SCHOOL OF COMPUTER SCIENCES

UNIVERSITI SAINS MALAYSIA

CMT221/CMM222: Database Organization and Design

Semester 1, Academic Session: 2021/2022

System Design

Group 14

Case Study Number 03 :

Avade University Library Management Database System

Name	Matric No.	USM Email	Module	Role	Core/Minor
Faizal Salim	140585	faizalbinsalim@student.usm.my	Staff	Leader	Core
Anjumanara Athina	155142	a.athina2001@student.usm.my	Students	Member	Core
Abdul Rahman Rana Tariq	140580	abdulrahmantrq12@student.usm.my	Library	Member	Core
Mohammad Syaqir Bin Zahir	153621	syaqirzahir01@student.usm.my	Books	Member	Core

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1.0 Business Rules

Module 1: Library

- Each library has one unique code.A unique code is given to one library.
- Each library has one reader present. one reader is present at each library.
- A user has unlimited access to each of the libraries. Each library can be accessed unlimited times by one user.
- Users can access multiple computers. One computer can be accessed by one user.
- Each computer has one unique id assigned to it.one unique ID is assigned to one computer.

Module 2: Staff

- A staff can have only 1 ID. Only 1 ID is assigned to each staff member.
- A staff is assigned to one division. One staff is assigned to one division.
- A staff member can make unlimited transactions. Unlimited transactions can be made by a staff.
- A staff member can access many reports. Many reports can be accessed by staff.
- A staff can access many books. Many books can be accessed by staff.

Module 3: Students

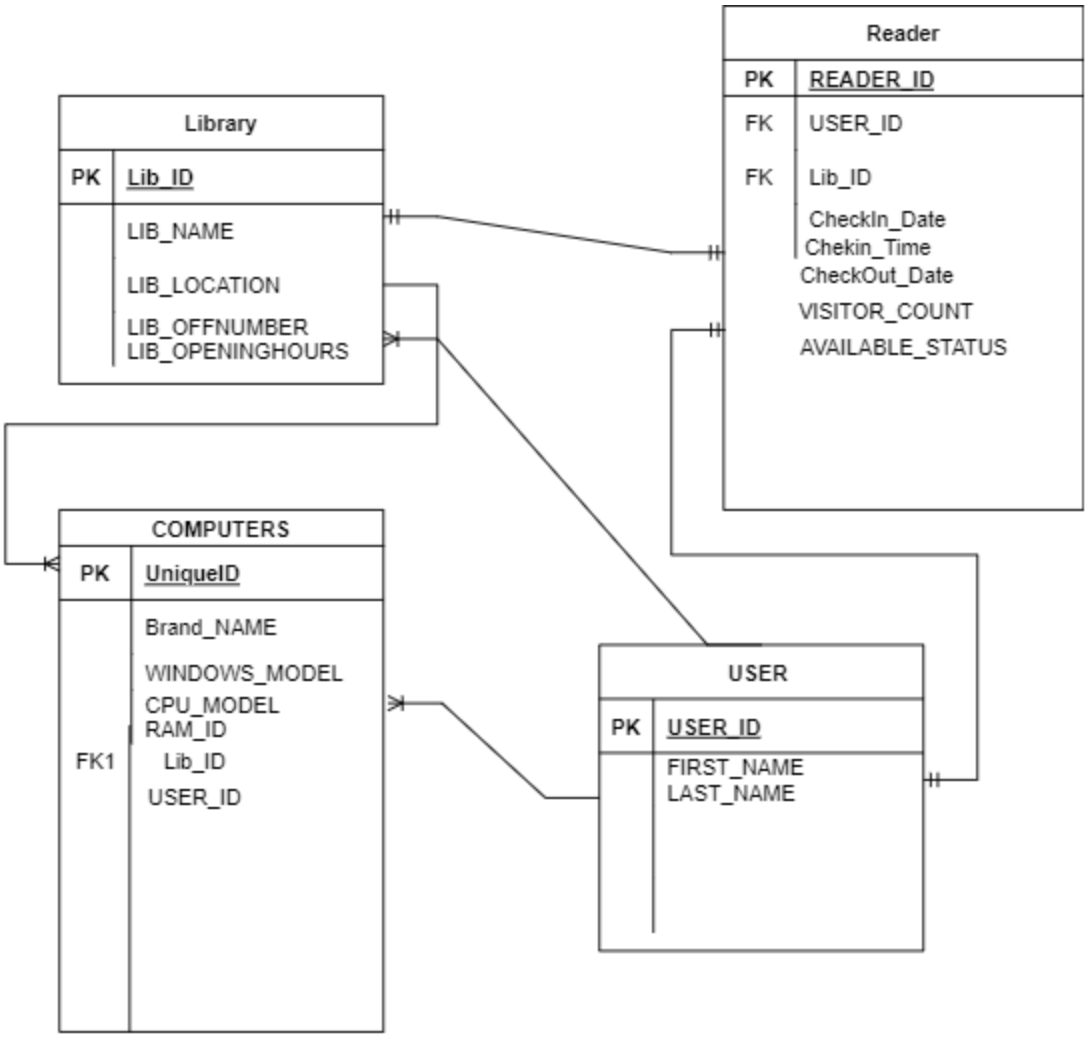
- A student may take out multiple loans. Multiple loans can be taken by one student.
- A student can make unlimited transactions. Unlimited transactions can be done by a student.
- A transaction can have many reports. Many reports can have one transaction.
- A loan can show many reports. Many reports can be shown by one loan.

