Faculty of Computers, Informatics and Microelectronics

Technical University of Moldova

Object-Oriented Modeling and Analysis

Laboratory work #3

Sequence Diagrams. Functional and Non-Functional Require- ments. Conceptual Object Oriented Analysis. Technical Object Oriented Design.

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Chișinau 2018

Laboratory work #3

1 Tasks

– Model your application using 3 Sequence Diagrams;

– Analyze the Functional and Non-Functional Requirements for your project (at least 5 of each).

2 Theory

2.1 Object-Oriented Analysis

a) Elicit requirements: Define what does the software need to do, and what's the problem the software trying to solve.

b) Specify requirements: Describe the requirements, usually, using use cases (and scenarios) or user stories.

c) Conceptual model: Identify the important objects, refine them, and define their relationships and behavior and draw them in a simple diagram.

2.2 Conceptual Model

a) Identifying Objects

b) Refining Objects

c) Drawing Objects

d) Identifying Object Relationships

e) Identifying Object Behaviors

3 Sequence Diagrams

In Figure 3.1 is represented the sequence diagram for the login operation.

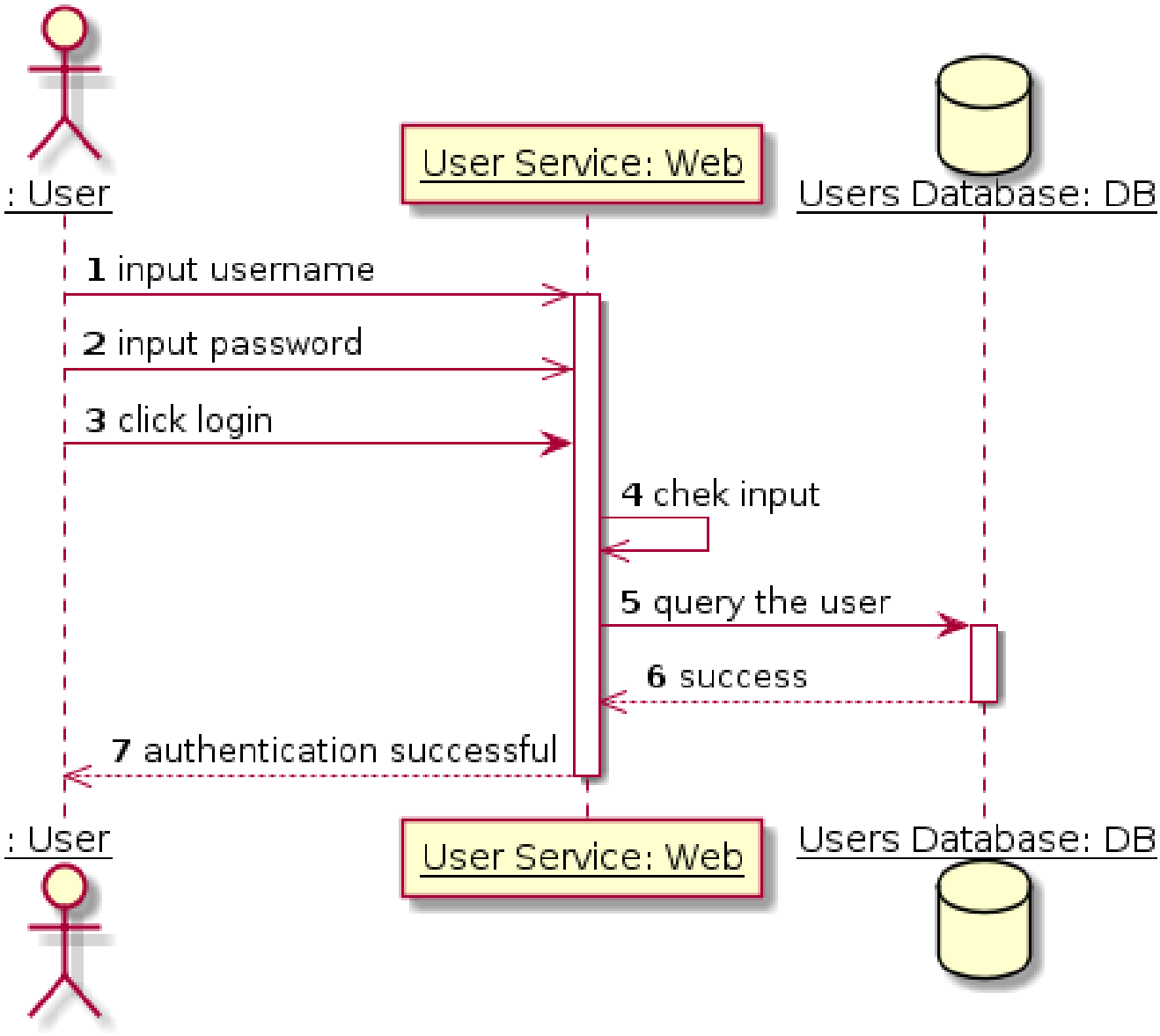

Figure 3.1 – Login sequence diagram

In Figure 3.2 is represented the sequence diagram for creation of a new course.

