Quiz 1: Databases & ERD

Due Apr 11 at 11:59pm **Points** 100 **Questions** 11
Available Mar 30 at 12am - Apr 15 at 11:59pm 17 days **Time Limit** None
Allowed Attempts Unlimited

Instructions

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Some questions on this Quiz can be interpreted in different ways and not all the interpretations are correct or the ones which the grader will use when grading.

I strongly encourage you to participate on Piazza, ask questions, and discuss the concepts related to this Quiz.

Read all questions carefully before attempting as some questions require you to read and understand a diagram or description that precede them.

For all questions requiring File Upload, upload only a PDF and use only the notation that is described in the class. You could look at the Tools section in the syllabus for a list of good tools to draw. You can even upload scanned copy of a legible hand-drawn diagram.

Points

You can take this Quiz several times. The most recent score will be counted. This will count as a Quiz as well as an Assignment when calculating your Final Grade. Canvas Gradebook doesn't take this into account when calculating your Final Grade.

The rubric for the Q1 and Q2 is **here.**

Take the Quiz Again

Attempt History

	Attempt	Time	Score
KEPT	Attempt 2	43 minutes	70 out of 100 *
LATEST	Attempt 2	43 minutes	70 out of 100 *
	Attempt 1	2 minutes	10 out of 100 *

* Some questions not yet graded

ⓘ Correct answers are hidden.

Score for this attempt: **70** out of 100 *
Submitted Apr 11 at 11:26pm
This attempt took 43 minutes.

For the next TWO questions on relationships, you are to ignore attributes and provide ER diagrams that represent the relationship between entities correctly.

The entities will be Foo, Bar and Baz.

Your diagrams should be in a PDF. Do not combine both the diagrams in a single file.

Question 1

Not yet graded / 10 pts

Draw a single ER diagram for the following as described above:

A Foo is related to at least one Bar.
A Bar is related to at most one Foo.

Question1_quiz1.pdf
(https://oregonstate.instructure.com/files/74802691/download)

Question 2

Not yet graded / 20 pts

Draw a single ER diagram for the following as described above:

A Foo is related to no more than one Bar.
A Bar is related to zero or more Foos.
A Baz is related to one or more Bars and at least one Foo.
A Bar is related to at least one Baz.
A Foo is related to exactly one Baz.

Question1_quiz2.pdf
(https://oregonstate.instructure.com/files/74802687/download)

Question 3

5 / 5 pts

Attributes are the smallest division of data in ER diagram.

- (•) True
- ( ) False

Question 4

5 / 5 pts

Which level of abstraction is the ER model most concerned with?

- (•) Conceptual
- ( ) External
- ( ) Internal
- ( ) Physical

ER model is part of the conceptual stage of database design, which provides a high-level description of data

Question 5

5 / 5 pts

Which is created first when designing a database, the ER model or the schema?

- (•) ER model
- ( ) Schema
- ( ) It doesn't matter - they're both ways to create conceptual models

Question 6

5 / 5 pts

In the Entity-Relationship Model, relationships can have attributes.

- (•) True
- ( ) False

Question 7

10 / 10 pts

Which of the following is NOT a design choice when using the ER model?

- ( ) Binary relationship vs. ternary relationship vs. n-ary relationship
- ( ) Entity vs. relationship
- (•) None of the above
- ( ) Entity vs. attribute

ER modeling is subjective. A lot of data can be captured using the ER model, but there are also many constraints that cannot be shown. A given scenario can often be modeled in many ways.

Question 8

10 / 10 pts

Consider the following relationship involving two entities, *students* and *classes*:

A student can take many classes. A class can be taken by many students.

How many tables can be used to represent this relationship in a schema?

- 2
- All of the above
- 3 (selected)
- 1

Question 9

10 / 10 pts

Consider the following relationships:

- A student must be enrolled in at least one class.
- A class can have many students.

Which of the following is/are true?