Module 4: Books

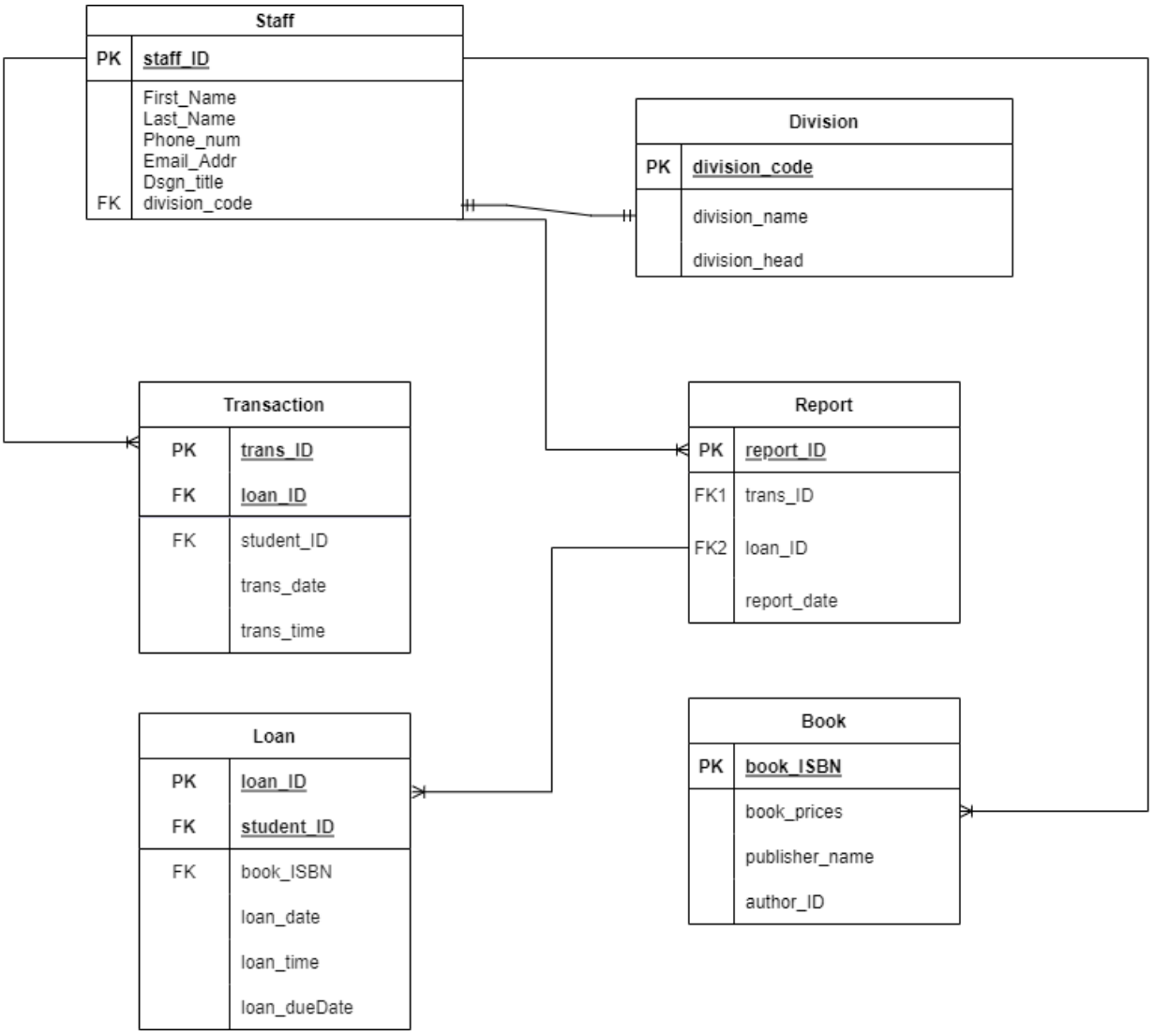
- A publisher can publish many books. Each book can only be published by a publisher.
- A publisher may own many printing locations. Each printing location may be owned by many publishers
- An author may write many books. A book may be written by many author .
- A user can borrow many books. Each book may only be borrowed by a user.
- A user can request one book per request form. Each request form can only be requested by a user.

