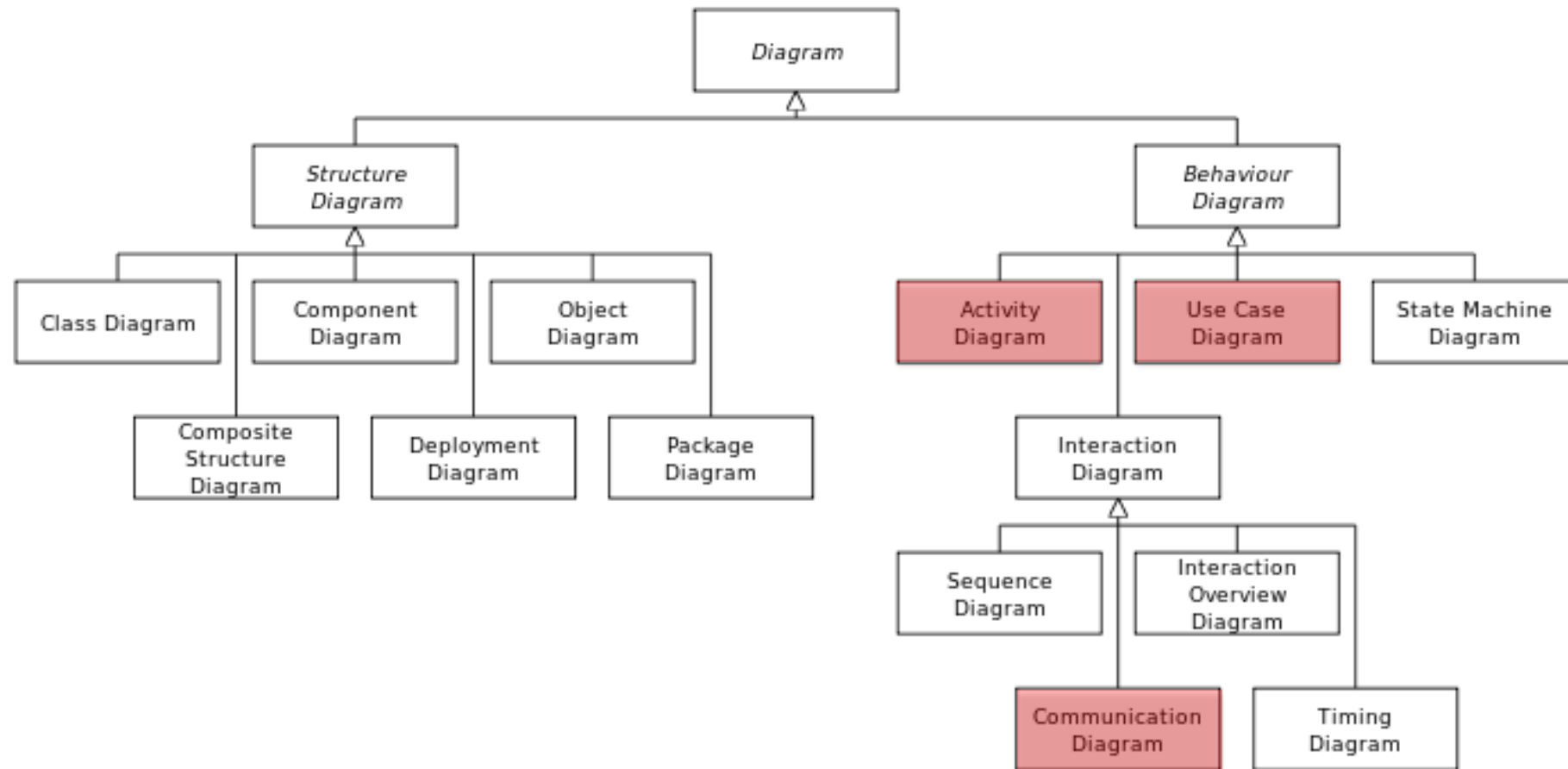# SAD
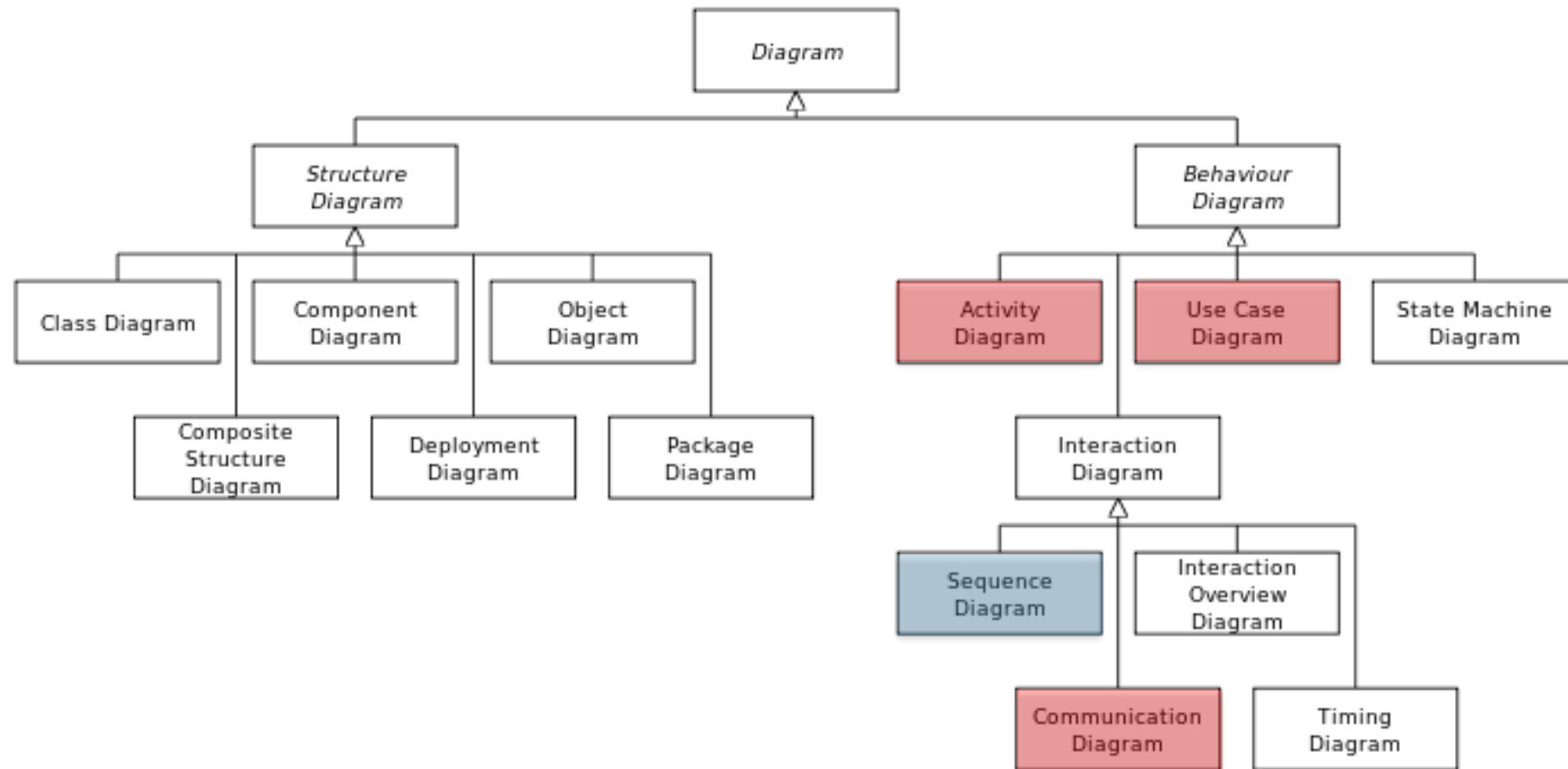