Deliverable 5: Object Relational Mapping

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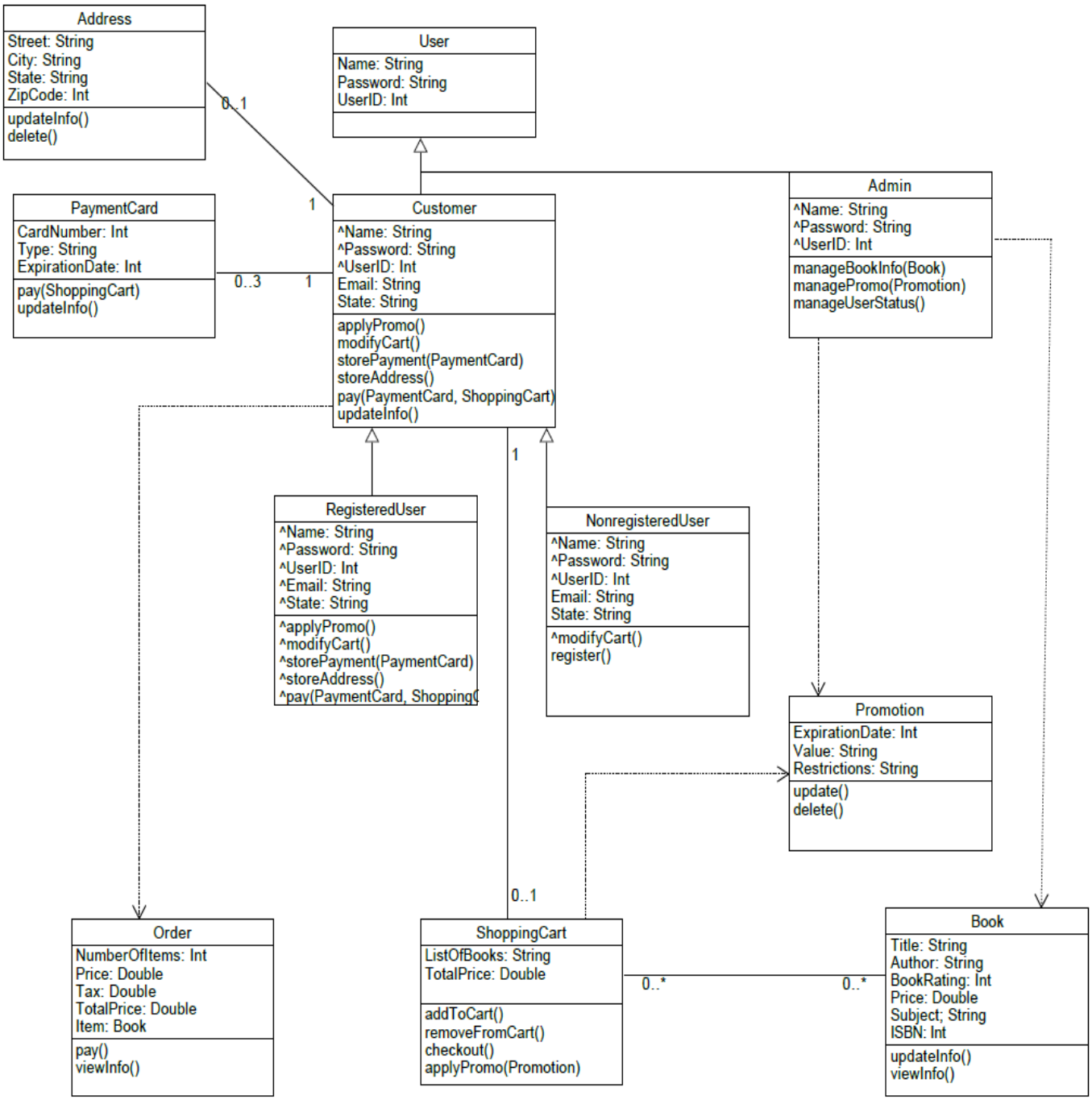
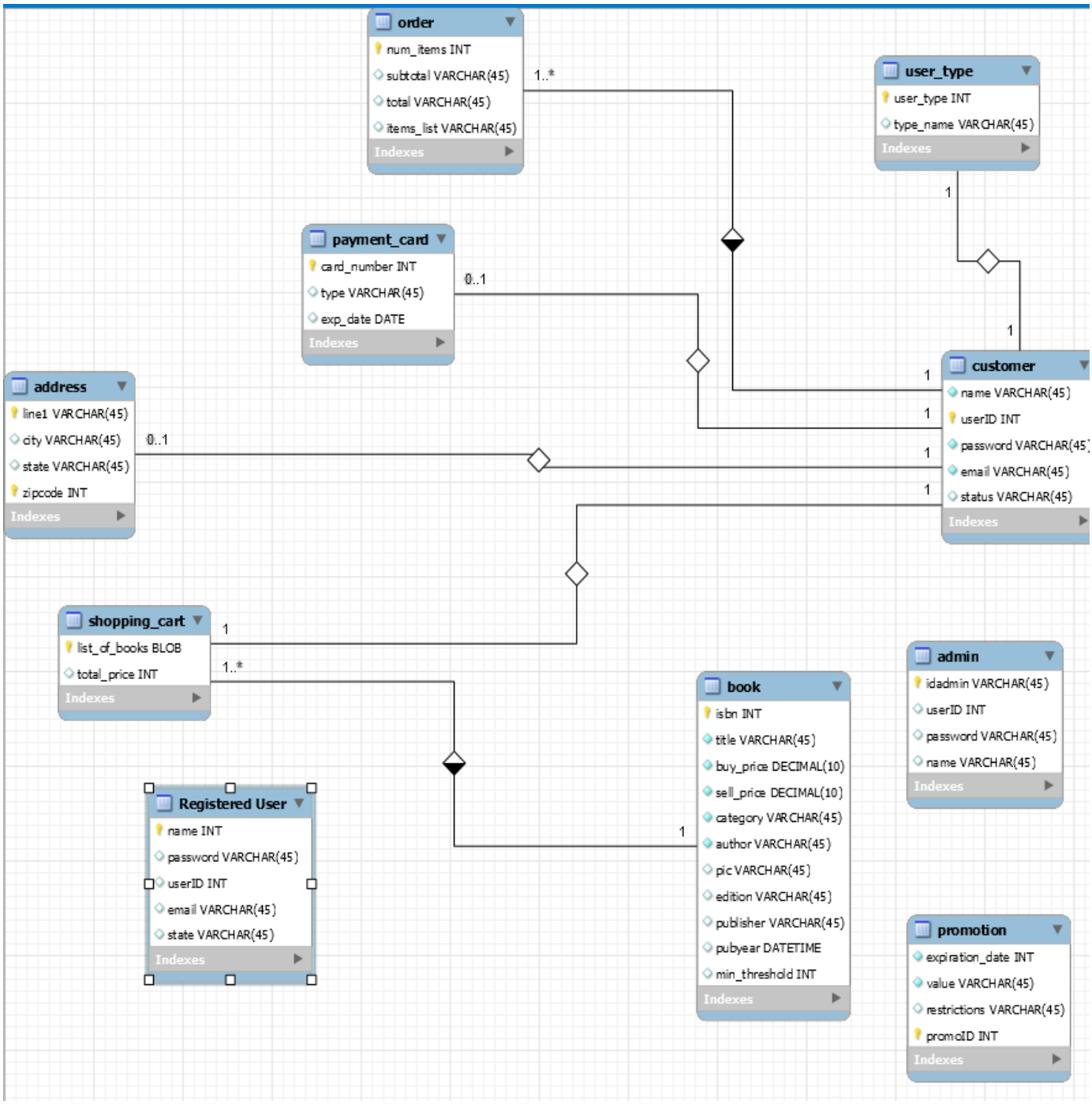
INTRODUCTION

