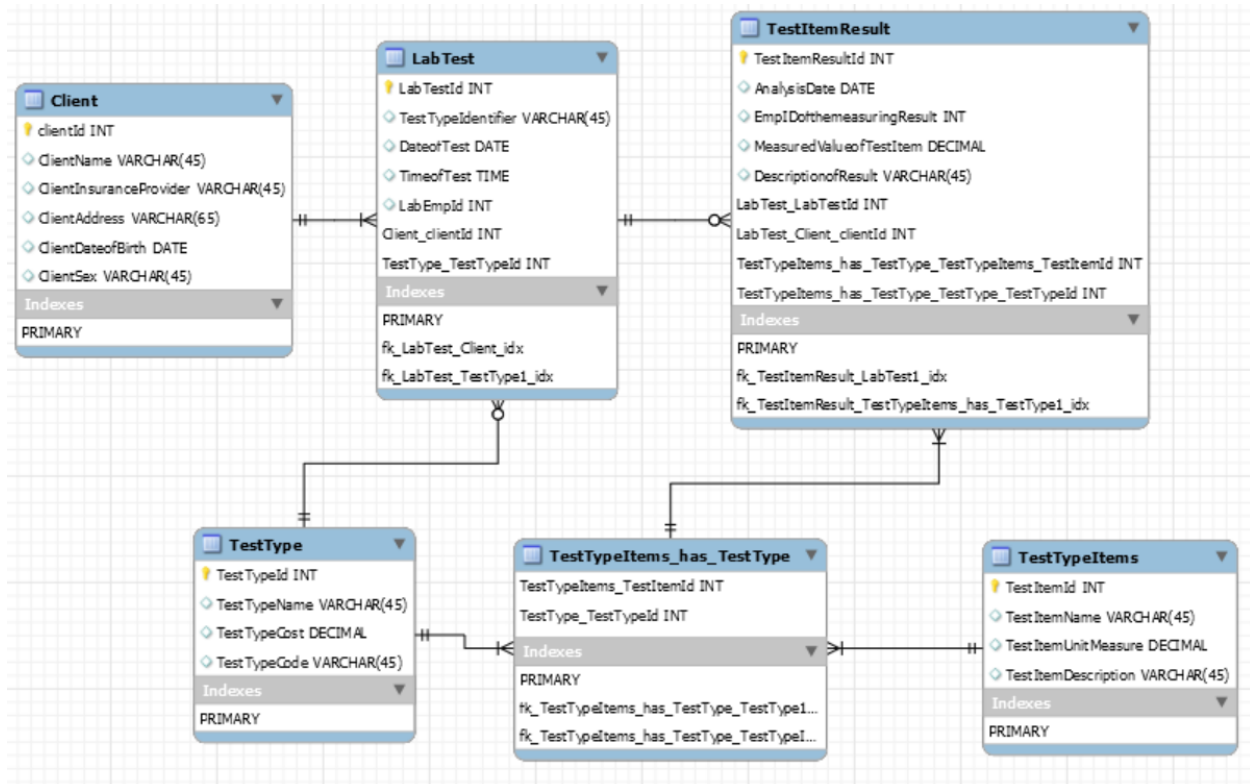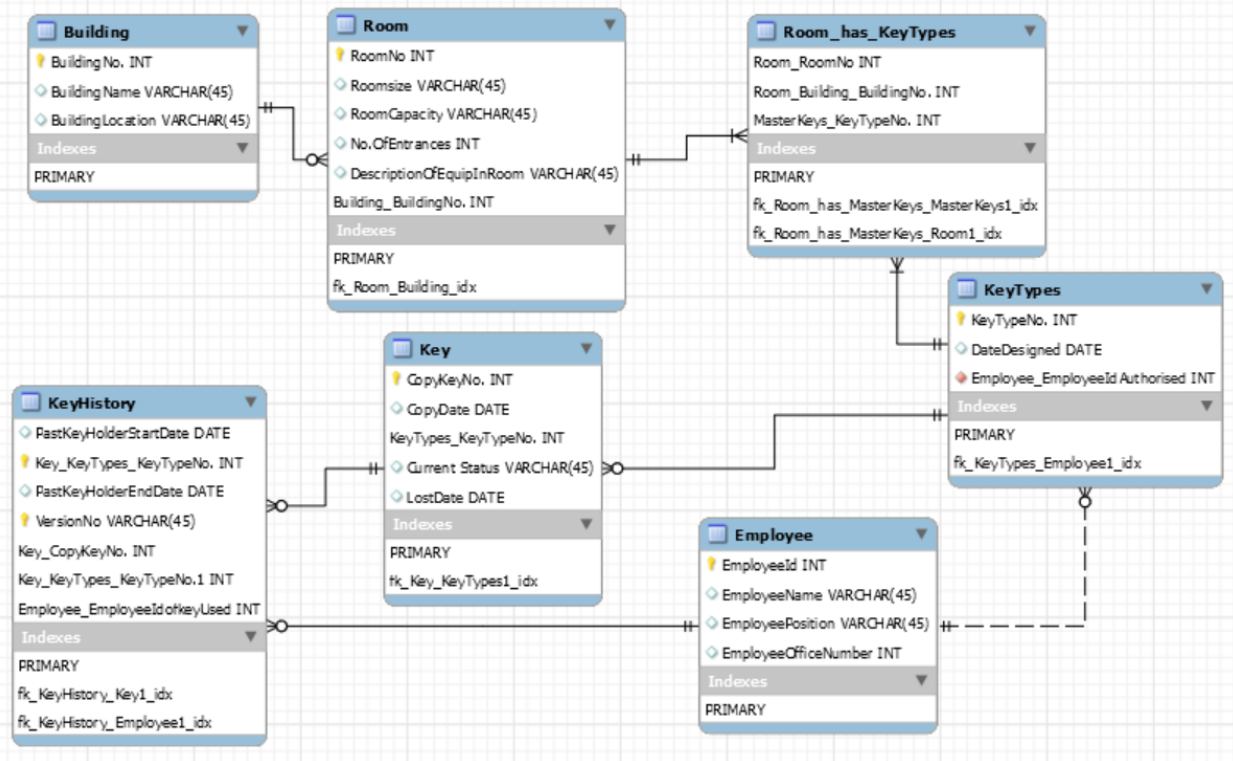## Assignment 3