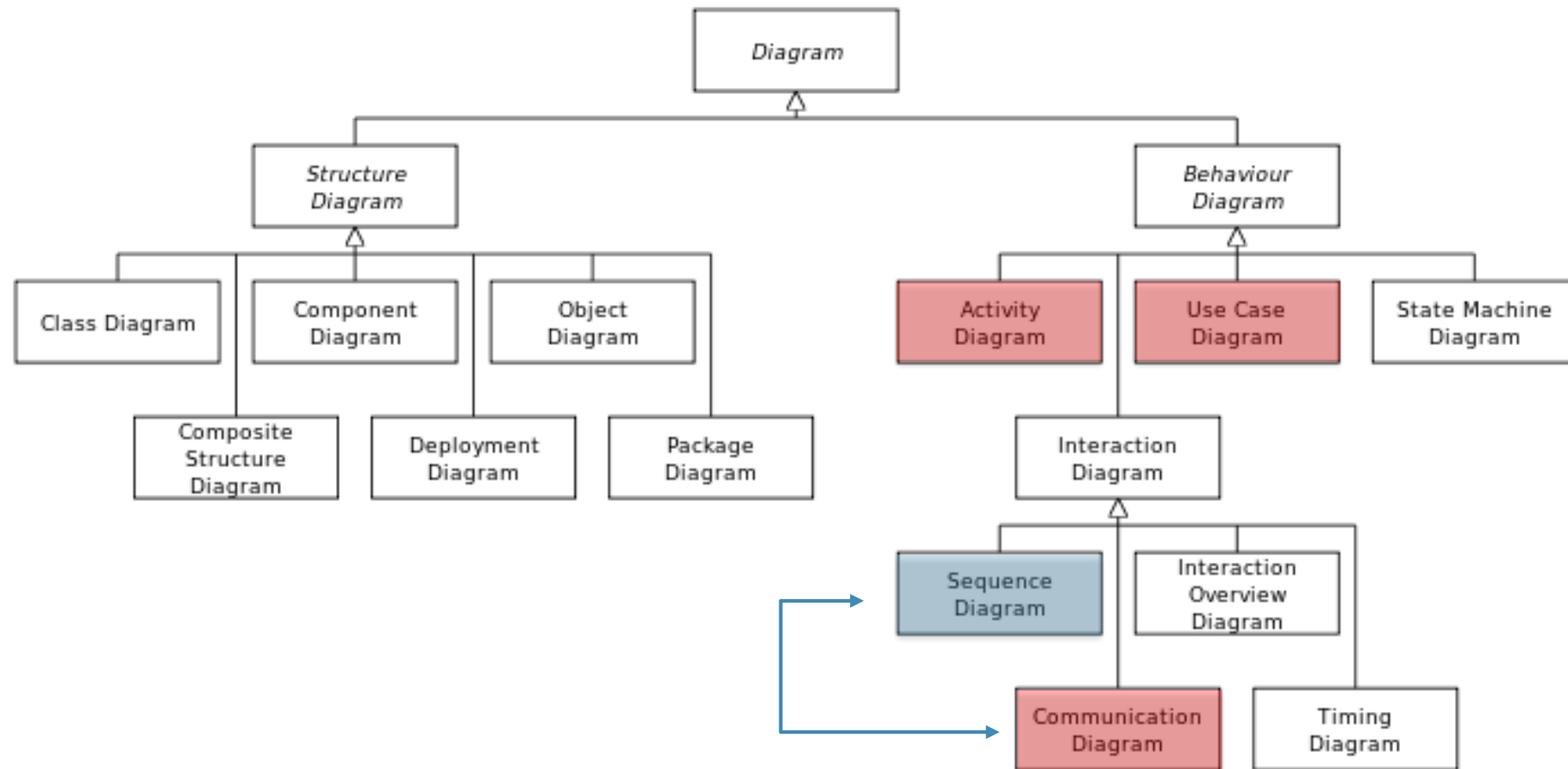
Lecture 10