The following document is intended to map the objects and relationships between them for our online bookstore system. First will be the class diagrams, which will show the different attributes of each class and the methods they use to interact with each other, as well as the relationships between the classes themselves. These will include inheritance, association, multiplicity, and composition. After that will be the Entity Relationship Schema, which will help us further explore these attributes and relationships. The ERD will help us identify primary keys, which are unique identifying attributes of a class object that differentiate between the objects of that class. This schema will also help show which attributes of which classes directly relate to the other classes, and which methods they use to do so, these being called foreign keys. We will map out the relationships here, and from this generate the database dictionary, which is a dictionary of different aspects of the database. This includes what is in the database, who is allowed to access which information, and where the database if physically stored, among other things. This will show how things are meant to run on a very deep level that the customer should never know and/or see. Ultimately, this document is here to visualize the classes in the online bookstore system. This allows us to look at some of the different layers of the bookstore system, so that when it is implemented it is possible to see how it came together. Also, the visualization of the classes helps us initially set up the database and helps remind us how everything is connected when we start to build everything.

Class Diagram



Entity Relationship Diagram (ERD)



Database Dictionary

Schema Report for database: mydb

Table List

Table: book						
Table Comments						
Columns						
Name	**Data Type**	**Nullable**	**PK**	**FK**	**Default**	**Comment**
isbn	INT	Yes	Yes	No		
title	VARCHAR(45)	Yes	No	No		
buy_price	DECIMAL(10)	Yes	No	No		
sell_price	DECIMAL(10)	Yes	No	No		
category	VARCHAR(45)	Yes	No	No		
author	VARCHAR(45)	Yes	No	No		
pic	VARCHAR(45)	No	No	No		
edition	VARCHAR(45)	No	No	No		
publisher	VARCHAR(45)	No	No	No		
pubyear	DATETIME	No	No	No		
min_threshold	INT	No	No	No		

Table List

Table: promotion

Table Comments						
Columns						
Name	**Data Type**	**Nullable**	**PK**	**FK**	**Default**	**Comment**
expiration_date	INT	Yes	No	No		
value	VARCHAR(45)	Yes	No	No		
restrictions	VARCHAR(45)	No	No	No		
promoID	INT	Yes	Yes	No		

Table List

Table: shopping_cart

Table Comments						
Columns						
Name	**Data Type**	**Nullable**	**PK**	**FK**	**Default**	**Comment**
list_of_books	BLOB	Yes	Yes	No		
total_price	INT	No	No	No		

Table List

Table: customer

Table Comments						
Columns						
Name	**Data Type**	**Nullable**	**PK**	**FK**	**Default**	**Comment**
name	VARCHAR(45)	Yes	No	No		
userID	INT	Yes	Yes	No		
password	VARCHAR(45)	Yes	No	No		
email	VARCHAR(45)	Yes	No	No		
status	VARCHAR(45)	No	No	No		

Table List

Table: order

Table Comments						
Columns						
Name	**Data Type**	**Nullable**	**PK**	**FK**	**Default**	**Comment**
num_items	INT	Yes	Yes	No		
subtotal	VARCHAR(45)	No	No	No		
total	VARCHAR(45)	No	No	No		
items_list	VARCHAR(45)	No	No	No		

Table List

Table: admin

Table Comments						
Columns						
Name	**Data Type**	**Nullable**	**PK**	**FK**	**Default**	**Comment**
idadmin	VARCHAR(45)	Yes	Yes	No		
userID	INT	No	No	No		
password	VARCHAR(45)	No	No	No		
name	VARCHAR(45)	No	No	No		

Table List

Table: address

Table Comments						
Columns						
Name	**Data Type**	**Nullable**	**PK**	**FK**	**Default**	**Comment**
line1	VARCHAR(45)	Yes	Yes	No		
city	VARCHAR(45)	No	No	No		
state	VARCHAR(45)	No	No	No		
zipcode	INT	Yes	Yes	No		

Table List

Table: user_type

Table Comments						
Columns						
Name	**Data Type**	**Nullable**	**PK**	**FK**	**Default**	**Comment**
user_type	INT	Yes	Yes	No		
type_name	VARCHAR(45)	No	No	No		

Table List

Table: payment_card

Table Comments						
Columns						
Name	**Data Type**	**Nullable**	**PK**	**FK**	**Default**	**Comment**
card_number	INT	Yes	Yes	No		
type	VARCHAR(45)	No	No	No		
exp_date	DATE	No	No	No		

Table List

Table: Registered User

Table Comments						
Columns						
Name	**Data Type**	**Nullable**	**PK**	**FK**	**Default**	**Comment**
name	INT	Yes	Yes	No		
password	VARCHAR(45)	No	No	No		
userID	INT	No	No	No		
email	VARCHAR(45)	No	No	No		
state	VARCHAR(45)	No	No	No		

Table List