IT-314

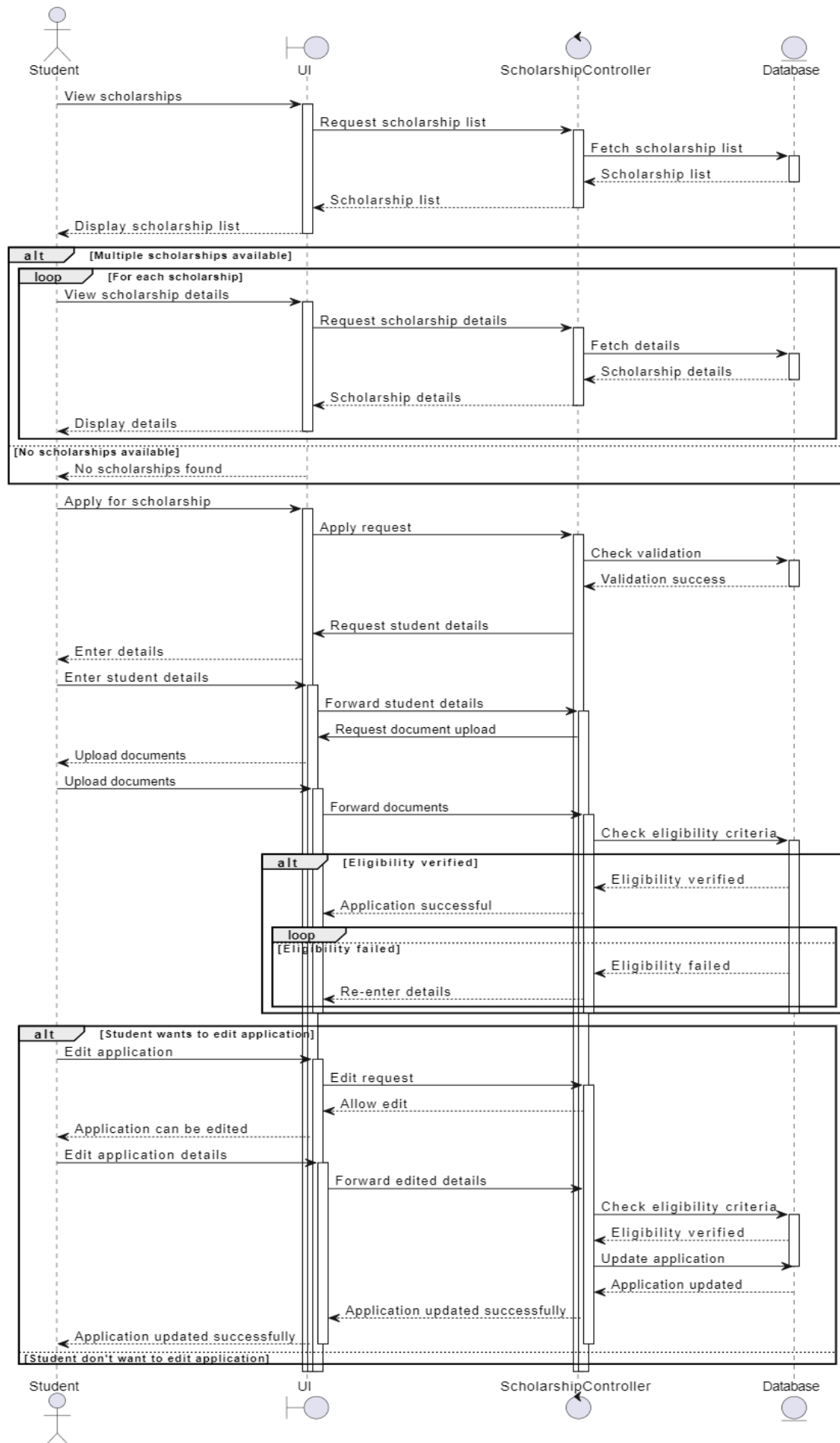# SOFTWARE ENGINEERING

Lab - 5 => Group 7

FOR SPRINT 2 :-

- **Identify Entity/Boundary/Control Objects**

  => Entity objects: Student,Database.

  => Boundary object: User interface (UI).

  => Control Objects: Scholarship controller.

