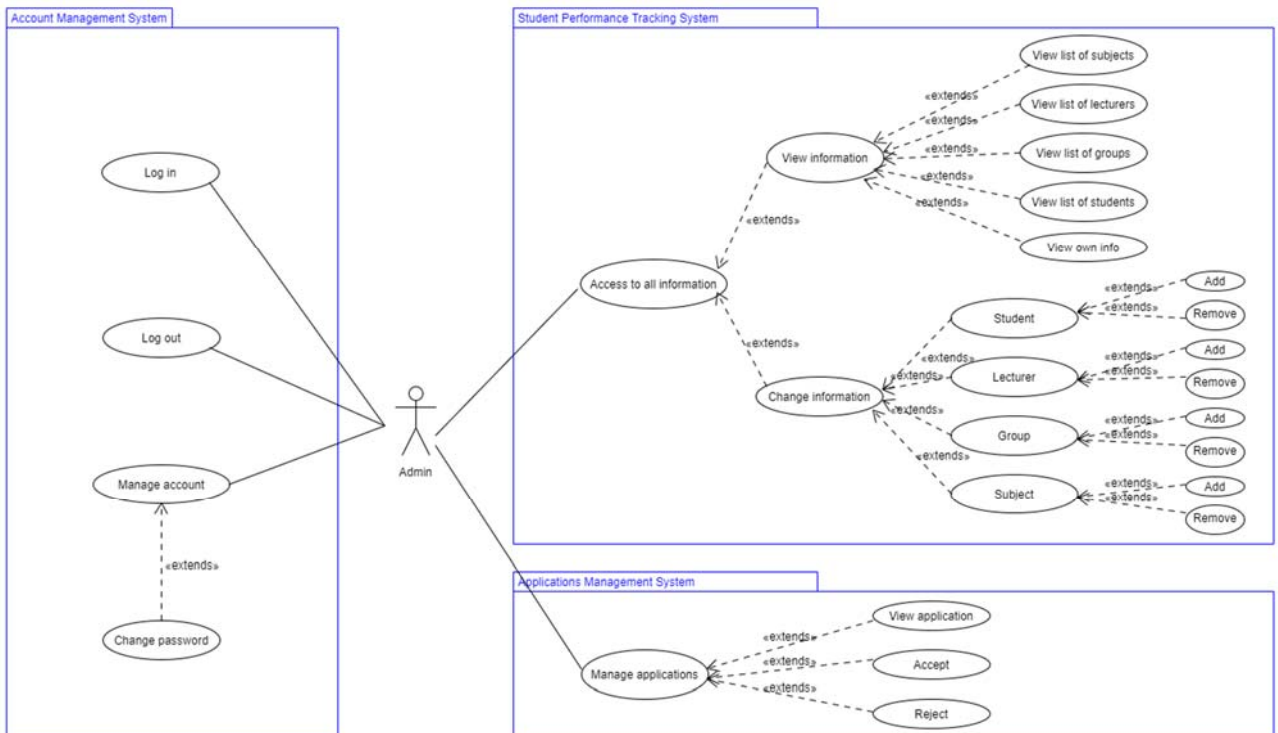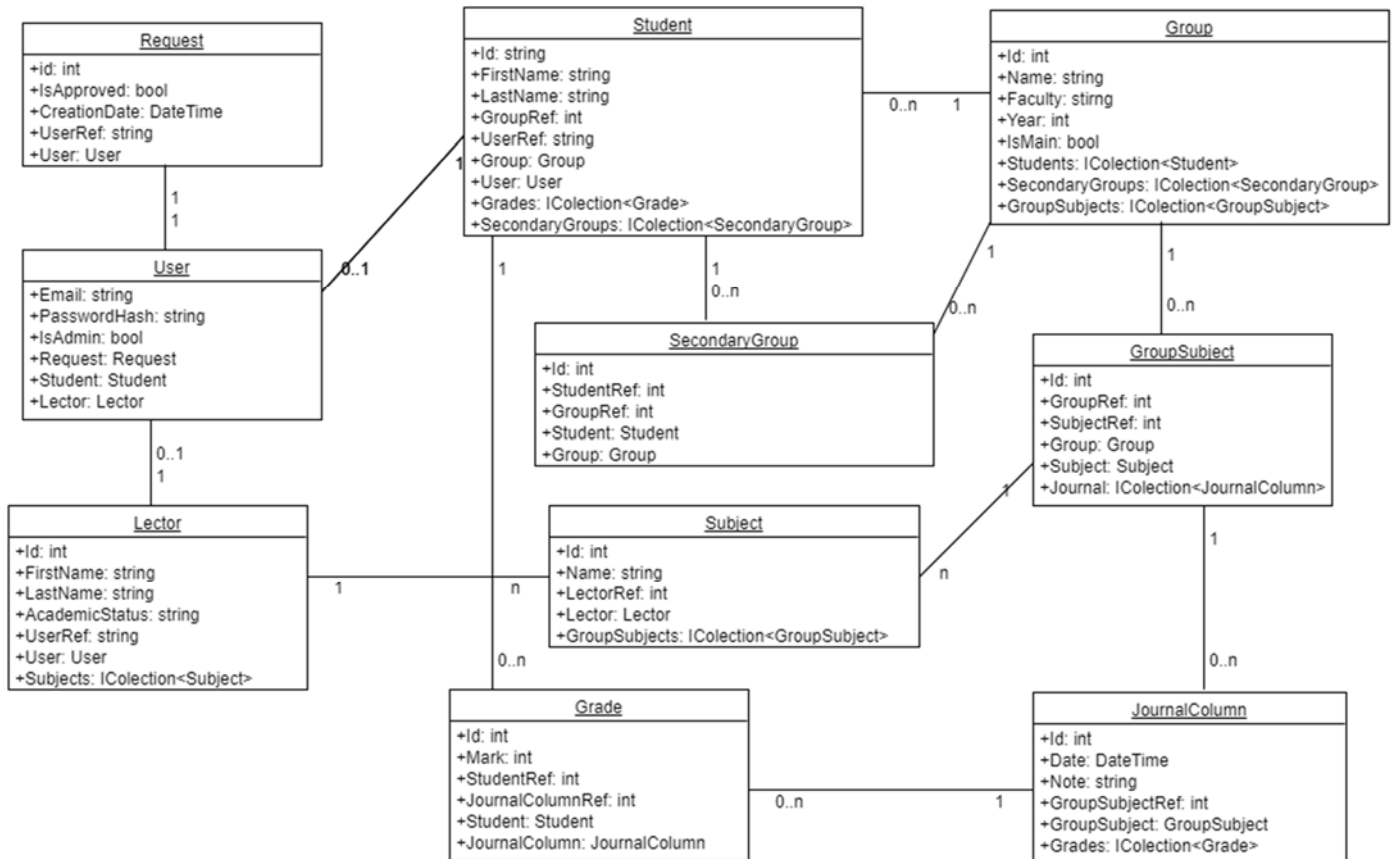

Student role use case diagram:

Lecturer role use case diagram:

Admin role use case diagram:

Class diagram

Request
- +id: int
- +IsApproved: bool
- +CreationDate: DateTime
- +UserRef: string
- +User: User

Student
- +Id: string
- +FirstName: string
- +LastName: string
- +GroupRef: int
- +UserRef: string
- +Group: Group
- +User: User
- +Grades: IColection<Grade>
- +SecondaryGroups: IColection<SecondaryGroup>

Group
- +Id: int
- +Name: string
- +Faculty: stirng
- +Year: int
- +IsMain: bool
- +Students: IColection<Student>
- +SecondaryGroups: IColection<SecondaryGroup>
- +GroupSubjects: IColection<GroupSubject>

User
- +Email: string
- +PasswordHash: string
- +IsAdmin: bool
- +Request: Request
- +Student: Student
- +Lector: Lector

SecondaryGroup
- +Id: int
- +StudentRef: int
- +GroupRef: int
- +Student: Student
- +Group: Group

GroupSubject
- +Id: int
- +GroupRef: int
- +SubjectRef: int
- +Group: Group
- +Subject: Subject
- +Journal: IColection<JournalColumn>

Lector
- +Id: int
- +FirstName: string
- +LastName: string
- +AcademicStatus: string
- +UserRef: string
- +User: User
- +Subjects: IColection<Subject>

Subject
- +Id: int
- +Name: string
- +LectorRef: int
- +Lector: Lector
- +GroupSubjects: IColection<GroupSubject>

