

بسم الله الرحمن الرحيم

طراحی منطقی جداول سیستم تبادل کتاب

نیوشا سیدی و فاطمه شاه‌علی

پ.ن: برای نمایش کلیدهای خارجی از فونت ایتالیک استفاده شده است. زیرا ابزار ما (گوگل داک) قابلیت زیر خط نقطه چین را نداشت. آنهایی که هم با ایتالیک هستند و هم زیرشان خط کشیده شده است، کلیدهای خارجی ای هستند که جز کلید اصلی هم هستند.

Book (Id, *Publisher Id*, Name, Score, Price, Genre, Language, Release Date, Material, Series Number, Description, Summary, Category, Size)

User (Id, National Id, First Name, Surname, Email, Password, Credit Card Number, City, Region, Street, Alley, House Number, Telephone, Score as a Seller, Score as a Lender, Score as a Borrower, Score as a Purchaser)

UserHasBook (*User Id*, *Book Id*, Number, Status)

Author (Id, First Name, Surname, Nationality, Birth Date, Death Date, Writing Style, Doctrine, City, Region, Street, Alley, House Number, Telephone, Description)

AuthorBook (*Author Id*, *Book Id*)

Interpreter (Id, First Name, Surname, Nationality, Birth Date, Death Date, Style, City, Region, Street, Alley, House Number, Telephone, Description)

InterpreterBook (Interpreter Id, Book Id, Language)

Bookstore (Id, BookstoreContract Id, Password, Name, Email, Registration Number, City, Region, Street, Alley, Building Number, Credit Card Number, Website, Score)

BookstoreTelephone (Bookstore Id, Telephone)

BookstoreHasBook (Bookstore Id, Book Id, Number, Price)

Borrow (Id, Borrower ID, Lender Id, Book Id, Status, Price, Start Date, Deadline Date, Daily Delay Penalty, Guarantee Price, Confirmation, Delivery Address, Description)

Transaction (Id, Type, Amount, Credit Card Number, Date, Time, Status, Description)

Manager (Id, National Id, First Name, Surname, Email, Password, City, Region, Street, Alley, House Number, Telephone)

Employee (Id, Employee Contract Id, National Id, First Name, Surname, Email, Password, City, Region, Street, Alley, House Number, Telephone, Credit Card Number)

Accountant (Employee Id)

SupportAgent (Employee Id)

Message (Id, Receiver User Id, Sender User Id, Subject, Text, Date, Time)

Wallet (User Id, Blocked Credit, Available Credit)

Advertisement (Id, *Book Id*, *User Id*, Title, Proposed Price, Description)

Publisher (Registration Number, Name, City, Region, Street, Alley, House Number)

PublisherTelephone (Registration Number, Telephone)

CreditChange (Id, *Wallet User Id*, *Transaction Id*)

Comment (Id, *Sender User Id*, Score, Subject, Text, Date, Time)

UserCommentForUser (Comment Id, *Receiver User Id*, Receiver Type)

UserCommentForBook (Comment Id, *Book Id*)

UserCommentForBookstore (Comment Id, *Bookstore Id*)

PaidSalary (Id, *Transaction Id*, *Accountant Id*, *Employee Id*)

BookstorePony (Id, *BookstoreBankAccount Id*, *Transaction Id*)

Complaint (Id, Date, Time, Subject, Text, Documentation, *SupportAgent Id*, Status, Result)

ComplaintUser(Complaint Id, *Plaintiff Id*, *User Id*)

ComplaintBookstore (Complaint Id, *Plaintiff Id*, *Bookstore Id*)

Buy (Id, Date, Book Price, Success, Description)

UserBuy (Id, *Buyer Id*, *Seller Id*, *Book Id*, Delivery Address)

UserBuyBookstore (*Id*, *UserId*, *BookStore Id*, *Book Id*, Sending Address)

BookstoreBankAccount (*Bookstore Id*, Total Income, System's Total Benefit, Bookstore Credit Card Number, Remaining Balance, Last Payment Date)

BookstoreContract (*Id*, *Contractor Id*, *Canceller Id*, *BookStore Id*, Date, System Profit percentage, Description)

EditBookstoreContract (*Contract Id*, *Supporter Id*, *Date*, Description)

EmployeeContract (*Id*, *Employee Id*, *Contractor Id*, *Canceller Id*, Date, Daily Salary, Description)

ExtensionEmployeeContract (*Contract Id*, *Manager Id*, *Date*, Description)

BookstoreMonitoring (*Manager Id*, *Bookstore Id*, *Date*, Description)

UserMonitoring (*Manager Id*, *User Id*, *Date*, Description)

EmployeeMonitoring (*Manager Id*, *Employee Id*, *Date*, Description)

برای پیاده سازی از ابزار MySQL استفاده می کنیم که در درس مورد استفاده قرار گرفته است و بسیار مشهور است.