2.0 Partial ERD

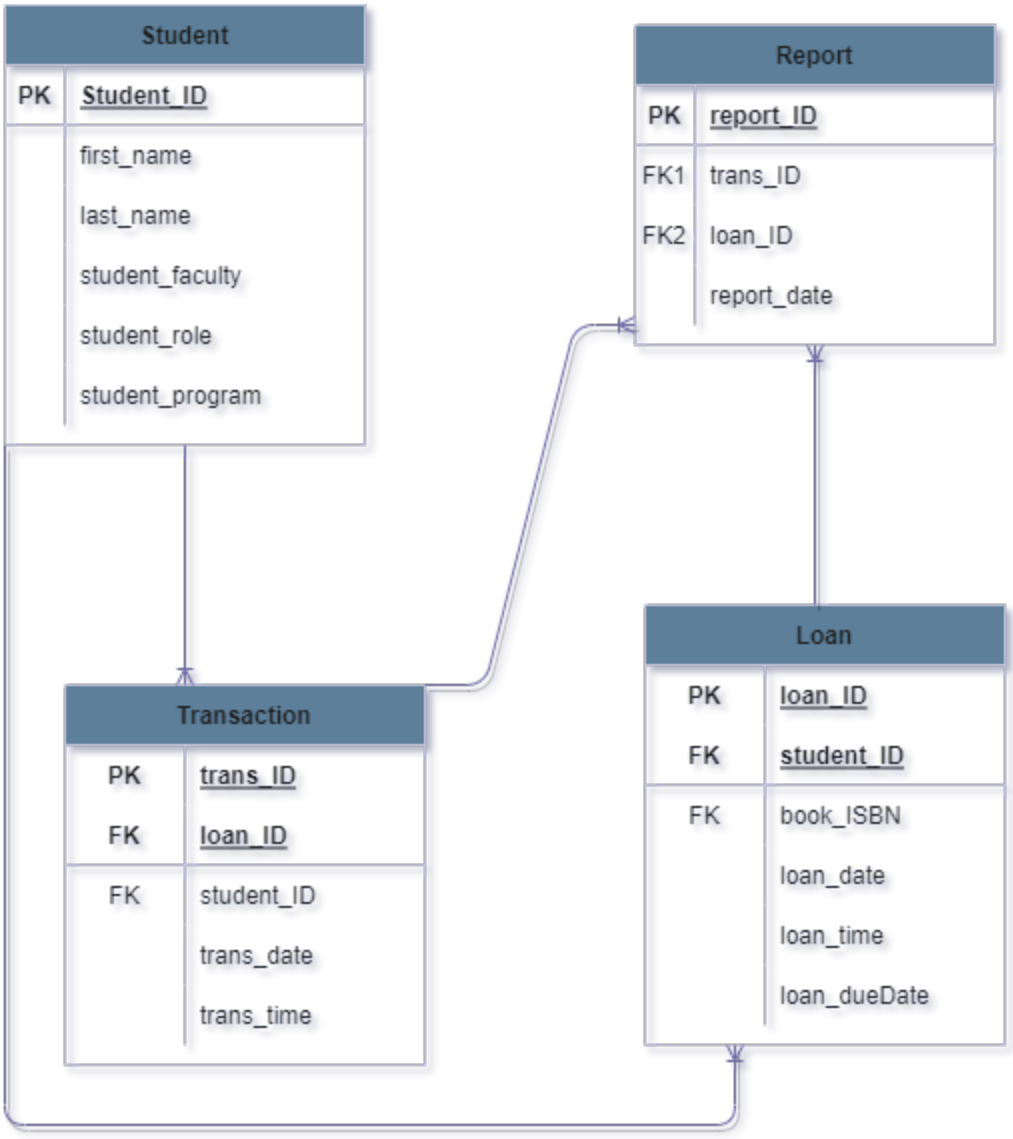
Module 1: Library