- [x] A student can be associated to 2 classes
- [ ] A student can be associated to 0 classes
- [ ] All of the above
- [x] A student can be associated to 1 class

Question 10

10 / 10 pts

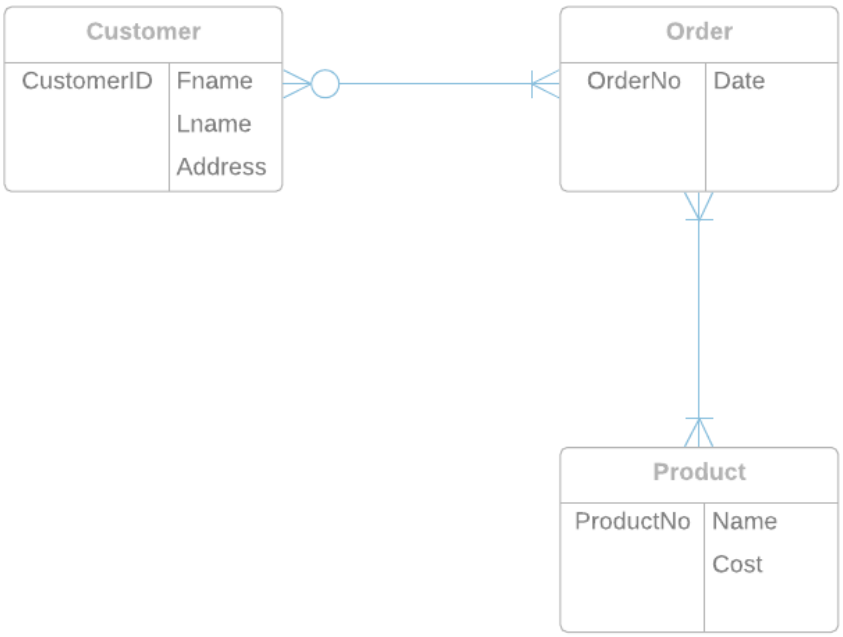
Consider the database of a retail company that wants to track information about its sales and customers. The company would like to regularly produce reports showing data on purchases made by customers in each age group. Which of the following are good choices of attribute(s) to represent the age of the *customer* entity in the database?

- [ ] `birthdate` varchar(8)
- [x] `birthdate` date
- [ ] `age` int
- [x] `month` int,
`day` int,
`year` int
- [ ] None of the above; it's rude to ask for their customers' ages

