Lab for Software Engineering

Movie Rating Application

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1 Analysis

1.1 A1

1.1.1 Requirements & Domain-Knowledge

Requirements

R1 Persons can perform a **Registration** to become a **User**

R2 A **User** can perform a **Login** to be online.

R3 A **User** can perform a **Logout** to be online.

R4 A **User** can add Movie to his/her **WatchList** and **Rate** them.

R5 A **User** can Create a **Movi**e that is added to the **Moviedatabase**

R6 A **User** can **Star**t a **Movie**-discussion-**group**

R7 A User can **Add** an other **User** to a **Movie-discussion-group**

R8 A **Groupmember** of a **Movie-discussion-group** can **Leave**

R9 Within a **Movie-discussion-group** a **Groupmember** can see the **Watchlist** of all
other **Groupmember**

R10 A **Groupmember** can read and send a **Message** to a **Groupchat.**

R11 A **Groupadministrator** can **ban** other **Groupmember.**

R12 If the **Groupadministrator Leaves** the **Movie-discussion-group**, it will be erased

R13 If a **Movie-discussion-group** consists only of one **Groupmember**, it will be
erased after a certain amount of time.

Facts

F1 A **Login** consists of **Emailadress** and **Username**

F2 If an **Age** younger than eighteen is entered in the **Registration**, it fails.

F3 The **Watchlist** consists of M**ovie**s from the **Moviedatabase**

F4 In a **Groupchat** the **Messages** are sorted by the **Timestamp.**

F5 If a **Movie** has no **Rating** by the User, it's Rating is **0**

F6 To **Create** a **Movie** the **User** inputs **Title**, **Director**, at least one **Actor**, and a **original publishing date .**

F7 A **User** can only give one **Rating** per **Movie**.

F8 If for the **Rating** a number di ering from one to ten is entered, the **Rating** fails.

F9 If a **Username** that already exists is entered in the **Registration**, it fails.

F10 A **Registration** consists of **Username, Emailadress** and **Age**

F11 A successful **Registration** creates a **User** with the same data.

F12 Every **User** has a unique **Username.**

F13 Every **User** consists of **Username**, **Emailadress** and **Age.**

F14 Every **User** has a **Watchlist.**

F15 The **Watchlist** consists of **Title**,**Rating** and **Comment** on a **Movie**.

F16 A **Rating** is a number from 0 to 10

F17 A **Movie** has a **Title**, **Director**, **Main-Actor-List**, and a **original publishing date**

F18 Every **Main-Actor-List** consist of one or several **Actors**

F19 The **Movielist** consists of all **Titles** from the **Moviedatabase**, their average **Rating** and the **Comments**

F20 Every **Movie** is only once in the **Moviedatabase**.

F22 A **Comment** can consist of text or be empty.

F23 The **User** that **Starts** a **Movie-discussion-group** is its **Groupadministrator**

F24 Every **Movie-discussion-group** has a unique **Groupname** and a **Memberlist**

F25 A **User** is a **Groupmember** if he is on the **Memberlist**

F26 A **User** that is **Added** to a **Movie-discussion-group** is added to the **Memberlist**

F27 A **User** that **Leaves** a **Movie-discussion-group** is deleted from the **Memberlist**

F28 Every **Movie-discussion-group** has a **Groupchat**

F29 A **Groupchat** consists of **Messages.**

F30 A **Message** contains of the **Username** of it's creator, a **Timestamp** and the **Content**

Assumptions

A1 The application can be used on di erent platforms including mobile devices

A2 A **User** performs a Logout if he wants to end the session.

A3 The data that the **User** enters to **Create** a new **Movie** is valid

A4 A **User** is only **Rating a Movie** he has really watched and the **Rating** is based on his own opinion.

A5 A **Groupadministrator ban** a **Groupmember** from a **Movie-discussion-group** if he thinks he is misbehaving.

A6 The **Groupadministrators** decisions are always fair

A7 In a **Movie-discussion-group** the **Groupmember** only discuss movie related topic

