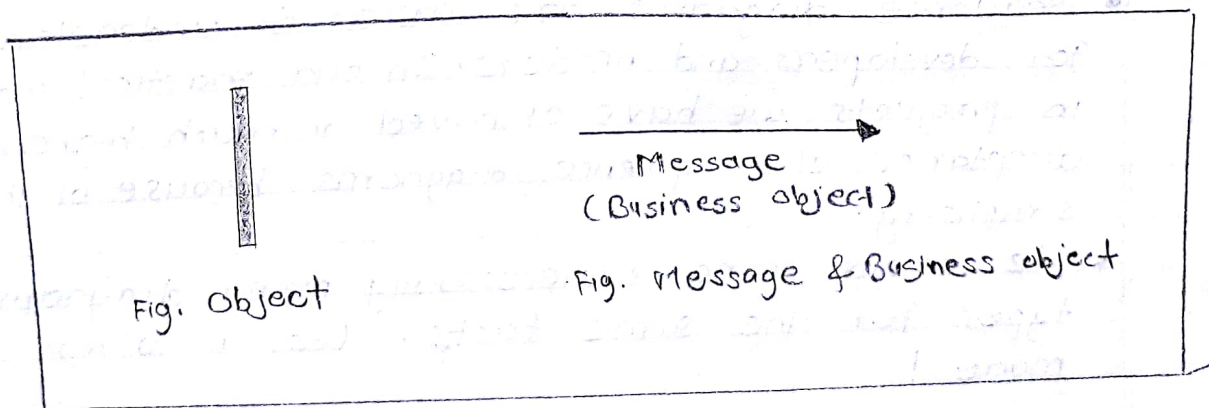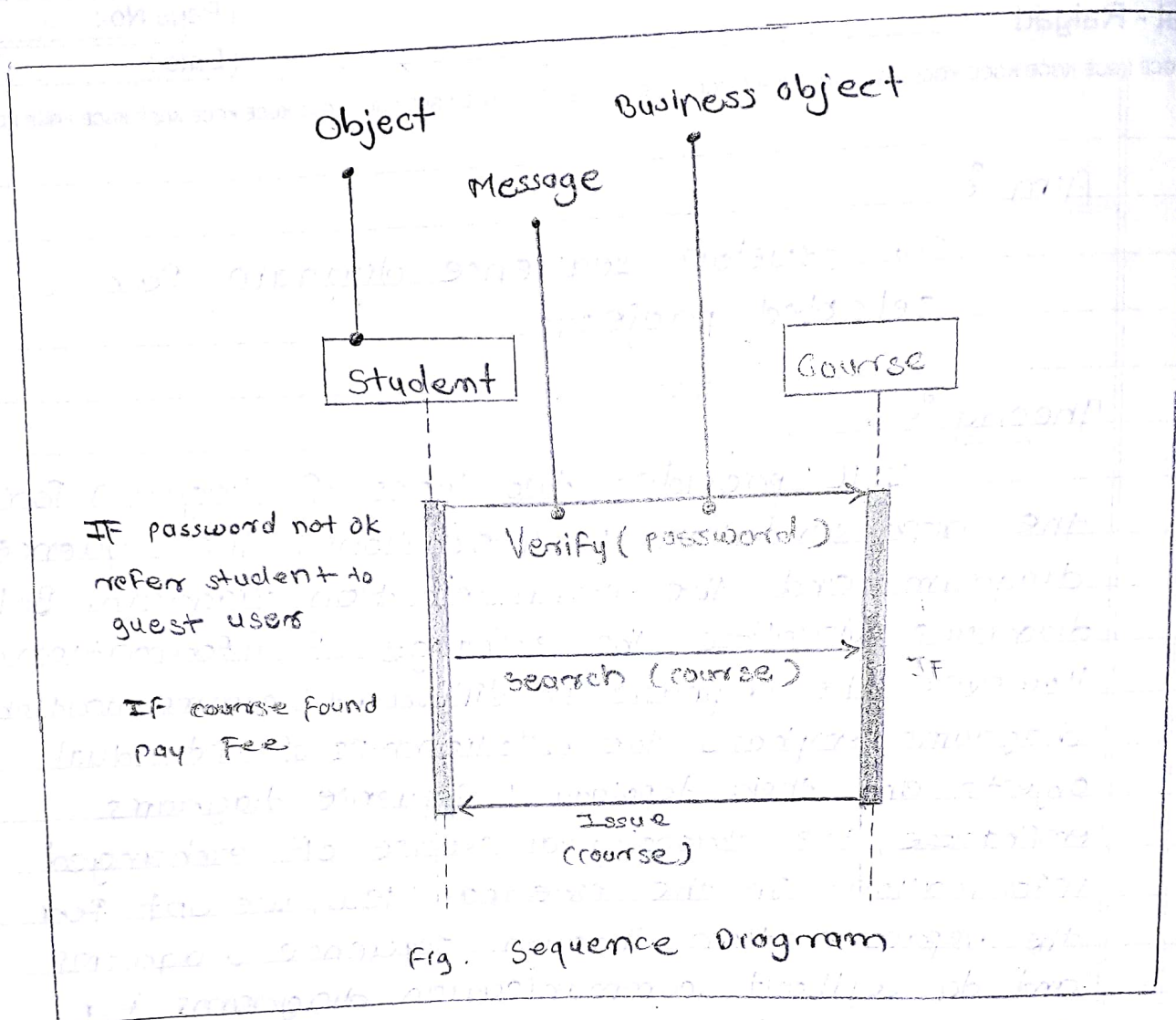## Aim :