Eng. Joud Khattab

UML

UML

UML

Interaction Diagram

- Interaction diagrams are used to illustrate interactions of parts within a system.

Sequence Diagrams

(emphasize time ordering)

Communication Diagrams
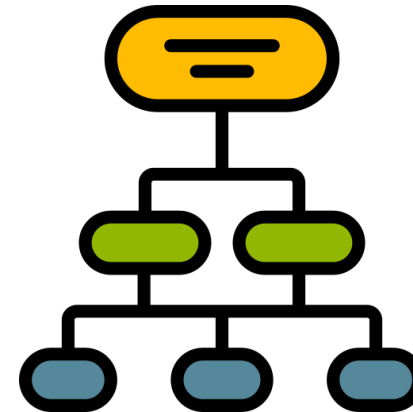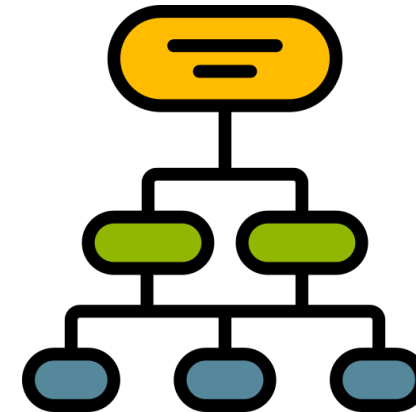
(emphasize structural ordering)

Interaction Diagram

- Interaction diagrams are used to illustrate interactions of parts within a system.

Sequence Diagrams

(emphasize time ordering)

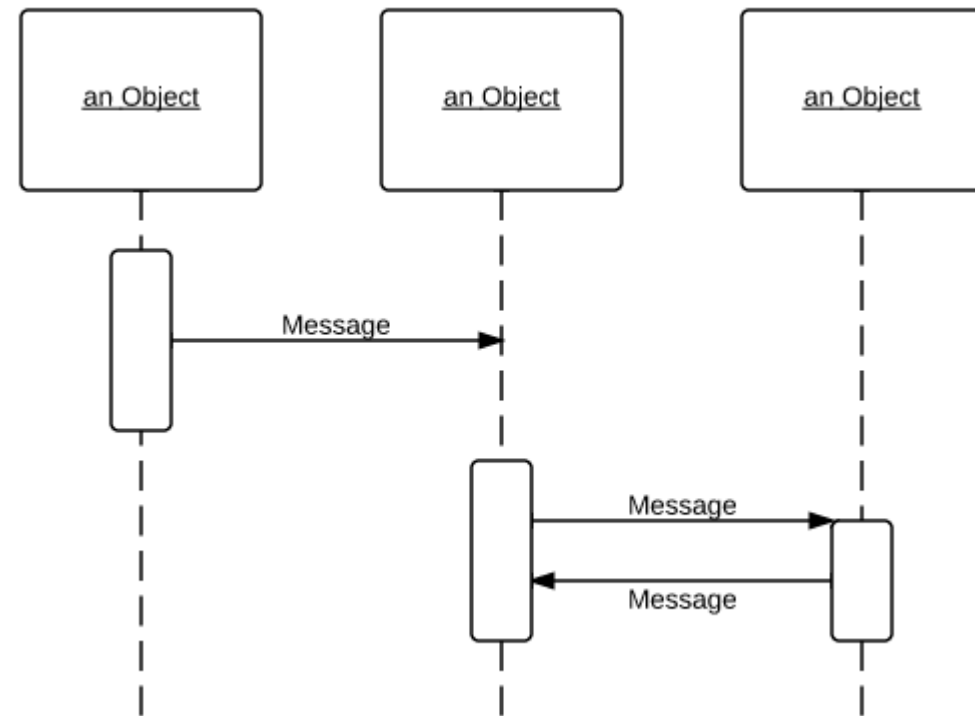**Communication Diagrams**

(emphasize structural ordering)