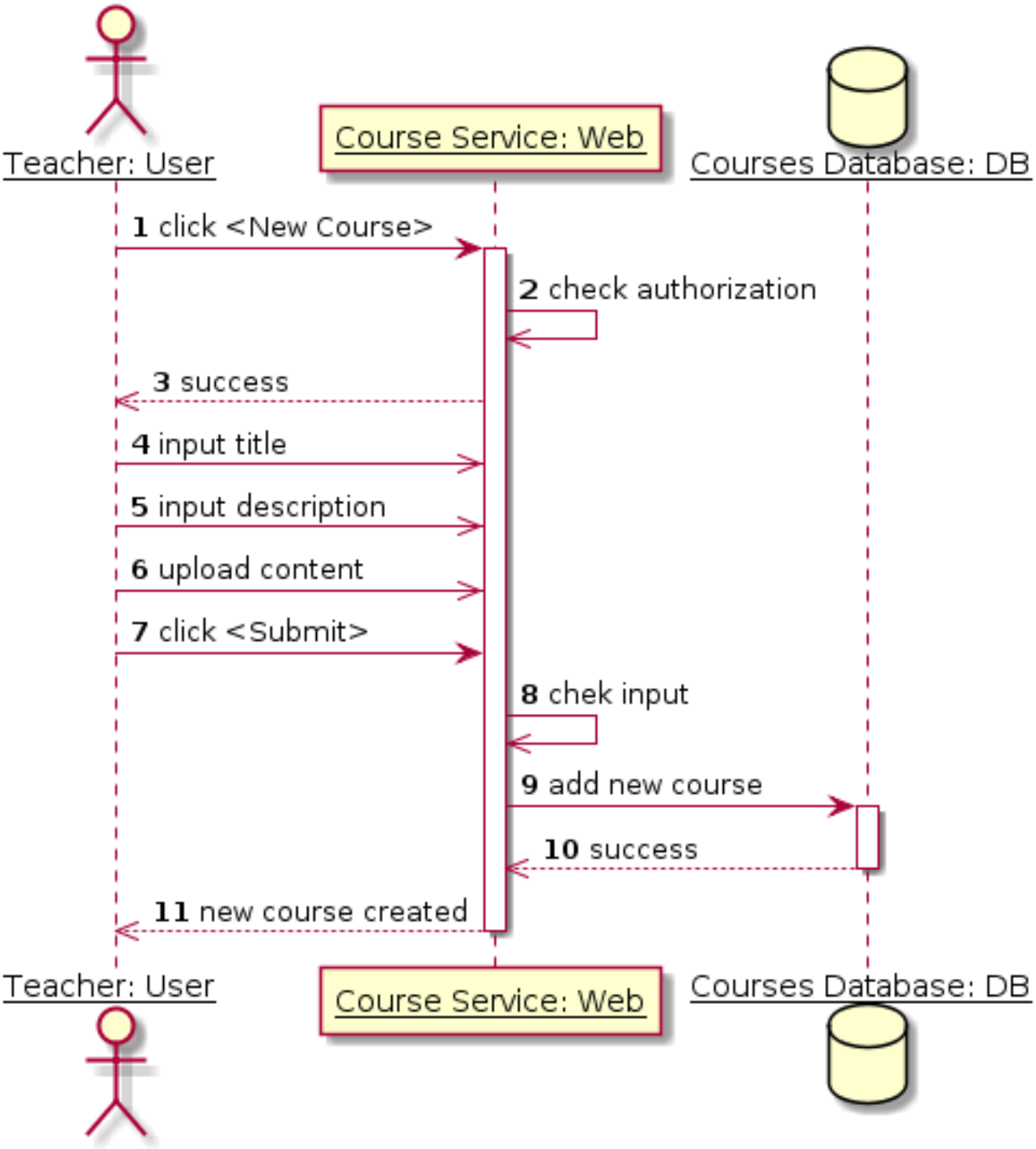

Figure 3.2– New course sequence diagram

In Figure 3.3 is represented the sequence diagram for giving feedback for a course.

