A3

This is a preview of the published version of the quiz

Started: Feb 16 at 8:16pm

Quiz Instructions

All questions are based on Chapter 4.

This test has a time limit of 75 mins.

This test will save and submit automatically when the time expires.

Once started, this test must be completed in one sitting. Do not leave the test before clicking Save and Submit.

Access Code:**A3**

Assignment 3 eview.pdf

premiere.sql

Question 1 — 5 pts

What two conditions must be met before an entity can be classified as a weak entity?

- [ ] The entity must be existence-dependent on its parent entity.
- [ ] The entity must inherit at least part of its primary key from its parent entity.

- [ ] The entity must be existence-dependent on its child entity.
- [ ] The entity must inherit the primary key from its parent entity.

Question 2

5 pts

Given the business rule “an employee may have many degrees,” its effect on attributes, entities, and relationships, (Hint: Remember what a multivalued attribute is and how it might be implemented.), choose the ***<u>**BEST**</u>*** solution(s) below (also, remember, "<u>**composite**</u>" keys may be used in some db designs):

○

EMP_NUM	EMP_LNAME	EMP_DEGREE
123	Carter	AA, BBA
124	O’Shanski	BBA, MBA, Ph.D.
125	Jones	AS
126	Ortez	BS, MS

○ **Table name: EMPLOYEE**

EMP_NUM	EMP_LNAME
123	Carter
124	O’S hanski
125	Jones

126	Ortez

Table name: DEGREE

EMP_NUM	DEGREE_CODE	DEGREE_DATE	DEGREE_PLACE
123	AA	May-1999	Lake Sumter CC
123	BBA	Aug-2004	U. of Georgia
124	BBA	Dec-1990	U. of Toledo
124	MBA	May-2001	U. of Michigan
124	Ph.D.	Dec-2005	U. of Tennessee
125	AS	Aug-2002	Valdosta State
126	BS	Dec-1989	U. of Missouri
126	MS	May-2002	U. of Florida

○

EMP_NUM	EMP_LNAME	EMP_DEGREE1	EMP_DEGREE2	EMP_DEGREE3
123	Carter	AA	BBA	
124	O'Shanski	BBA	MBA	Ph.D.
125	Jones	AS		
126	Ortez	BS	MS	

EMP_NUM	EMP_LNAME	EMP_AA	EMP_AS	EMP_BA	EMP_BS	EMP_BBA	EMP_MS	EMP_MBA	EMP_PhD
123	Carter	X				X			
124	O'Shanski					X		X	X
125	Jones		X						
126	Ortez				X		X		

Question 3

5 pts

Discuss two ways in which the 1:M relationship between COURSE and CLASS can be implemented. (Hint: Think about relationship strength, **weak** vs. **strong**.)

- [ ] The relationship is implemented as ***strong*** when the CLASS entity's PK does not contain the COURSE entity's PK:

  COURSE(**CRS_CODE**, CRS_TITLE, CRS_DESCRIPTION, CRS_CREDITS)

  CLASS(**CLASS_CODE**, CRS_CODE, CLASS_SECTION, CLASS_TIME, CLASS_PLACE)

- [ ] The relationship is implemented as ***strong*** when the CLASS entity's PK contains the COURSE entity's PK:

  COURSE(**CRS_CODE**, CRS_TITLE, CRS_DESCRIPTION, CRS_CREDITS)

  CLASS(**CRS_CODE**, **CLASS_SECTION**, CLASS_TIME, CLASS_PLACE)

- [ ] The relationship is implemented as ***weak*** when the CLASS entity's PK does not contain the COURSE entity's PK:

  COURSE(**CRS_CODE**, CRS_TITLE, CRS_DESCRIPTION, CRS_CREDITS)

  CLASS(**CLASS_CODE**, CRS_CODE, CLASS_SECTION, CLASS_TIME, CLASS_PLACE)

☐ The relationship is implemented as ***weak*** when the CLASS entity's PK contains the COURSE entity's PK:

COURSE(**CRS_CODE**, CRS_TITLE, CRS_DESCRIPTION, CRS_CREDITS)

CLASS(**CRS_CODE**, **CLASS_SECTION**, CLASS_TIME, CLASS_PLACE)

Question 4

5 pts

What is a composite (bridge, join, link, associative) entity, and when is it used?

- ◯ A composite entity is generally used to transform 1:1 relationships into 1:M relationships.
- ◯ A composite entity is generally used to transform 1:M relationships into M:N relationships.
- ◯ A composite entity is generally used to transform M:N relationships into 1:M relationships.
- ◯ A composite entity is generally used to transform 1:M relationships into 1:1 relationships.

Question 5

4 pts

What two attributes must be contained in a composite entity? Use proper terminology in your answer.

- ◯ The composite entity must at least include the primary keys of the (parent) entities it references.
- ◯ The composite entity must at least include the foreign keys of the (parent) entities it references.
- ◯ The composite entity must at least include the primary key of the composite (child) entity.
- ◯ The composite entity must at least include the foreign key of the composite (child) entity.

Question 6

8 pts

What two courses of action are available to a designer when encountering a multivalued attribute? (Hint: give both the "very poor" solution, and the preferred solution.)