sequence diagrams are preferred by both developers and readers alike for their simplicity
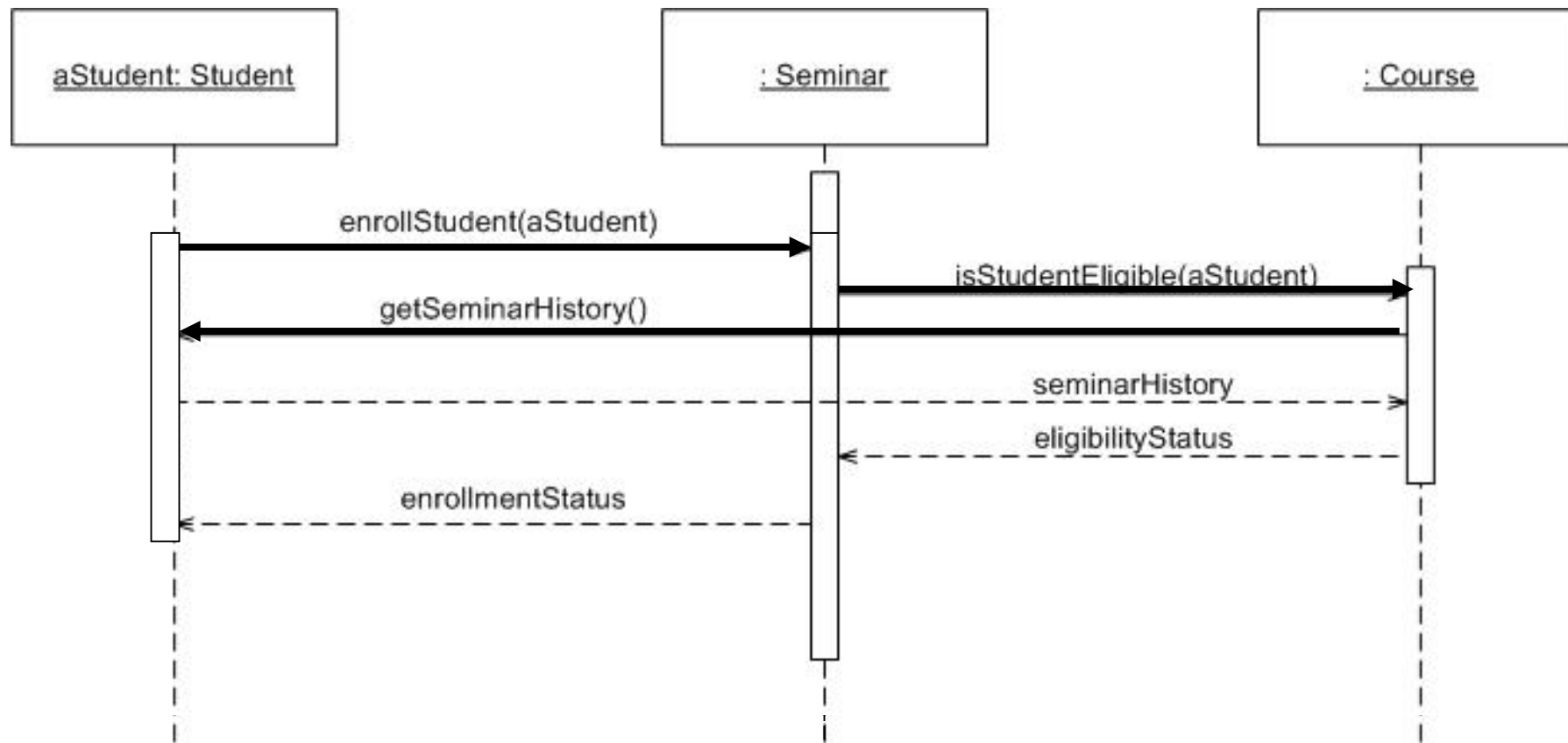
SEQUENCE DIAGRAM