2 Contextdiagram

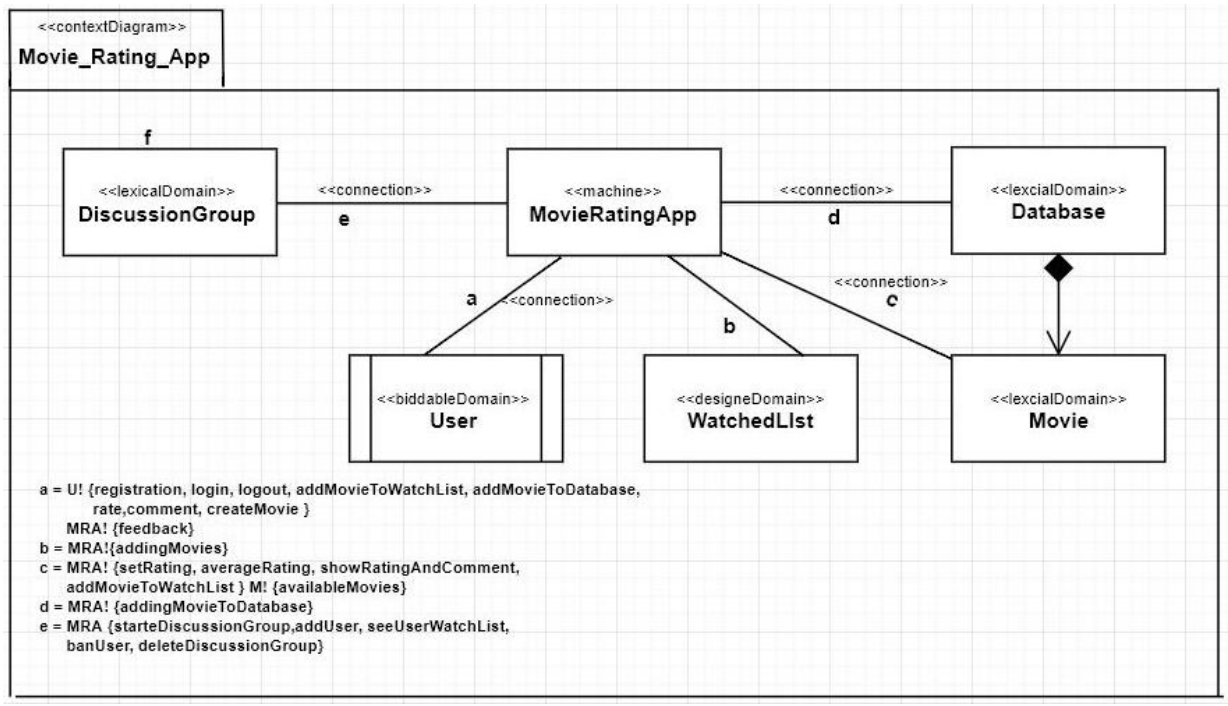

Figure 2.1 Contextdiagram

2.1.1 Validation

1) A context diagram has at least one machine domain.
   MovieRatingApp is one machine domain.

Domain	Domain Type(s)	Connection Domain(s)	Connection Domain(s) Type(s)
MovieRatingApp	Machine domain	Database	Lexical domain
		Movie	Lexical domain
		WachedList	Design domain
		User	Biddable domain
		DiscussionGroup	Lexical domain
Database	Lexical domain	MovieRatingApp	Macchine domain
		Movie	Lexical domain
Movie	Lexical domain	MovieAppRating	Machine domain
WtchedList	Design domain	MovieAppRating	Machine domain
User	Biddable domain	MovieAppRating	Machine domain
DiscussionGroup	Lexical domain	MovieAppRating	Machine domain
		Chat	Lexical domain

2) Biddable domain cannot be directly connected to lexical domains.

   No Lexical domain is connected to the Biddable domain

Domain	Domain Type(s)	Connection Domain(s)	Connection Domain(s) Type(s)
MovieRatingApp	Machine domain	Database	Lexical domain
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		DiscussionGroup	Lexical domain
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		Movie	Lexical domain
Movie	Lexical domain	MovieAppRating	Machine domain
WtchedList	Design domain	MovieAppRating	Machine domain
User	Biddable domain	MovieAppRating	Machine domain
DiscussionGroup	Lexical domain	MovieAppRating	Machine domain
		Chat	Lexical domain

3) Causal, design, lexical, display, machine domain types are not allowed together with biddable domainUser is the only biddable domain which is connected only to a machine domain.

Domain	Domain Type(s)	Connection Domain(s)	Connection Domain(s) Type(s)
MovieRatingApp	Machine domain	Database	Lexical domain
		Movie	Lexical domain
		WachedList	Design domain
		User	Biddable domain
		DiscussionGroup	Lexical domain
Database	Lexical domain	MovieRatingApp	Macchine domain
		Movie	Lexical domain
Movie	Lexical domain	MovieAppRating	Machine domain
WtchedList	Design domain	MovieAppRating	Machine domain
User	Biddable domain	MovieAppRating	Machine domain
DiscussionGroup	Lexical domain	MovieAppRating	Machine domain
		Chat	Lexical domain

2.1.2 Glossary

• The glossary contains the notions used in R and D.
The notions mentioned in R and D are contained in the glossary.