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12pt Paragraph

p

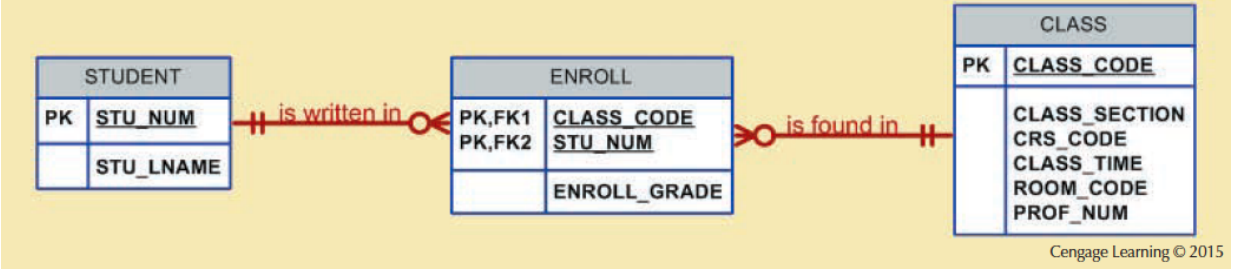
0 words

Question 7

10 pts

How is a composite entity represented in an ERD, and what is its function? See Figure 4.23 or 4.25 to write out the tables and some attributes for the relationship of the composite entity. For example, TABLE_NAME (PK_ATTRIBUTE, ATTRIBUTE2...) TABLE_NAME2 (PK_ATTRIBUTE, ATTRIBUTE2...) etc.

FIGURE 4.25 A composite entity in an ERD



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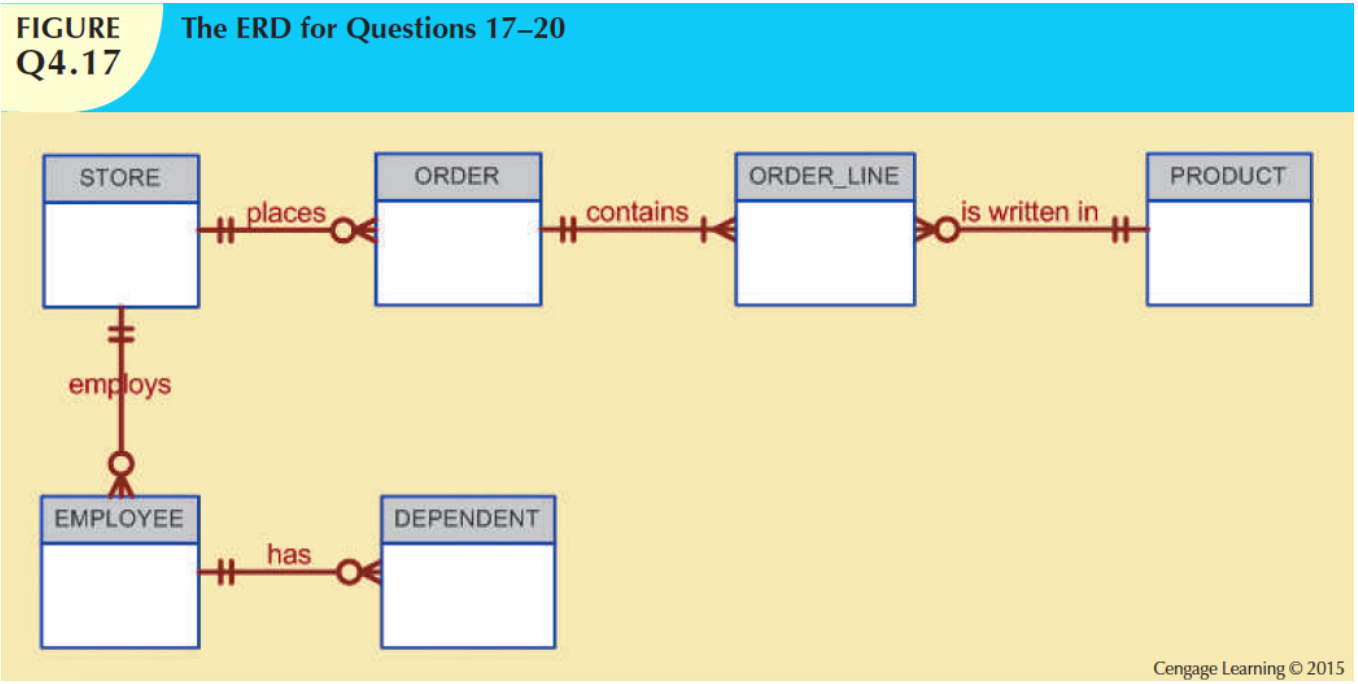
Question 8

10 pts

Write at least five business rules reflected in this ERD (see Fig. Q4.17).

FIGURE Q4.17 The ERD for Questions 17–20



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Question 9

8 pts

Use the Premiere database schema to answer the questions below. For all SQL statement questions, please list **SQL commands** (4pts) with the **query result sets** (4pts) in your answer!

Find the customer number, last name, first name, and current balance for every customer whose balance exceeds the credit limit.

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Question 10

8 pts

List the part number and description of every part that is in warehouse number 2 and that has more than 15 units on hand.

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12pt Paragraph

p

0 words

Question 11

8 pts

List the part number and price of every part that is classified as hardware or that costs more than $200.

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0 words

Question 12

8 pts

Update the quoted price to $139.99, for the order line whose order_number is 12491, and whose quoted price is currently $149.99.

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12pt Paragraph

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0 words

Question 13

8 pts

Remove all order lines having fewer than three parts ordered;

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12pt Paragraph

p 0 words

Question 14

8 pts

Add the following two records to the orders table (either explicit or implicit insert into):
order_number: 12505, order_date: 12/22/12, customer_number: 405
order_number: 12506, order_date: 12/24/13, customer_number: 567

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12pt Paragraph

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