Sequence Diagram

- Describe the flow of messages, events, actions between objects

- Show concurrent processes and activations

- Show time sequences that are not easily depicted in other diagrams

- Typically used during analysis and design to document and understand the logical flow of your system.
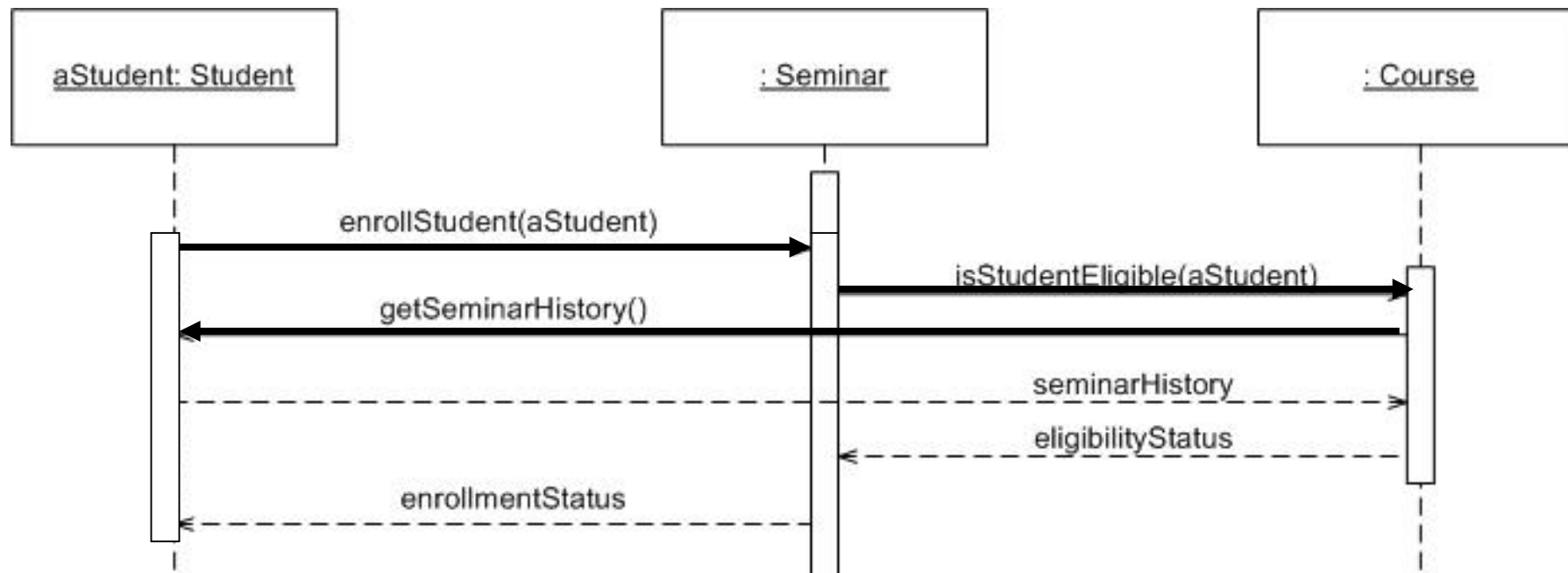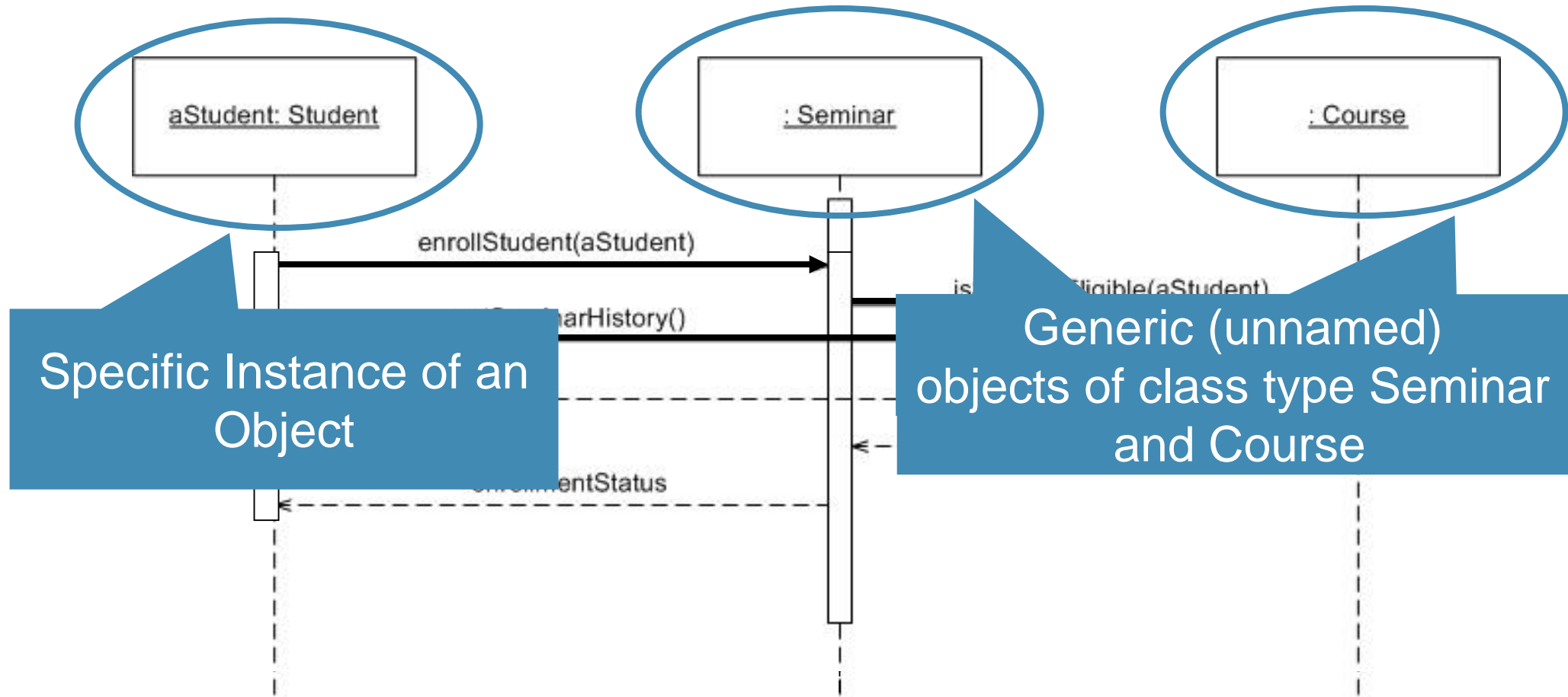
Sequence Diagram Notation

