数据库系统概念

作业 #6
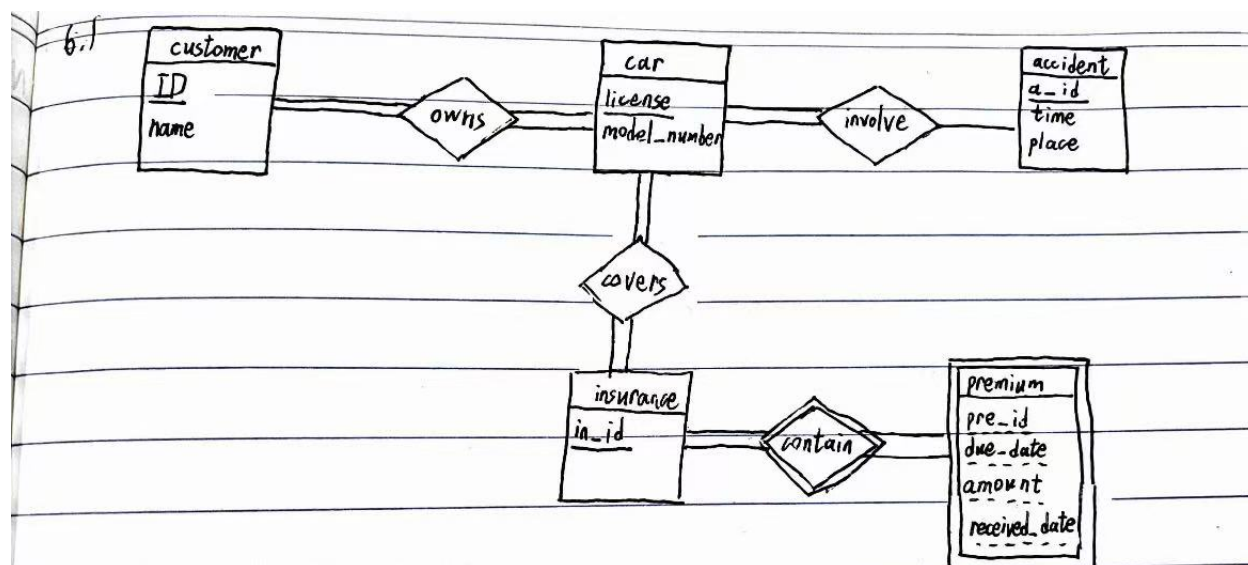
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邱吉尔 (学号：10235101533)

问题 1

6.1 Construct an E-R diagram for a car insurance company whose customers own one or more cars each. Each car has associated with it zero to any number of recorded accidents. Each insurance policy covers one or more cars and has one or more premium payments associated with it. Each payment is for a particular period of time, and has an associated due date, and the date when the payment was received
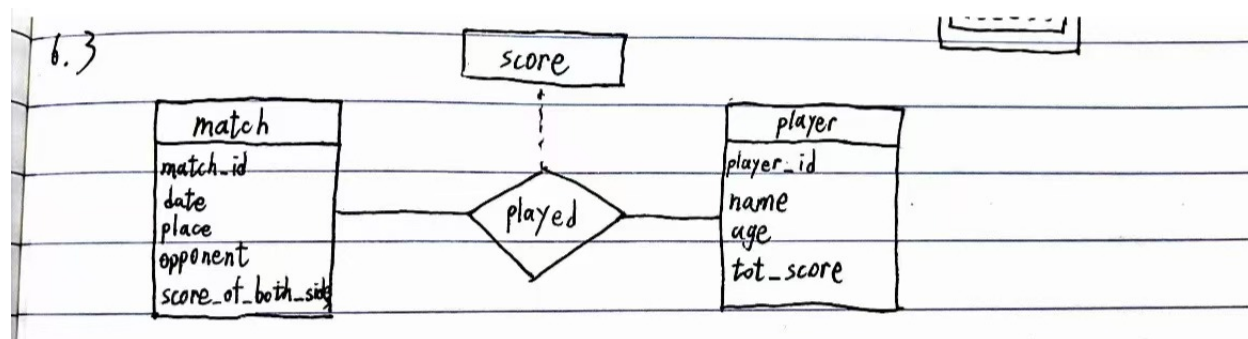
解答

问题 2

6.3 Design an E-R diagram for keeping track of the scoring statistics of your favorite sports team. You should store the matches played, the scores in each match, the players in each match, and individual player scoring statistics for each match

解答

问题 3

6.6.Consider the representation of the ternary relationship of Figure 6.29a using the binary relationships illustrated in Figure 6.29b (attributes not shown).

a. Show a simple instance of E , A , B , C , RA , RB ,and RC that cannot correspond to any instance of A , B , C , and R .

b. Modify the E-R diagram of Figure 6.29b to introduce constraints that will guarantee that any instance of E , A , B , C , RA, RB,and RCthat satisfies the constraints will correspond to an instance of A , B , C , and R.

c. Modify the preceding translation to handle total participation constraints on the ternary relationship

解答

6.6　a. 令 $E = \{e_1, e_2\}$，$A = \{a_1, a_2\}$，$B = \{b_1\}$，$C = \{c_1\}$，$R_A = \{(e_1, a_1), (e_2, a_2)\}$，$R_B = \{(e_1, b_1)\}$，$R_C = \{(e_1, c_1)\}$，因为 (e_2, a_2) 存在，所以不存在任何与 E，R_A，R_B 和 R_C 对应的，A, B, C 与 R 的实例

b.

c. 如果 A 全部参与了关系 R 中，就在 A 和 R_A 中使用双线，B、C 同理