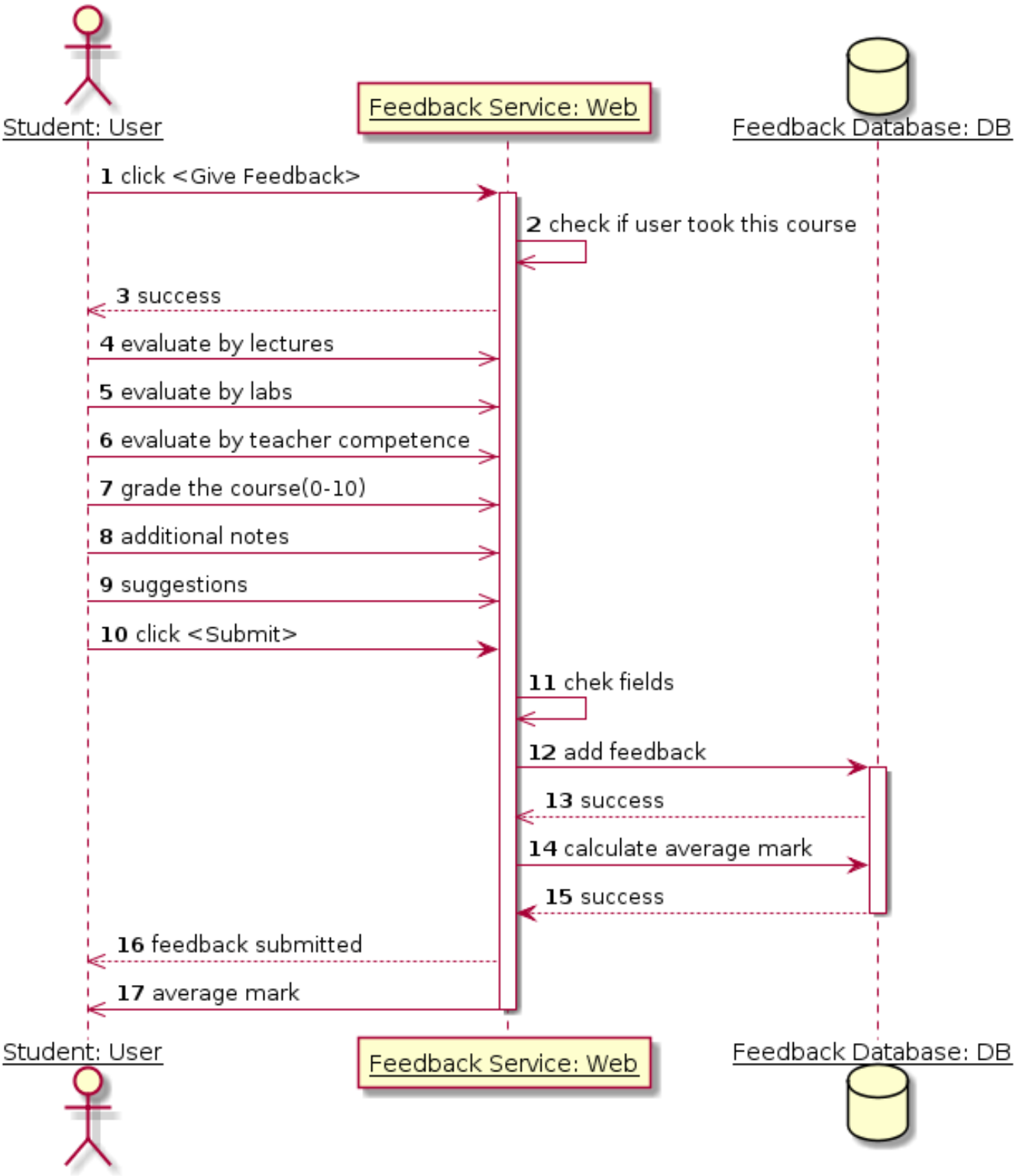

Figure 3.3– Feedback sequence diagram

4 Functional and Non-Functional Requirements

4.1 Functional

– Provide access to courses

– Teachers can create new courses

– Students can take tests

– Students can give feedback

– Teachers can invite and enroll students

4.2 Non-Functional

– The site supports multiple users at the same time

– The information is stored and encripted safely

– The site provides very fast access to data

– The site can provides access in multiple countries.

– The information is processed real-time.