Sequence Diagram Notation

Time Increasing →

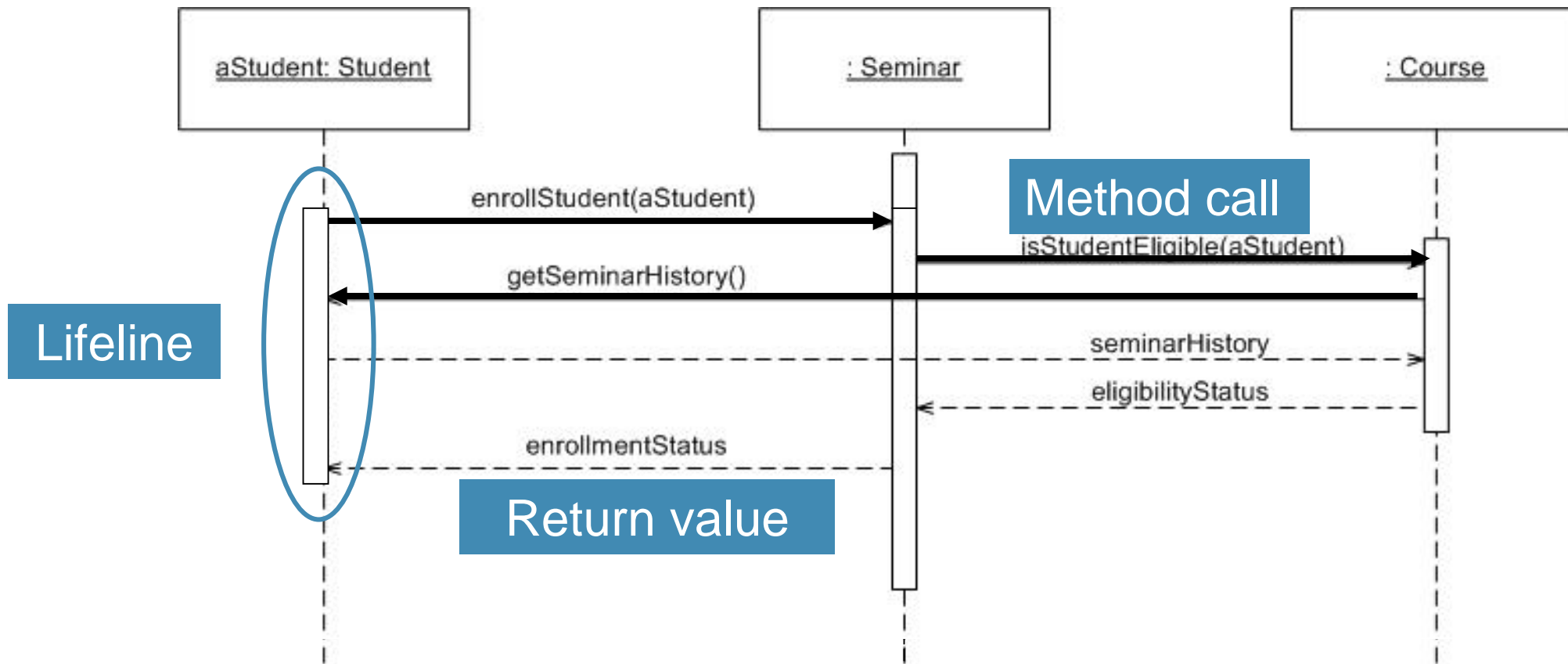All lines should be horizontal to indicate instantaneous actions. Additionally if ActivityA happens before ActivityB, ActivityA must be above activity A

Sequence Diagram Notation

aStudent: Student

: Seminar

: Course

enrollStudent(aStudent)

is...Eligible(aStudent)

...narHistory()