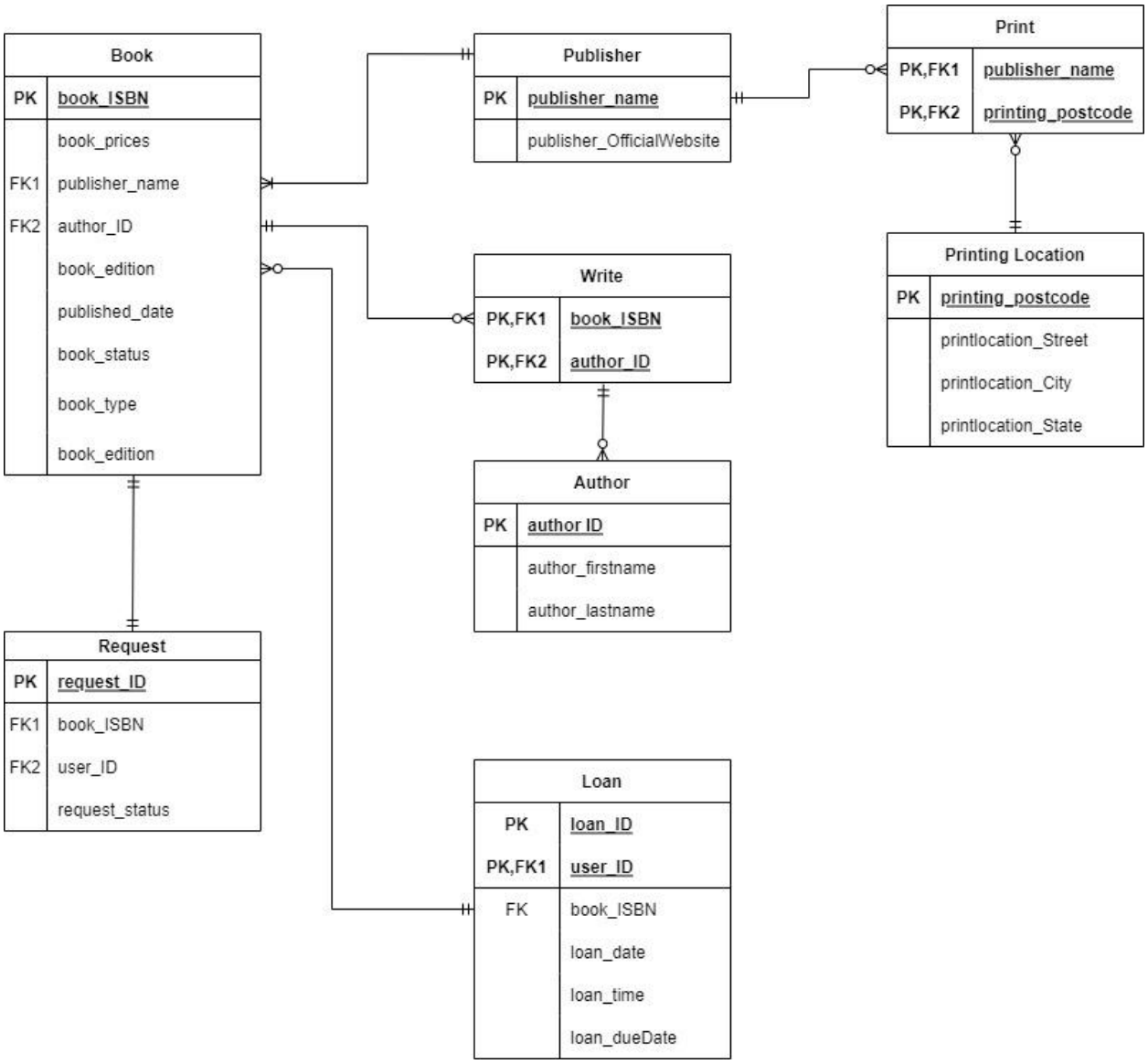
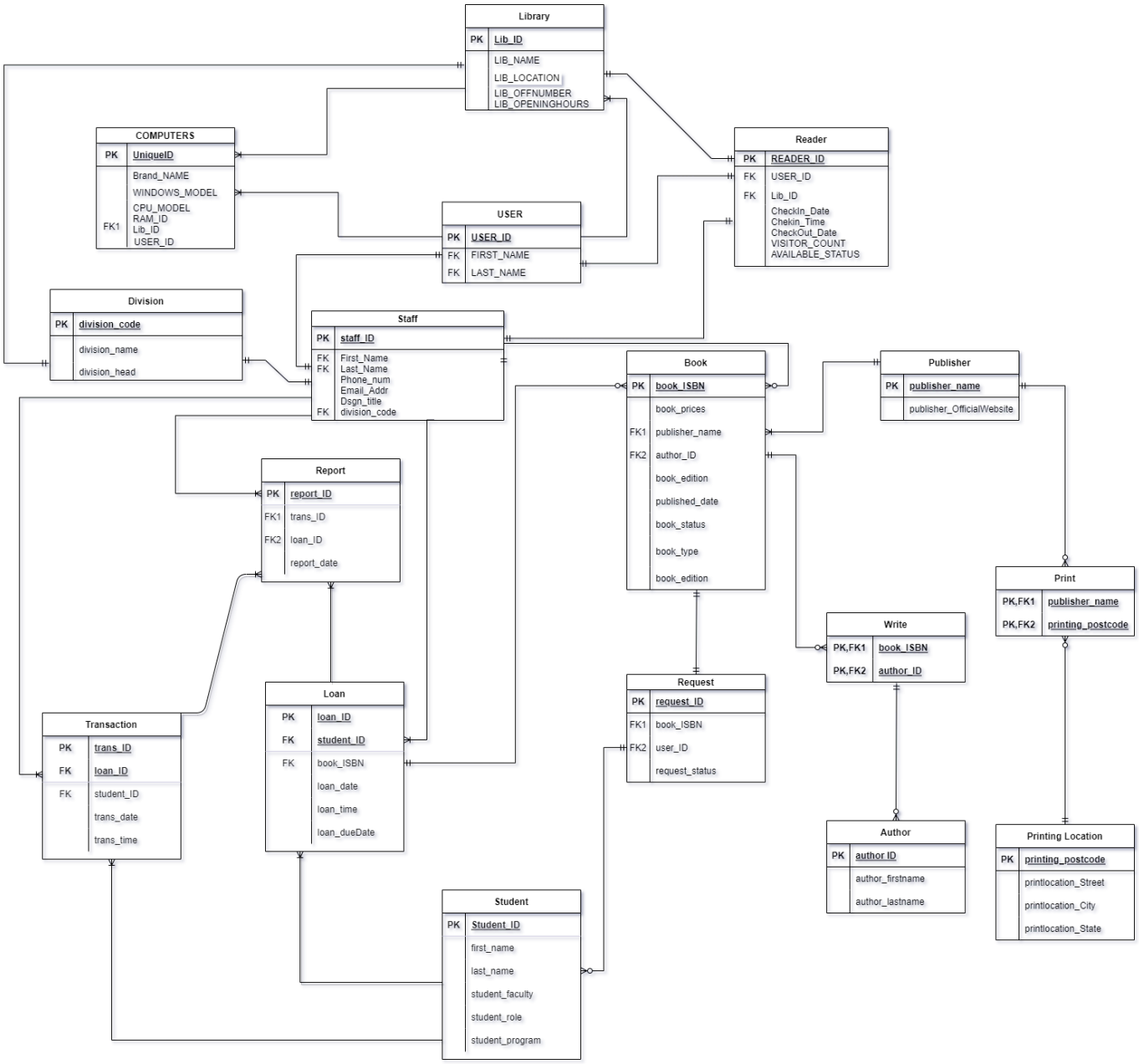
Module 2: Staff



Module 3: Students



Module 4: Books



3.0 Overall ERD