To develop sequence diagram for selected project

Theory :

UML provides two types of diagram for the representation of interactions: the sequence diagram and the communication diagram. Both diagrams visualize the exchange of information. However, the emphasis is different: communication diagrams emphasis the relationships of individual objects and their topology, sequence diagrams emphasize the chronological course of exchanged information. In the external view, we opt for the representation through sequence diagrams and do without communication diagrams for two reasons :

- sequence diagrams are easier to understand for developers and readers. In our practical work in projects we have observed a much higher acceptance of sequence diagrams because of their simplicity.

- We avoid using unnecessarily many diagram types for the same facts. Less is often more !

IF a customer or business partner uses an offered service, partners communicate with each other. The process can be described as a series of interactions. These interactions are clearly laid out in the sequence diagram.

Object   Business object

        Message

┌──────────┐   ┌──────────┐
│ Student │   │ Course   │
└──────────┘   └──────────┘

IF password not ok   Verify (password)
refer student to
guest users

IF course found   search (course)   IF
pay Fee
                                Issue
                               (course)

Fig. Sequence Diagram

Message
(Business object)

Fig. Object   Fig. Message & Business object

Like the activity diagrams, sequence diagrams can be modeled spanning several use cases, as well as being used to refine business use cases. A sequence diagram illustrates the various scenarios of a business use case.

In a sequence diagram, we work with the following elements :

<u>comment</u> :

Sequence diagrams can be annotated with comments (UML generally permits comments in all diagrams). For instance, activities of partners or conditions can be specified as comments.

<u>Object</u> :

Objects that are involved in interactions are placed on the x-axis. Objects are senders and receivers of messages in the sequence diagram. In the business system model (external view) these objects represent the actors of the business system and the business system itself.

<u>message and Business Object</u> :

The messages that objects send and receive are shown on the y-axis. Messages are inserted in increasing chronological order from top to bottom. The direction of the arrow indicates the direction in which a message is sent.

The business object is listed in parenthesis. Business objects are conveyed together with messages. Some examples of business objects are tickets, boarding passes, and luggage.

Conclusion :
Thus, we have studied and develop an sequence diagram for the selected project.