Specific Instance of an Object

Generic (unnamed) objects of class type Seminar and Course
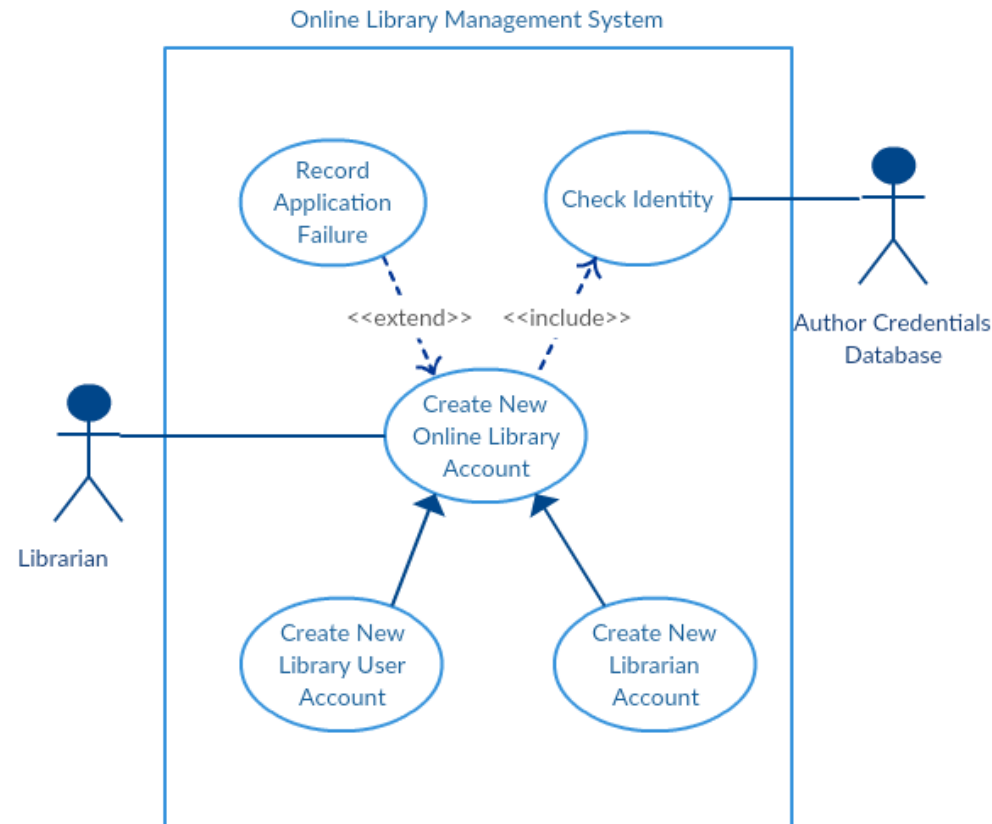
...entStatus

Sequence Diagram Notation

EXAMPLE

Online Library Management System

Sequence Diagram Example

- A sequence diagram represents the scenario or flow of events in one single use case.
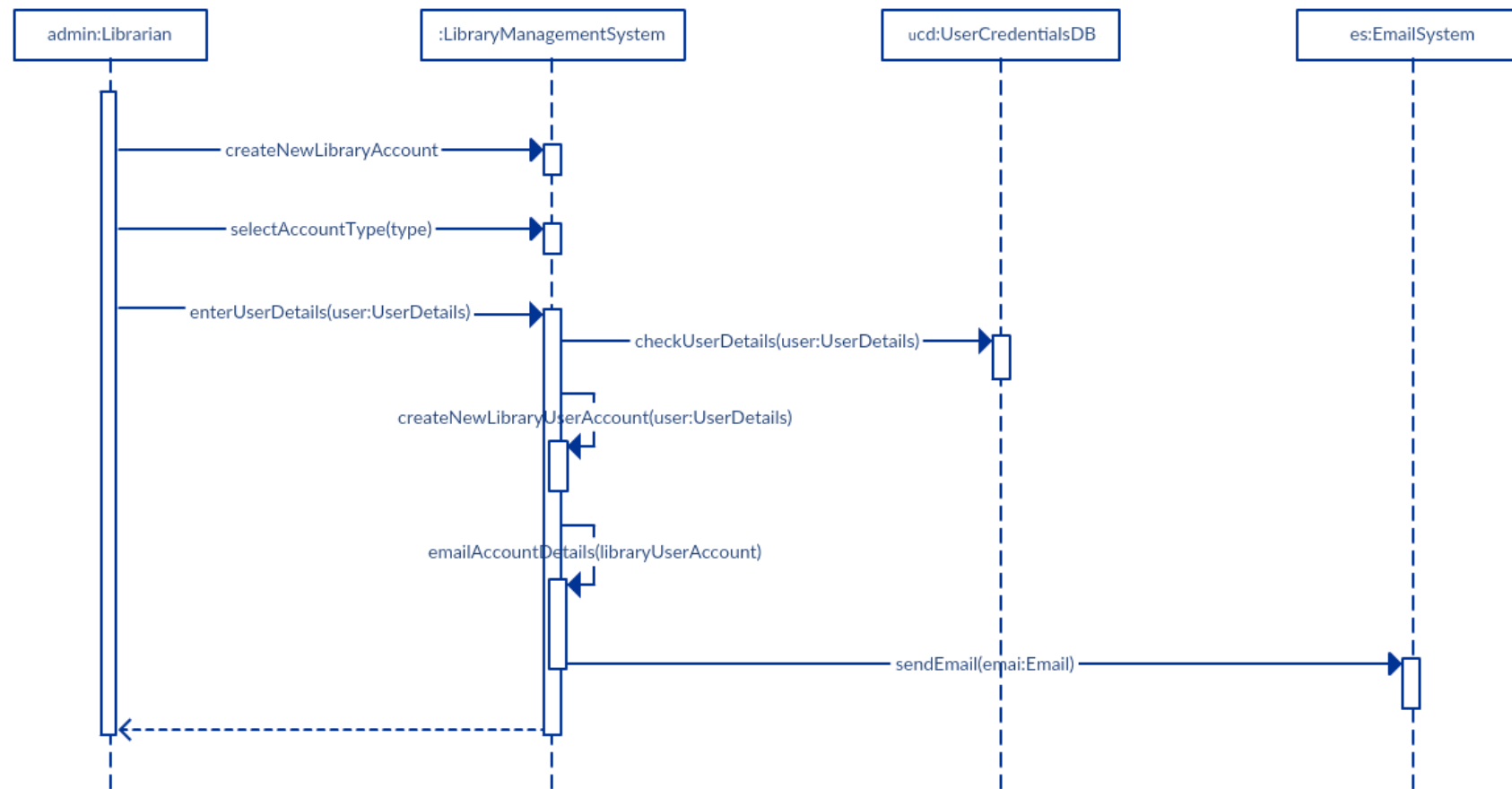
Sequence Diagram Example

- From the above use case diagram example of 'Create New Online Library Account', we will focus on the use case named 'Create New User Account' to draw our sequence diagram example.