• The domains and phenomena of the context diagram must be consistent with R and D.

Name	Type	Description	Source
A			
Actor	lexical domanin	Attribute of Main-Actor-List	Requirements and Domain-Kn
Add	causal domain	Operation to add users to a Movie-discussion-group	Requirements and Domain-Kn
Age	lexical domanin	Attribute of User	Requirements and Domain-Kn
B			
C			
Comment	lexical domanin	Attribute of Watchlist	Requirements and Domain-Kn
Create	causal domain	Creates a new Movie	Requirements and Domain-Kn
D			
Director	lexical domanin	Attribute of Movie	Requirements and Domain-Kn
E			
Emailadress	lexical domanin	Attribute of User	Requirements and Domain-Kn
F			
G			
Groupadministrator	lexical domanin	Keymember of a Movie-discussion-group with additional privileges	Requirements and Domain-Kn
Groupchat	lexical domanin	All Messages of a Movie-discussion-group	Requirements and Domain-Kn
Groupmember	lexical domanin	Member of a Movie-discussion-group	Requirements and Domain-Kn
H			
I			
J			
K			
L			
Leave	causal domain	Operation that deletes a User from a Movie-discussion-group	Requirements and Domain-Kn
Login	causal domain	Login to the Application	Requirements and Domain-Kn
M			
Main-Actor-List	lexical domanin	Attribute of Movie relationg to a Table of Actors	Requirements and Domain-Kn
Message	lexical domanin	Text send by a Groupmember to the Groupchat	Requirements and Domain-Kn
Movie	lexical domanin	Dataset related to a Movie	Requirements and Domain-Kn
Movie-discussion-group	lexical domanin	Group of Users Discussing a spe-ci c Movie	Requirements and Domain-Kn

Table 2.1: Glossary

Name	Type	Description	Source
Moviedatabase	lexical domanin	Database Containing the Moviedata	Requirements and Domain-Kn
Movielist	display domanin	List of all Movies in the Moviedatabase	Requirements and Domain-Kn
N			
O			
online	causal domain	Attribute that allows users to In-teract with the application	Requirements and Domain-Kn
P			
Q			
R			
Registration	causal domain	Operation that Creates Users	Requirements and Domain-Kn
Rating	lexical domanin	Attribute of Movie	Requirements and Domain-Kn
S			
Start	causal domain	Operation that Creates Movie-discussion-groups	Requirements and Domain-Kn
T			
Title	lexical domanin	Attribute of Movie	Requirements and Domain-Kn
U			
User	biddable Domain	User of the system	Requirements and Domain-Kn
Username	lexical domanin	Attribute of User	Requirements and Domain-Kn
V			
W			
Watchlist	display domain	Userspeci c list of Movies	Requirements and Domain-Kn
X			
Y			
Z			

Table 2.1: Glossary

2.2 A2
We can drive the following problem diagrams:

2.2.1 R01
Figure 2.2 shows the diagram for problem registration.

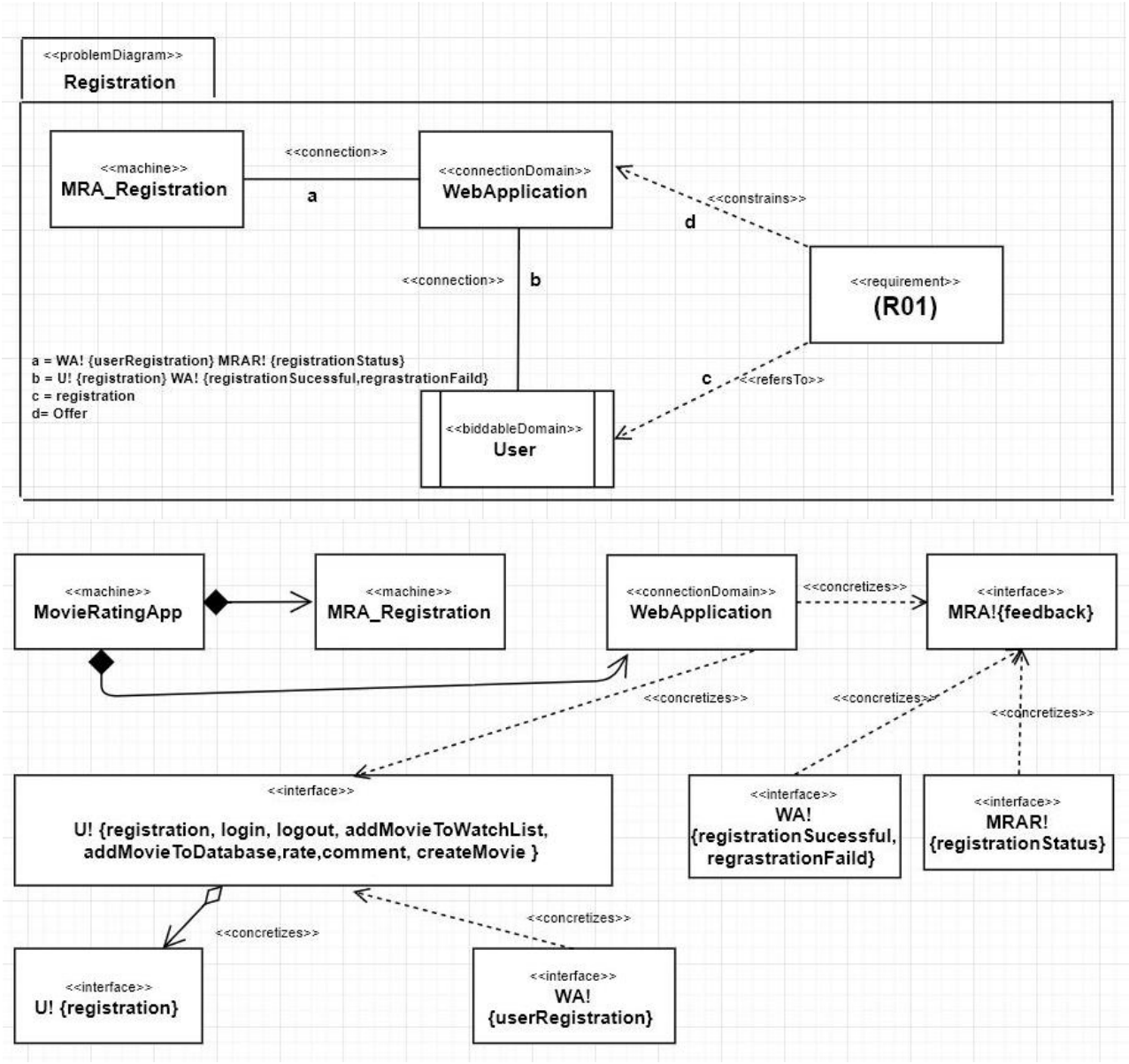

Figure 2.2: Problem diagram for R01 with mapping

2.2.2 R02

Figure 2.3 shows the diagram for problem login.

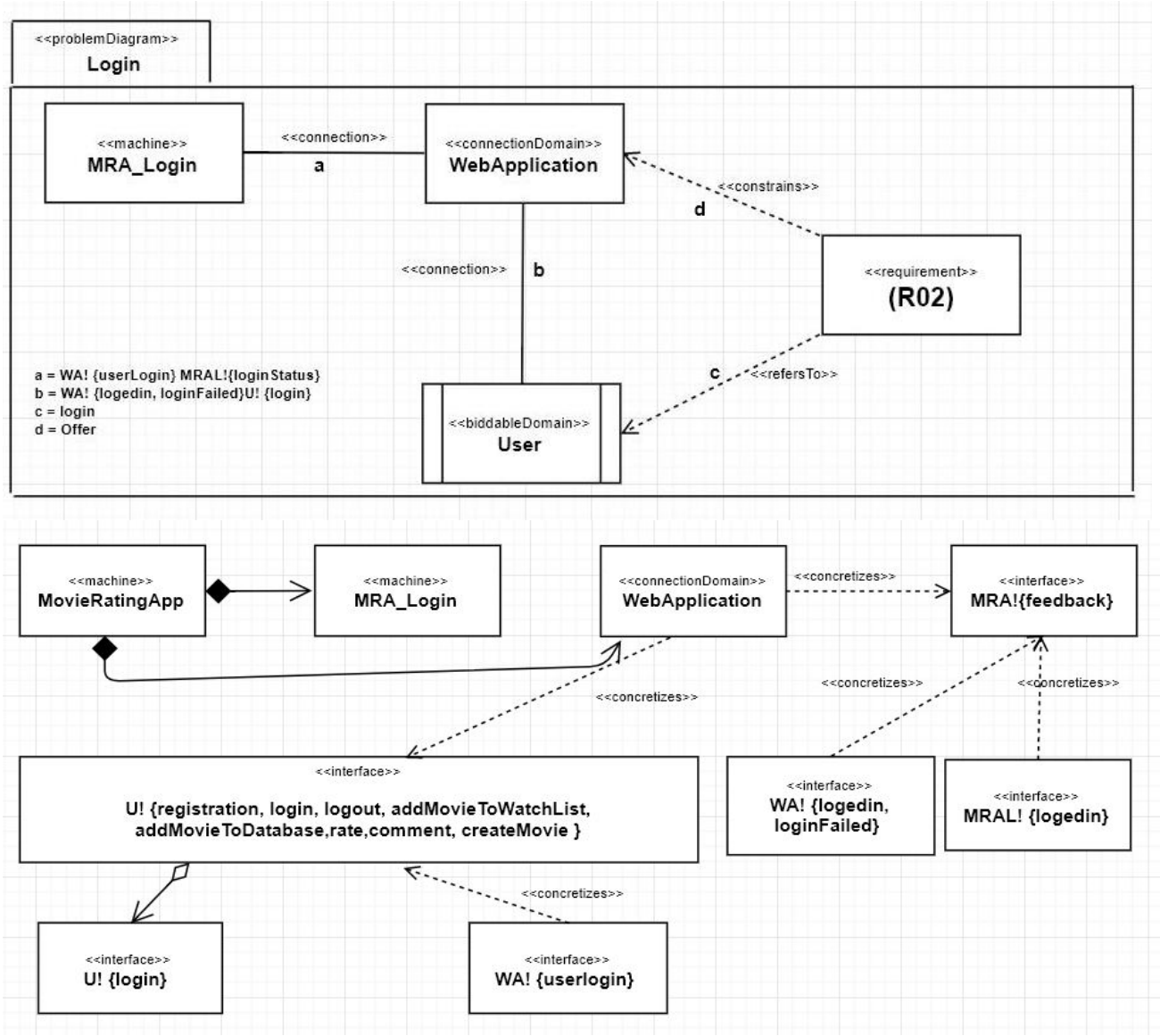

Figure 2.3: Problem diagram for R02 with mapping

2.2.3 R03

Figure 2.4 shows the diagram for problem logout.

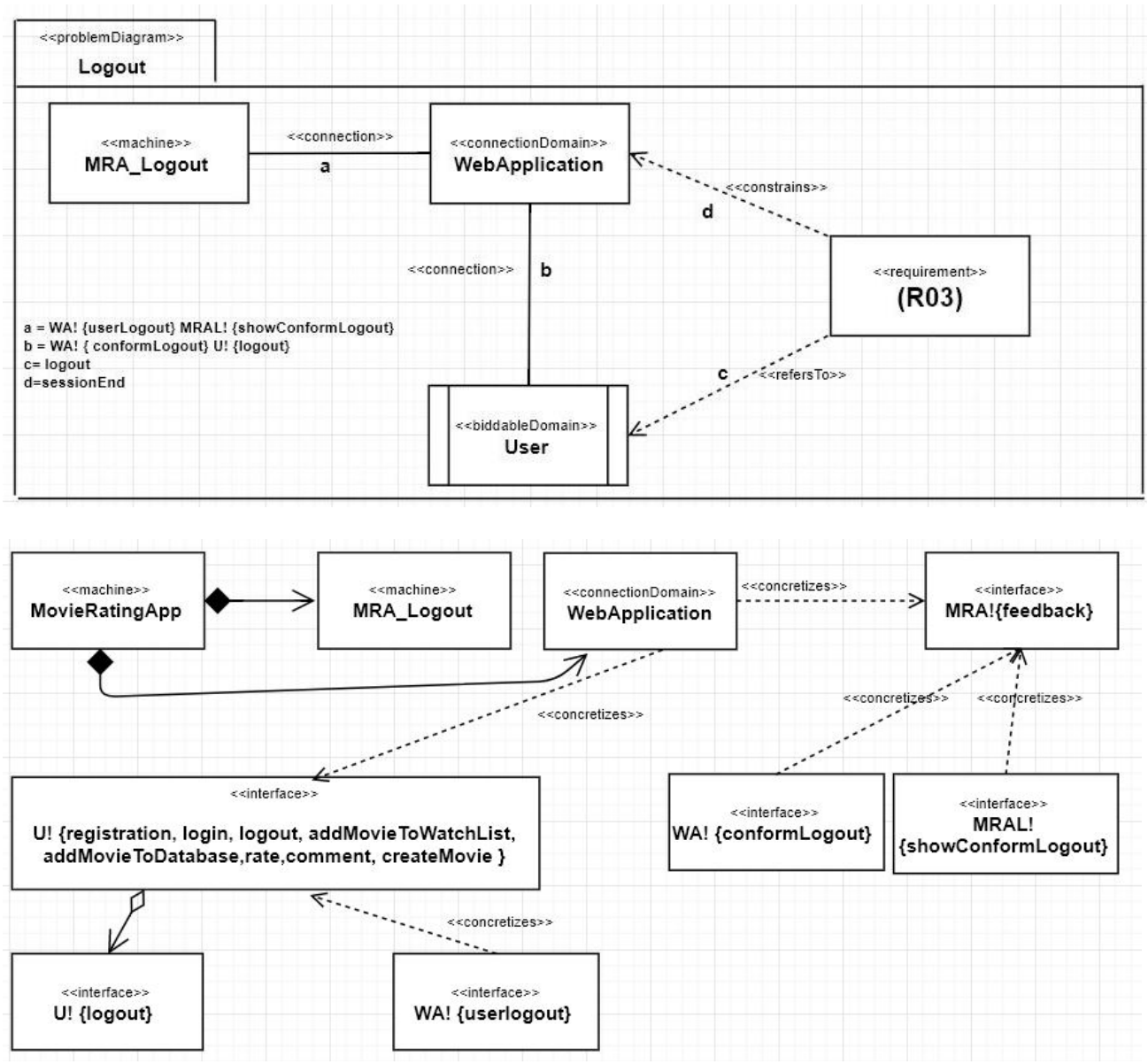

Figure 2.4: Problem diagram for R03 with mapping

2.2.4 R04

Figure 2.5 shows the diagram for problem to add in the watched list.

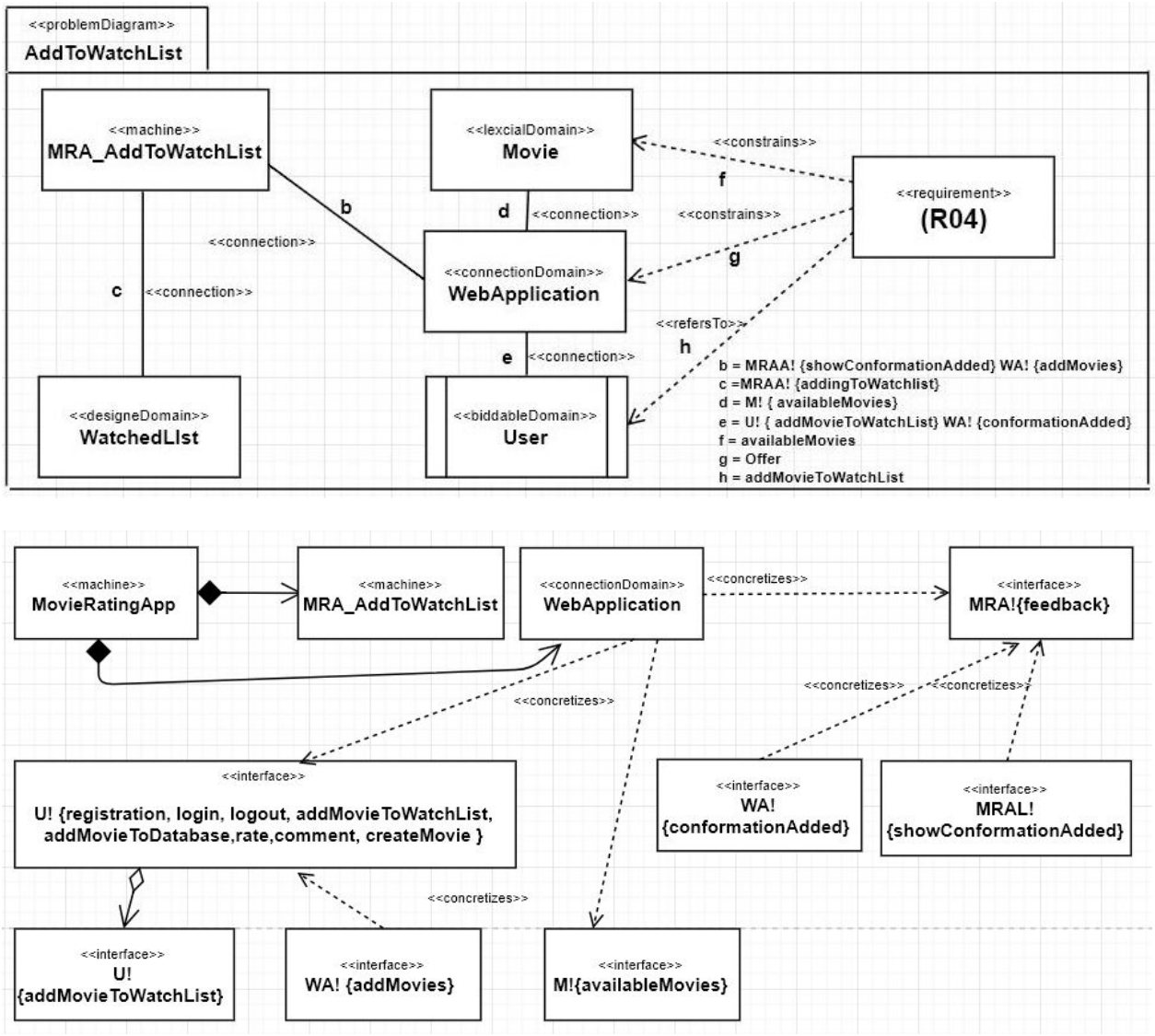

Figure 2.5: Problem diagram for R04 with mapping

2.2.5 R05

Figure 2.6 shows the diagram for problem for creating movie and to add to database.

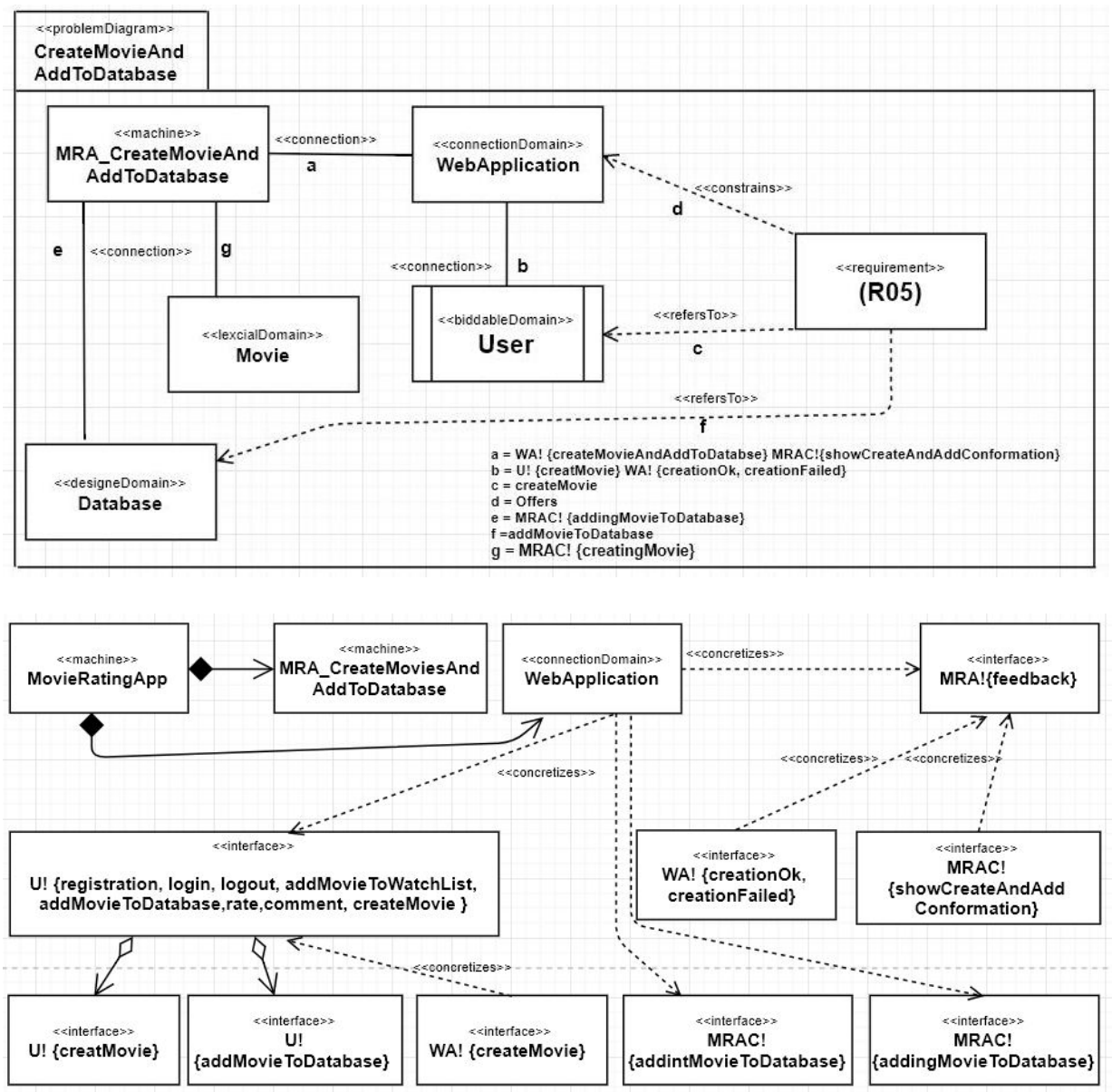

Figure 2.6: Problem diagram for R05 with mapping

2.2.6 R06

Figure 2.7 shows the diagram for problem for creating movie and to add to database.

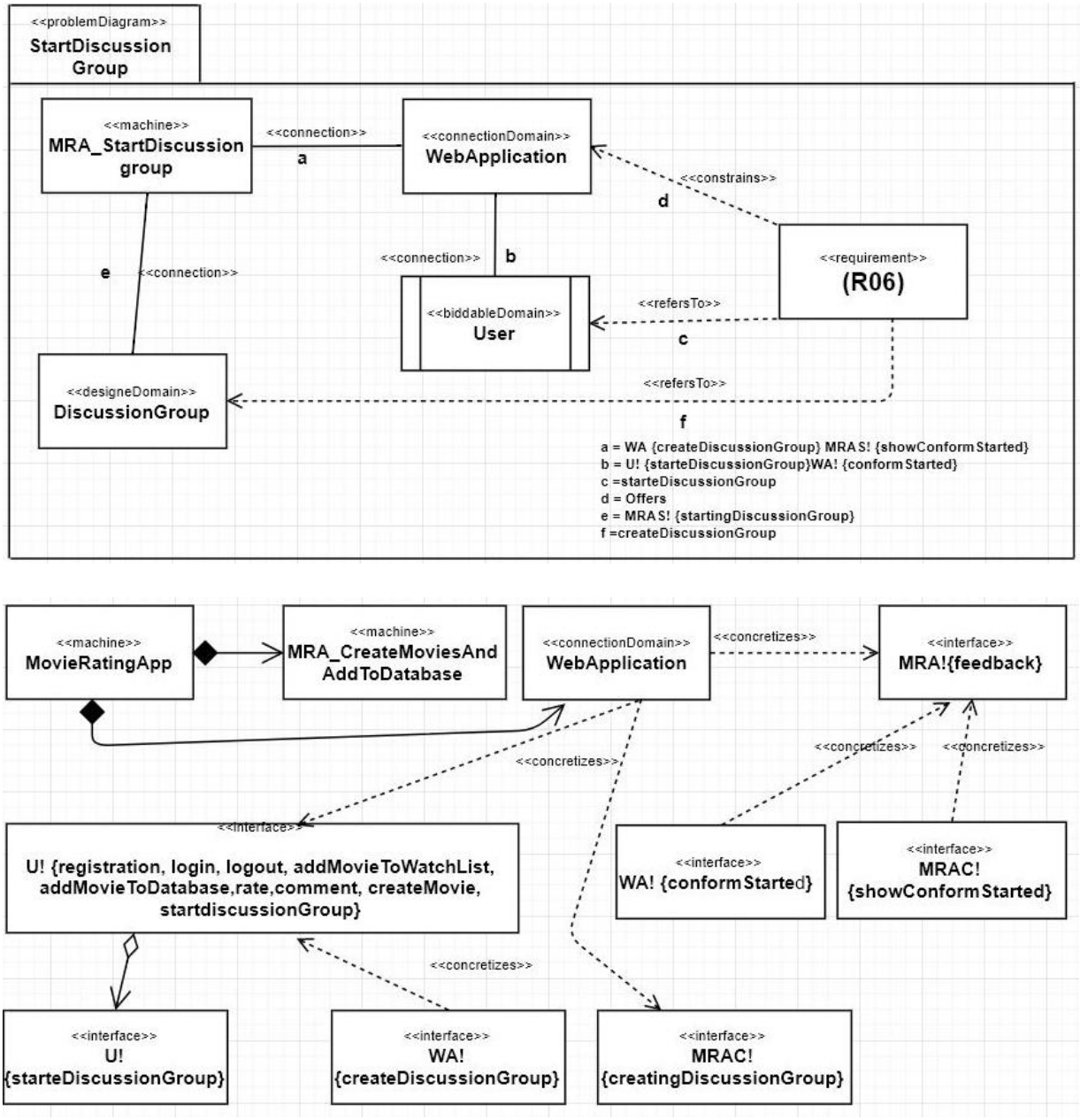

Figure 2.7: Problem diagram for R06 with mapping