Grade
- +Id: int
- +Mark: int
- +StudentRef: int
- +JournalColumnRef: int
- +Student: Student
- +JournalColumn: JournalColumn

JournalColumn
- +Id: int
- +Date: DateTime
- +Note: string
- +GroupSubjectRef: int
- +GroupSubject: GroupSubject
- +Grades: IColection<Grade>

Relationships / multiplicities:
- Request 1 — 1 User
- Student 0..n — 1 Group
- Student 1 — 0..1 User
- User 0..1 — 1 Lector
- Student 1 — 1 / 0..n SecondaryGroup
- Group 1 — 0..n SecondaryGroup
- Group 1 — 0..n GroupSubject
- Lector 1 — n Subject
- Subject n — 1 GroupSubject
- Student 1 — 0..n Grade
- Grade 0..n — 1 JournalColumn
- GroupSubject 1 — 0..n JournalColumn
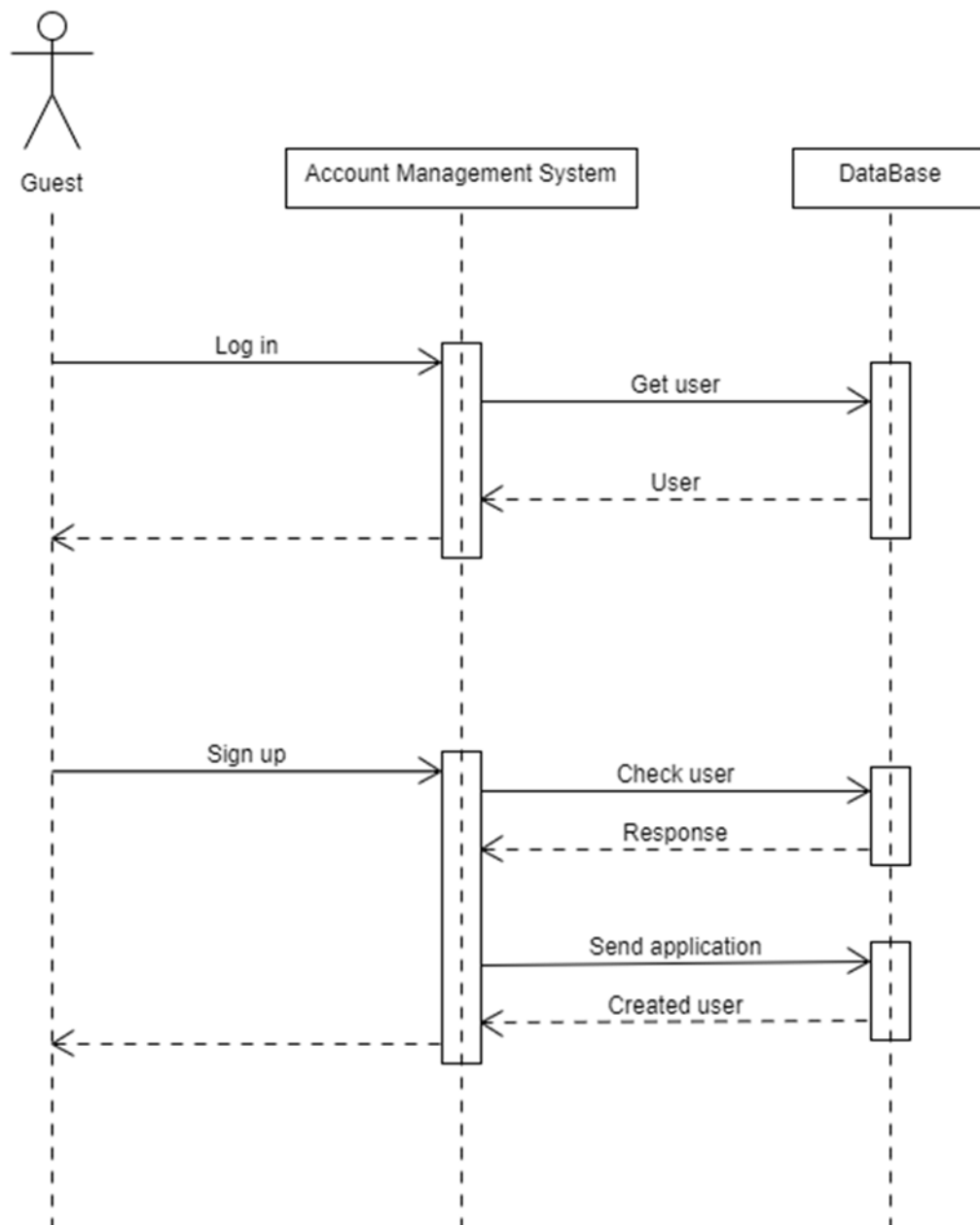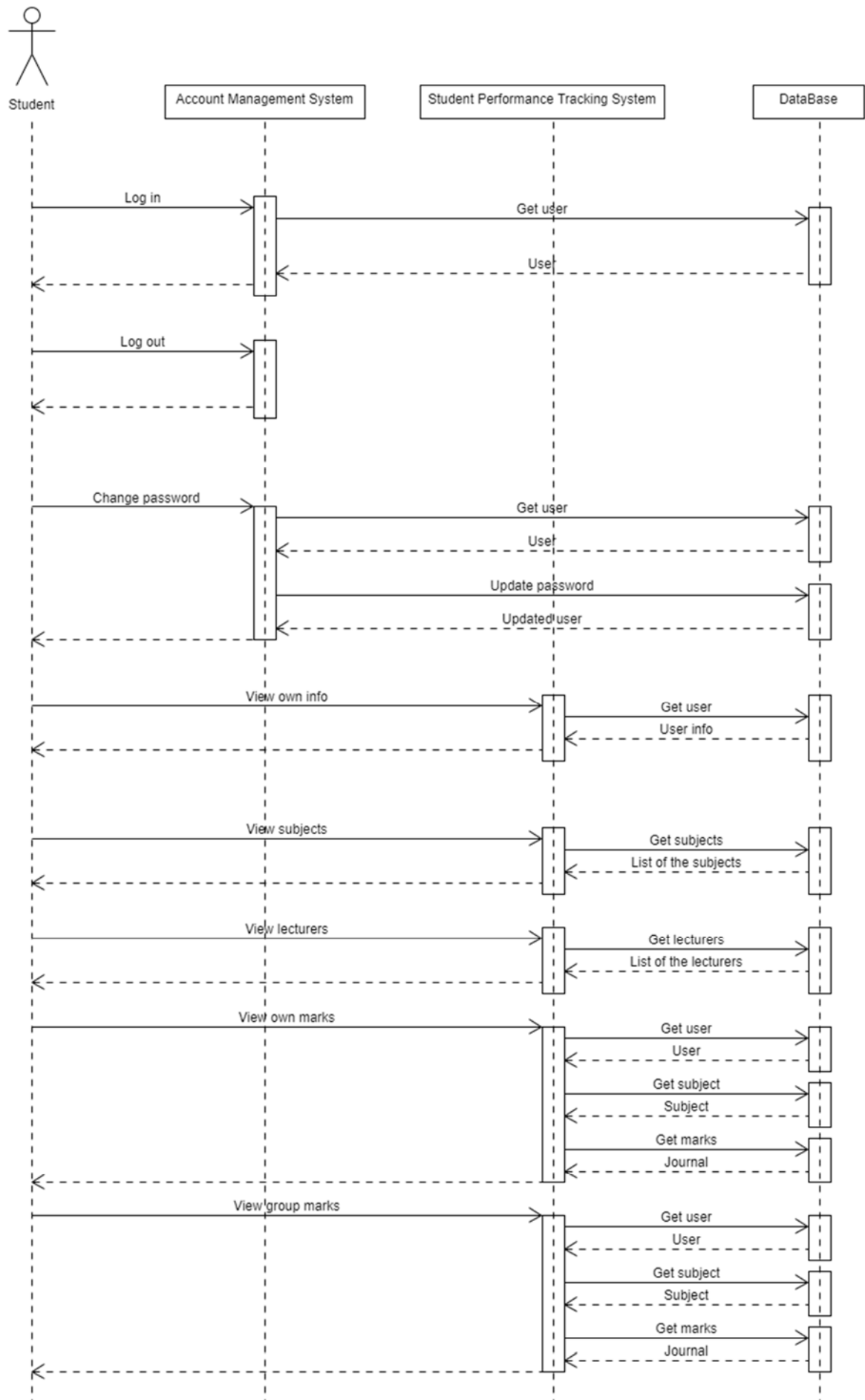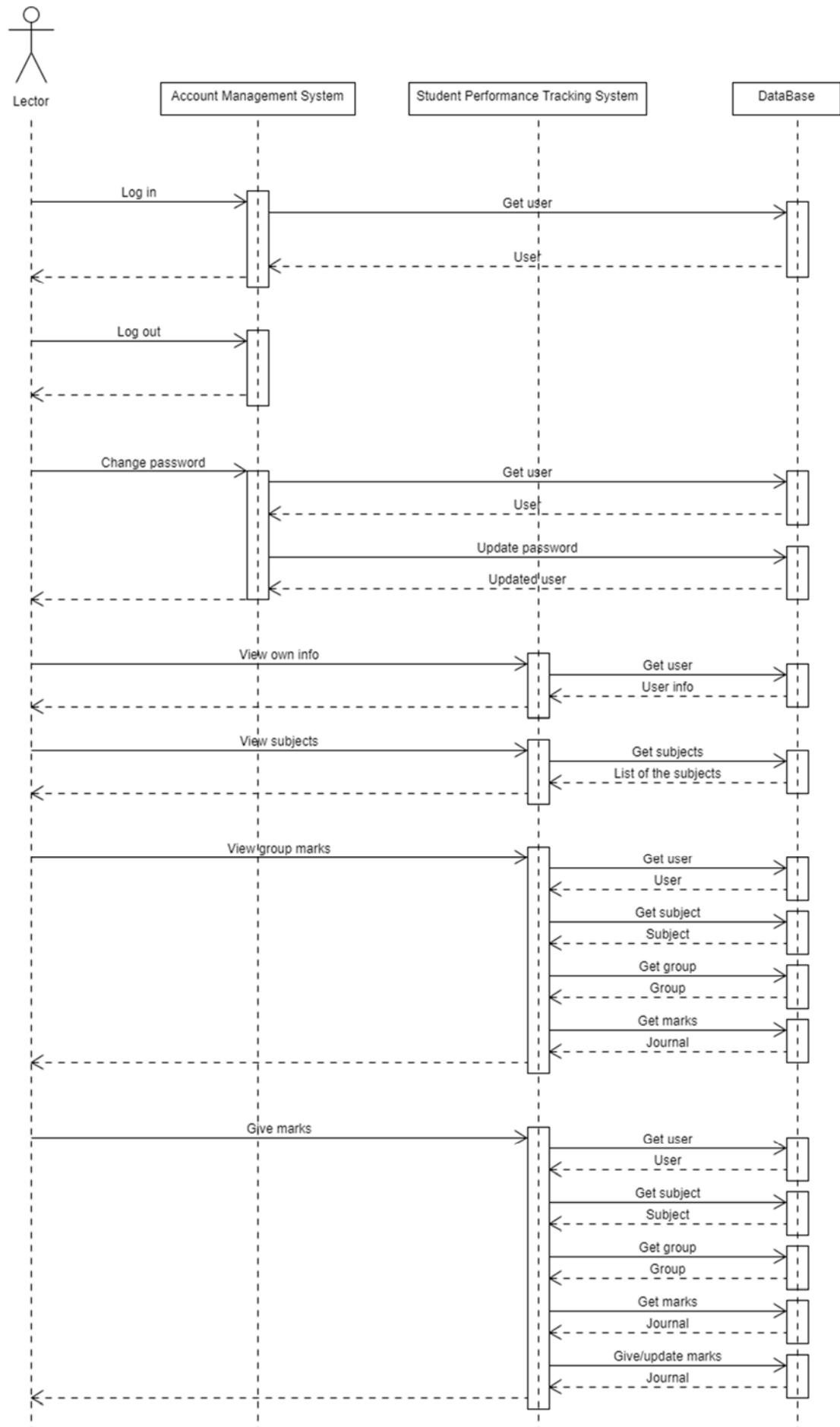
Sequence diagrams

Guest role sequence diagram:

Student role sequence diagram:

Lecturer role sequence diagram:

Admin role sequence diagram: