Database System
Logical and Physical Design

for

Library DB application

Version 1.0 approved

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"Mysterious Library"

12.04.2018

Table of Contents

Revision History

Name	Date	Reason For Changes	Version
Maftuna Sharabbaeva	12.04.2018	To make more complex database	1.0
Kamola Samigova	12.04.2018	To maintain security	1.0
Anvar Muminov	12.04.2018	To make interface be simple	1.0

1   Introduction

< Here briefly summarize the project, give a context, so that what follows in the next sections has a proper – although brief - introduction.>

2   Logical Database Design

< Here make the necessary premises on notation and terminology that you are going to use successively in your logical design.>

2.1 Summary of Conceptual Design – ER/EER-Diagram(s)

*< Here insert **exactly the same conceptual ER/EER-diagram** you produced **in Homework 2**. The diagram is also required to be printed in format A4 (orientation Landscape for better view, if your diagram has a horizontal development) and attached to this document.>*
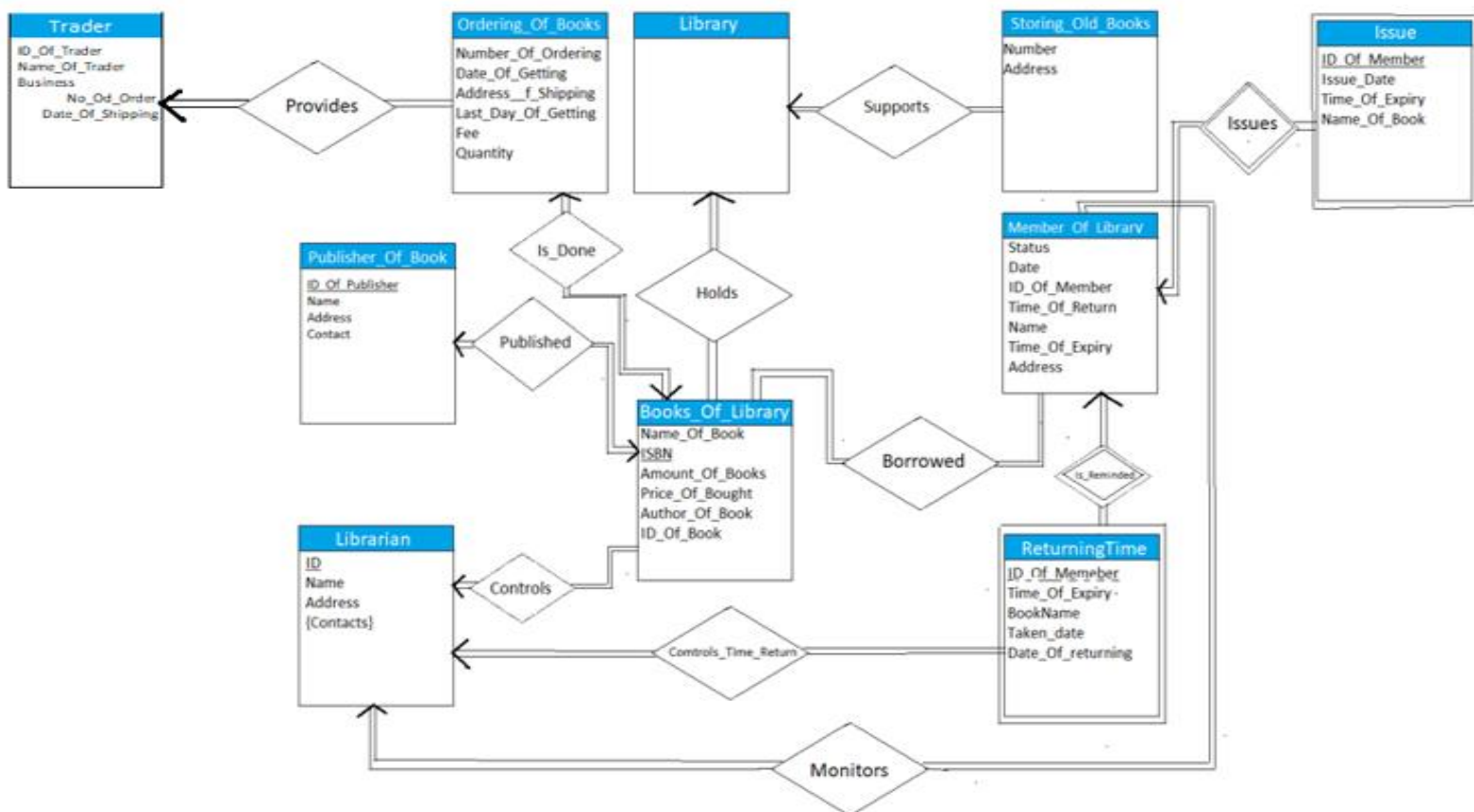
< 2.2 Logical Schemas in *ER-Win*: Logical Diagram

< Here insert the ER-Win Logical Diagram of the conceptual diagram in the previous subsection.
Important*: If there are some differences in the two diagrams due to specific limitations and/or features of ER-Win, explain the differences and why they are necessary in order to make the two diagrams equivalent, or almost equivalent, in case you think the two diagrams are not equivalent. <u>The diagram is also required to be printed in format A4 (orientation Landscape for better view, if your diagram has a horizontal development) and attached to this document</u>.>*
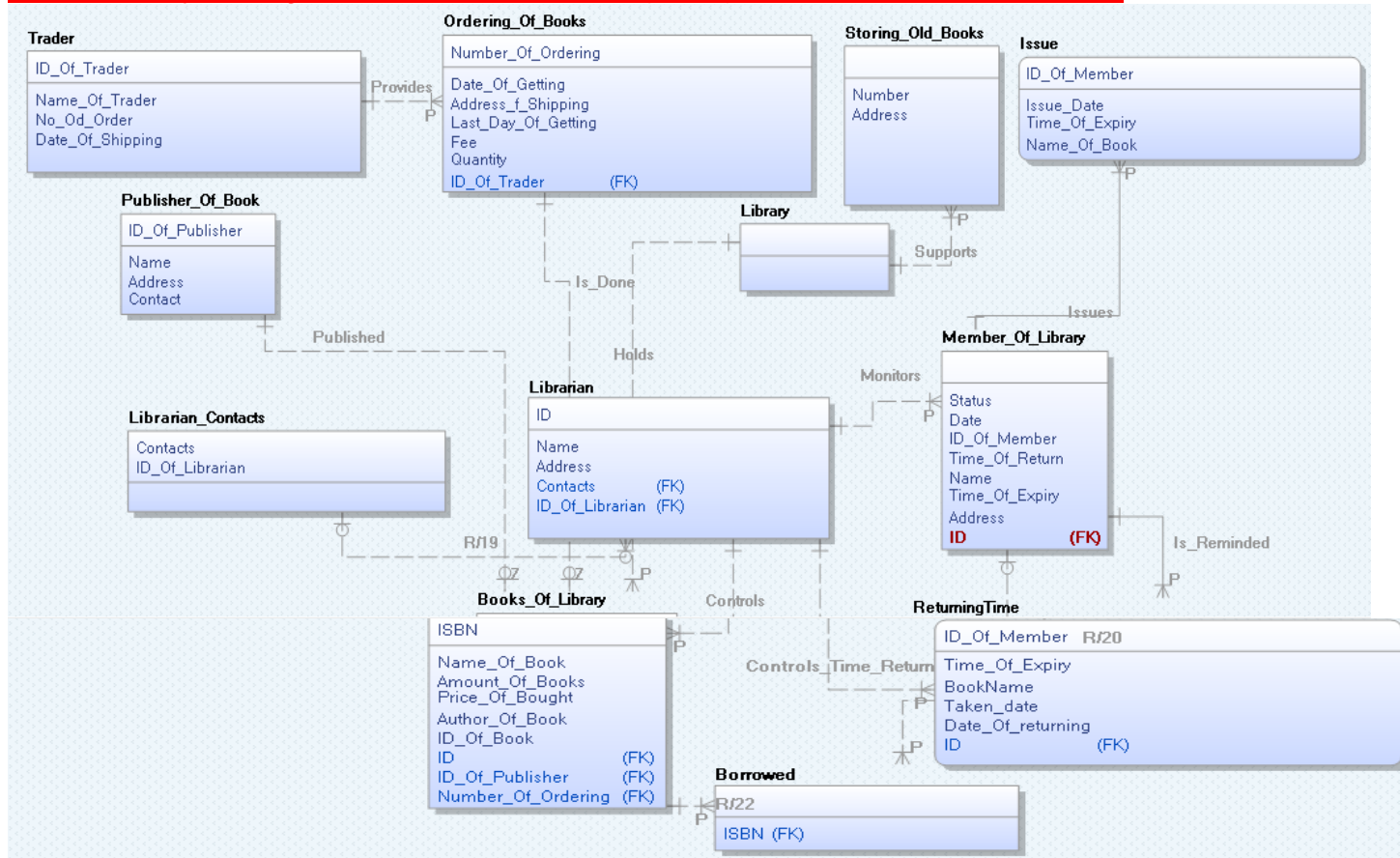
3   Physical Database Design

< Here make the necessary premises on notation and terminology that you are going to use successively in your physical design by ER-Win.>

3.1 Physical Schemas ("tables") in *ER-Win*: Physical Diagram

Trader

ID_Of_Trader	integer	Number NOT N
Name_Of_Trader	varchar(20) String	NULL
No_Od_Order	integer	Number NULL
Date_Of_Shipping	varchar(20) String	NULL

Provides
P

Publisher_Of_Book

ID_Of_Publisher	char(18)	_default_ NOT NULL
Name	varchar(20) String	NULL
Address	varchar(20) String	NULL
Contact	integer	Number NULL

Librarian_Contacts

Contacts	integer Number NOT NUL
ID_Of_Librarian	integer Number NOT NUL

Librarian

ID	integer	Number NO⁻
Name	varchar(20) String	NUI
Address	varchar(20) String	NUI
Contacts	integer	Number NUI
ID_Of_Librarian	integer	Number NUI

Published

R_19

Controls
P

B

Ordering_Of_Books

Number_Of_Ordering	integer	Number	NOT N
Date_Of_Getting	datetime	Datetime	NULL
Address_f_Shipping	varchar(20)	String	NULL
Last_Day_Of_Getting	datetime	Datetime	NULL
Fee	integer	Number	NULL
Quantity	integer	Number	NULL
ID_Of_Trader	integer	Number	NOT N

Storing_Old_Books

Number integer
Address varchar(20)

Issue

ID_Of_Member	char(18)	_default_	NOT NU
Issue_Date	varchar(20)	String	NULL
Time_Of_Expiry	datetime	Datetime	NULL
Name_Of_Book	varchar(20)	String	NULL

Issues

Library

Is_Done

Supports

Member_Of_Library

Date	datetime	Datetime	NULL
Status	varchar(20)	String	NULL
ID_Of_Member	integer	Number	NULL
Time_Of_Return	datetime	Datetime	NULL
Name	varchar(20)	String	NULL
Time_Of_Expiry	datetime	Datetime	NULL
Address	varchar(20)	String	NULL
ID	integer	Number	NOT NULL (FK)

Holds Monitors

P

R_20

Is_Reminded

Books_Of_Library

ISBN	char(18)	_default_	NOT NULL
Name_Of_Book	varchar(20)	String	NULL
Amount_Of_Books	integer	Number	NULL
Price_Of_Bought	integer	Number	NULL
Author_Of_Book	varchar(20)	String	NULL
ID_Of_Book	integer	Number	NULL
ID	integer	Number	NOT NULL (FK)
ID_Of_Publisher	integer	Number	NOT NULL (FK)
Number_Of_Ordering	integer	Number	NOT NULL (FK)

R_22

ReturningTime

ID_Of_Member	integer	Number	NOT NULL
Time_Of_Expiry	datetime	Datetime	NULL
BookName	varchar(20)	String	NULL
Taken_date	datetime	Datetime	NULL
Date_Of_returning	datetime	Datetime	NULL
ID	integer	Number	NOT NULL (FK

Borrowed

ISBN char(18) _default_ NULL (FK)