- **Sequence Diagram**

```
Student          UI              ScholarshipController    Database

  │ View scholarships │                    │                    │
  ├──────────────────▶│                    │                    │
  │                   │ Request scholarship list              │
  │                   ├───────────────────▶│                    │
  │                   │                    │ Fetch scholarship list
  │                   │                    ├───────────────────▶│
  │                   │                    │ Scholarship list   │
  │                   │                    │◀───────────────────┤
  │                   │ Scholarship list   │                    │
  │                   │◀───────────────────┤                    │
  │ Display scholarship list               │                    │
  │◀──────────────────┤                    │                    │
```

alt [Multiple scholarships available]

loop [For each scholarship]

```
  │ View scholarship details               │                    │
  ├──────────────────▶│                    │                    │
  │                   │ Request scholarship details           │
  │                   ├───────────────────▶│                    │
  │                   │                    │ Fetch details      │
  │                   │                    ├───────────────────▶│
  │                   │                    │ Scholarship details│
  │                   │                    │◀───────────────────┤
  │                   │ Scholarship details│                    │
  │                   │◀───────────────────┤                    │
  │ Display details   │                    │                    │
  │◀──────────────────┤                    │                    │
```

[No scholarships available]

```
  │ No scholarships found                  │                    │
  │◀──────────────────┤                    │                    │
```

```
  │ Apply for scholarship                  │                    │
  ├──────────────────▶│                    │                    │
  │                   │ Apply request      │                    │
  │                   ├───────────────────▶│                    │
  │                   │                    │ Check validation   │
  │                   │                    ├───────────────────▶│
  │                   │                    │ Validation success │
  │                   │                    │◀───────────────────┤
  │                   │ Request student details               │
  │                   │◀───────────────────┤                    │
  │ Enter details     │                    │                    │
  │◀──────────────────┤                    │                    │
  │ Enter student details                  │                    │
  ├──────────────────▶│                    │                    │
  │                   │ Forward student details               │
  │                   ├───────────────────▶│                    │
  │                   │ Request document upload               │
  │                   │◀───────────────────┤                    │
  │ Upload documents  │                    │                    │
  │◀──────────────────┤                    │                    │
  │ Upload documents  │                    │                    │
  ├──────────────────▶│                    │                    │
  │                   │ Forward documents  │                    │
  │                   ├───────────────────▶│                    │
  │                   │                    │ Check eligibility criteria
  │                   │                    ├───────────────────▶│
```

alt [Eligibility verified]

```
  │                   │                    │ Eligibility verified
  │                   │                    │◀───────────────────┤
  │                   │ Application successful                 │
  │                   │◀───────────────────┤                    │
```

loop

[Eligibility failed]

```
  │                   │                    │ Eligibility failed │
  │                   │                    │◀───────────────────┤
  │                   │ Re-enter details   │                    │
  │                   │◀───────────────────┤                    │
```

alt [Student wants to edit application]

```
  │ Edit application  │                    │                    │
  ├──────────────────▶│                    │                    │
  │                   │ Edit request       │                    │
  │                   ├───────────────────▶│                    │
  │                   │ Allow edit         │                    │
  │                   │◀───────────────────┤                    │
  │ Application can be edited              │                    │
  │◀──────────────────┤                    │                    │
  │ Edit application details               │                    │
  ├──────────────────▶│                    │                    │
  │                   │ Forward edited details                 │
  │                   ├───────────────────▶│                    │
  │                   │                    │ Check eligibility criteria
  │                   │                    ├───────────────────▶│
  │                   │                    │ Eligibility verified
  │                   │                    │◀───────────────────┤
  │                   │                    │ Update application │
  │                   │                    ├───────────────────▶│
  │                   │                    │ Application updated│
  │                   │                    │◀───────────────────┤
  │                   │ Application updated successfully       │
  │                   │◀───────────────────┤                    │
  │ Application updated successfully       │                    │
  │◀──────────────────┤                    │                    │
```

[Student don't want to edit application]

```
Student          UI              ScholarshipController    Database
```

● Class Diagram

AcademicRecord

+ academicRecordId: string
+ institution: string
+ degree: string
+ yearOfGraduation: int
+ grade: float

Student

+ studentId : string
+ name : string
+ email : string
+ password : string
+ verified : boolean

+ signUp() : void
+ login() : void
+ viewScholarships() : void
+ applyForScholarships() : void
+ editApplications() : void
+ checkApplicationStatus() : string
+ fillStudentInformation() : void
+ uploadDocuments() : void

StudentInformation

+ studentId : string
+ address: string
+ phoneNumber: string
+ birthDate: date
+ collegeName: string
+ academicRecords : List<AcademicRecord>

+ fillStudentInformation(): void
+ addAcademicRecord() : void

Scholarship

+ scholarshipId : string
+ name : string
+ description : string
+ eligibilityCriteria : string
+ applyFrom : date
+ applyTill : date

+ uploadDocuments() : void
+ editMyApplication() : void
+ applyForScholarship() : void

Application

+ applicationId : string
+ name : string
+ description : string
+ eligibilityCriteria : string
+ applyFrom : date
+ applyTill : date
+ documents : List<Document>

+ uploadDocuments() : void
+ fillStudentInformation() : void

Document

+ documentId: string
+ documentName: string
+ fileSize: int

+ uploadFile() : void
+ verifyDocSize() : boolean
+ downloadFile() : void
+ viewFile() : void
+ removeFile() : void

1

1

1

1

0...2

1...*

1...*

1

1...*

0...2

1...*