Question 11

10 / 10 pts

Which ER diagram best represents the scenario where a customer can order products from an online retailer?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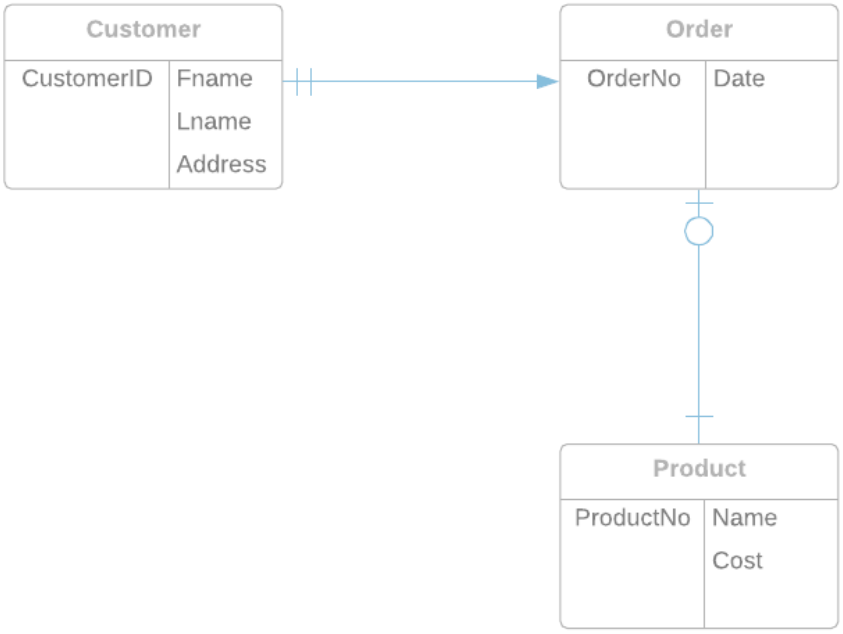
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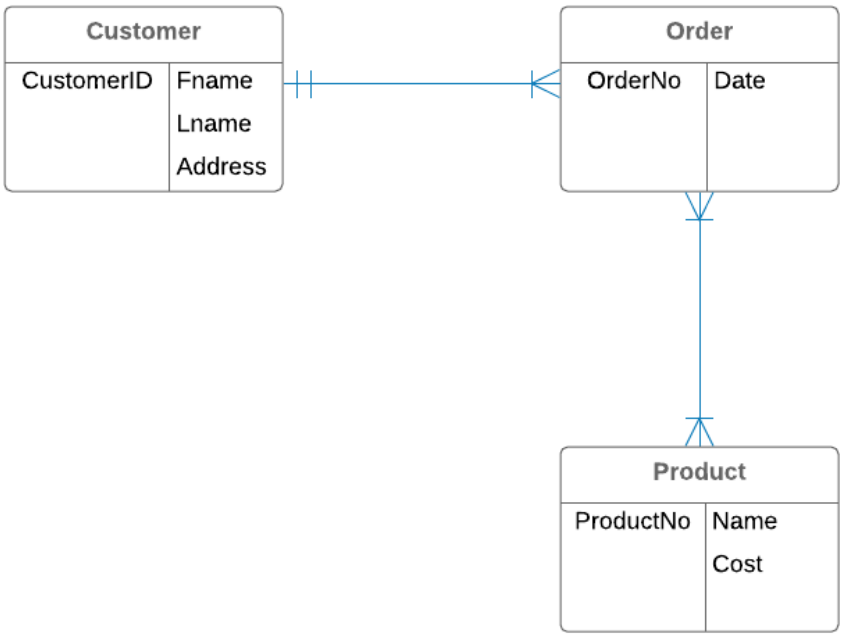

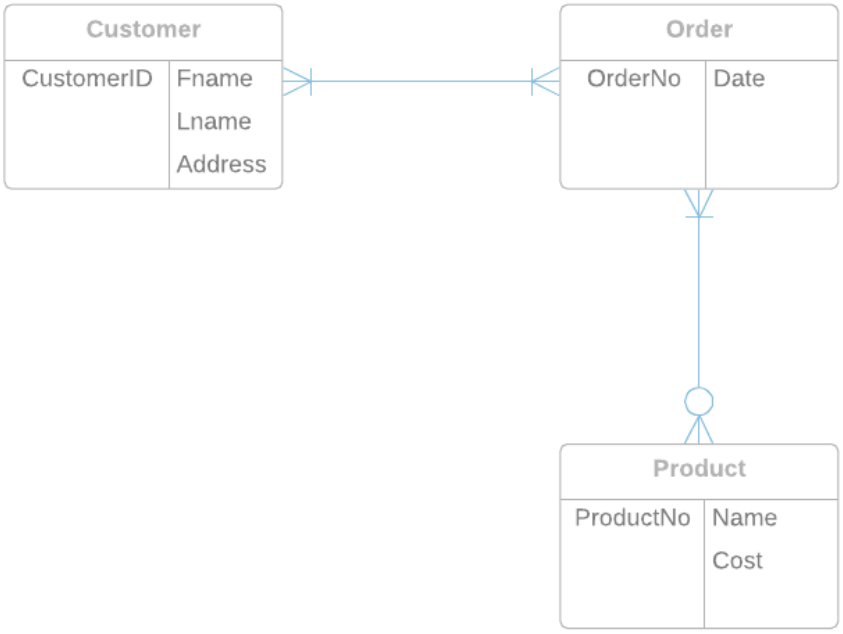

Quiz Score: **70** out of 100