- Before drawing the sequence diagram, it's necessary to identify the objects or actors that would be involved in creating a new user account. These would be:
  - Librarian
  - Online Library Management system
  - User credentials database
  - Email system

Sequence Diagram Example

- Here are the steps that occur in the use case named 'Create New Library User Account'.
  - The librarian request the system to create a new online library account
  - The librarian then selects the library user account type
  - The librarian enters the user's details
  - The user's details are checked using the user Credentials Database
  - The new library user account is created
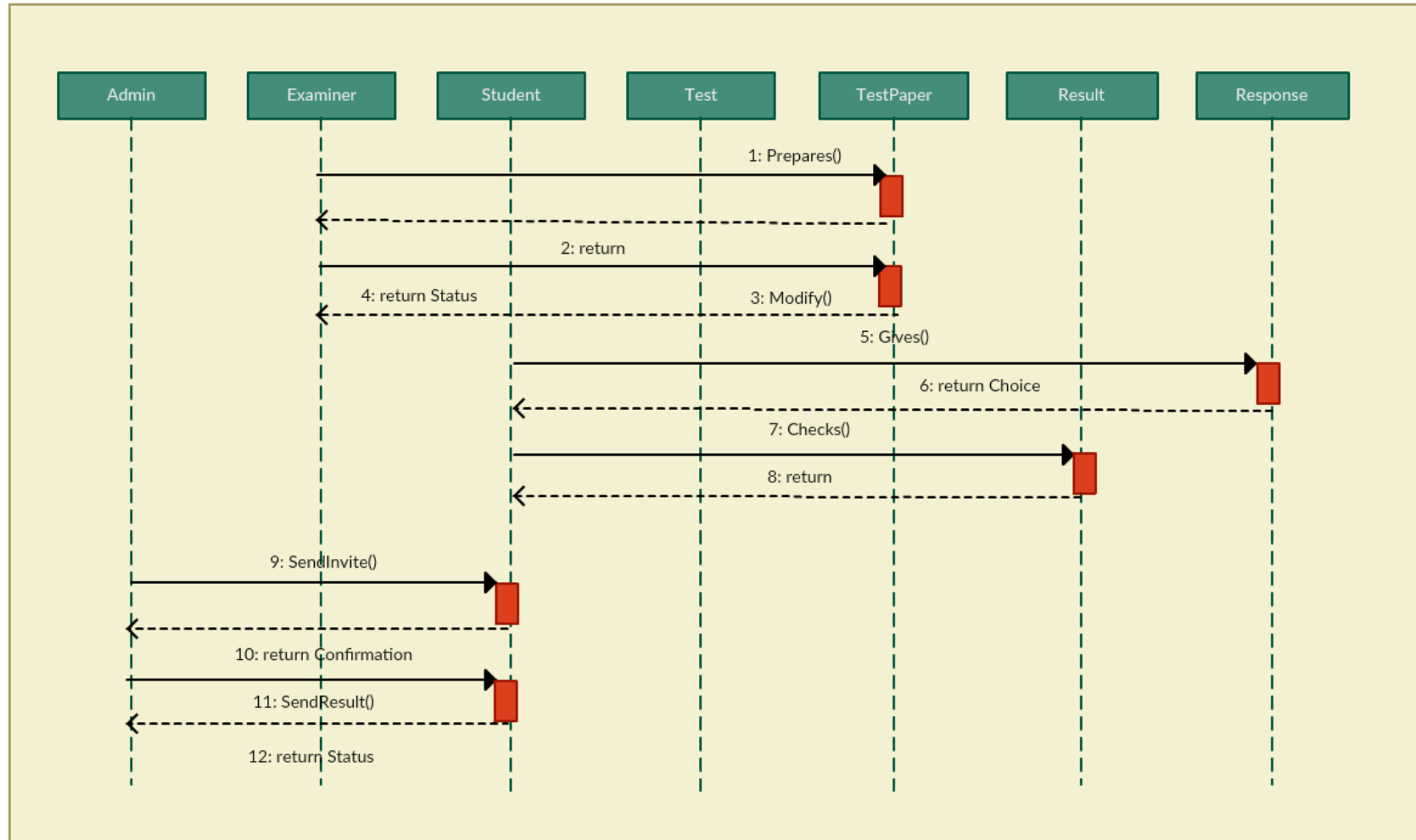 - A summary of the of the new account's details are then emailed to the user

Sequence Diagram Example

MORE EXERCISES

Online Exam System

ATM