1. Lab Test Database: Draw an ERD for Textbook Chapter 6 Data Modeling Problems 33, 34, 35, & 36 (Textbook Pages 224–225). That is, draw an ERD that satisfies all requirements of Problems 33, 34, 35, & 36. • I suggest you to draw an ERD for Problem 33, then revised it for Problem 34, and so on. • Then, turn in the ERD for Problem 36. Do not turn in ERDs for Problems 33, 34, and 35.

2. Building Key Management Database: Draw an ERD for Textbook Chapter 6 Data Modeling Problem 21 (Textbook Pages 21–216). • Any description of errors nd completeness is NOT required.
   • "An initial ERD" and "a list of decisions for each ERD" are NOT required.
   • Turn in the revised ERD only.

Building
- Building No. INT
- Building Name VARCHAR(45)
- Building Location VARCHAR(45)

Indexes
PRIMARY

Room
- RoomNo INT
- Roomsize VARCHAR(45)
- RoomCapacity VARCHAR(45)
- No.OfEntrances INT
- DescriptionOfEquipInRoom VARCHAR(45)
- Building_BuildingNo. INT

Indexes
PRIMARY
fk_Room_Building_idx

Room_has_KeyTypes
- Room_RoomNo INT
- Room_Building_BuildingNo. INT
- MasterKeys_KeyTypeNo. INT

Indexes
PRIMARY
fk_Room_has_MasterKeys_MasterKeys1_idx
fk_Room_has_MasterKeys_Room1_idx

KeyTypes
- KeyTypeNo. INT
- DateDesigned DATE
- Employee_EmployeeId Authorised INT

Indexes
PRIMARY
fk_KeyTypes_Employee1_idx

KeyHistory
- PastKeyHolderStartDate DATE
- Key_KeyTypes_KeyTypeNo. INT
- PastKeyHolderEndDate DATE
- VersionNo VARCHAR(45)
- Key_CopyKeyNo. INT
- Key_KeyTypes_KeyTypeNo.1 INT
- Employee_EmployeeIdofkeyUsed INT

Indexes
PRIMARY
fk_KeyHistory_Key1_idx
fk_KeyHistory_Employee1_idx

Key
- CopyKeyNo. INT
- CopyDate DATE
- KeyTypes_KeyTypeNo. INT
- Current Status VARCHAR(45)
- LostDate DATE

Indexes
PRIMARY
fk_Key_KeyTypes1_idx

Employee
- EmployeeId INT
- EmployeeName VARCHAR(45)
- EmployeePosition VARCHAR(45)
- EmployeeOfficeNumber INT

Indexes
PRIMARY

3. Grade Reporting Database: The following figure shows a grade report that is mailed to students at the end of each semester. Prepare an entity relationship diagram (ERD) reflecting the data contained in the grade report. Assume that each course is taught by one instructor. Also assume that instructors' names are unique.

Richardson College
Grade Report
Spring 2019

Student Name: Joe Harrison   Student ID: 1234567890
Address: 2222 Drive A, Richardson TX 78001
Major: Information Technology

Course ID	Course Title	Instructor Name	Instructor Office	Grade
IS350	Database	Codd	JSM104	B+
IS353	R	Parsons	JSM317	A-

Student
- 🔑 StudentId INT
- ◇ StudentFirstName VARCHAR(45)
- ◇ StudentAddress VARCHAR(45)
- ◇ Major VARCHAR(45)
- ◇ StudentState VARCHAR(45)
- ◇ StudentZip VARCHAR(45)
- ◇ StudentLastName VARCHAR(45)

Indexes
- PRIMARY

Instructor
- 🔑 Instructorname VARCHAR(45)
- ◇ InstructorOffice VARCHAR(45)

Indexes
- PRIMARY

Offering
- 🔑 OfferID INT
- ◇ OfferLocation VARCHAR(45)
- ◇ OfferingDate DATE
- ◇ OfferingTIme VARCHAR(45)
- Instructor_Instructorname VARCHAR(45)

Indexes

Enrollment
- Course_CourseID INT
- Student_StudentId INT
- ◇ Grade VARCHAR(45)

Indexes
- PRIMARY
- fk_Course_has_Student_Student1_idx
- fk_Course_has_Student_Course_idx

Course
- 🔑 CourseID INT
- ◇ CourseTitle VARCHAR(45)
- Offering_OfferID INT
- Offering_Instructor_Instructorname VARCHAR(45)

Indexes
- PRIMARY
- fk_Course_Offering1_idx