QUIZ1

Friday, 25 September 2020 10:41 AM

QUIZ1

Question 1 (1 mark)
Which of the statements below best captures the semantics of this ER diagram:

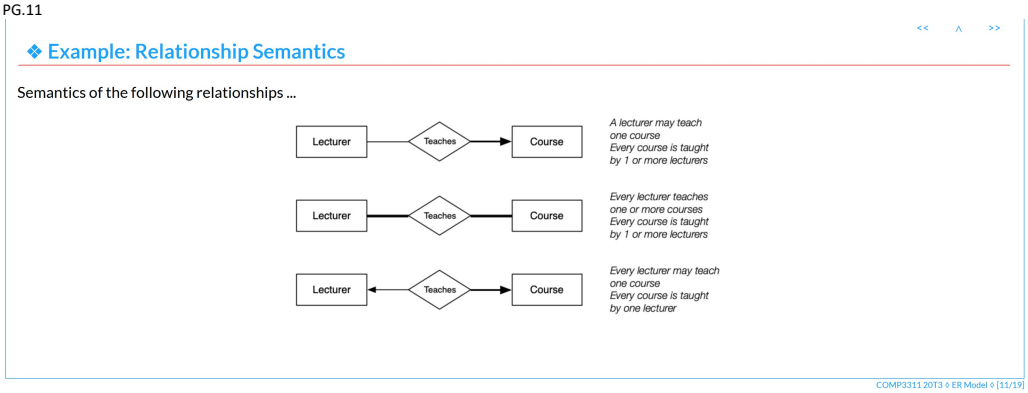
(a) Every Flurf owns one Boggle; every Boggle is owned by a Flurf.
(b) Every Flurf owns one or more Boggles; every Boggle is owned by a Flurf.
(c) **Some Flurfs own one Boggle; every Boggle is owned by one or more Flurfs.**
(d) Some Flurfs own one or more Boggles; every Boggle is owned by one Flurf.
(e) Some Flurfs own one Boggle; some Boggles are owned by a Flurf.
(f) None of the above answers is correct.

分析:

所有的 B is owned by 至少一个 F;
F 有可能拥有1个B;

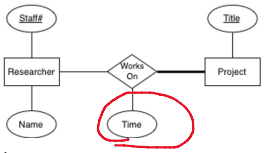
a. 每个F拥有一个B -->错误
b. 每个F拥有一个或多个B -->错误
c. **有一些F拥有一个B ; 每个B都被至少一个F拥有; -->对**
d. 有一些F拥有一个或多个B -->错误
e. 有一些F拥有一个B ; 有一些B被F所拥有(不是所有的B都被F拥有) -->错误

https://cgi.cse.unsw.edu.au/~cs3311/20T3/lectures/er-model/slides.html
PG.11

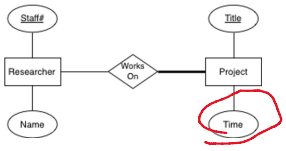


Question 2 (1 mark)
Which of the following best describes the difference in the meaning of the following two ER diagrams

(i)



(ii)



Proj..

(a) In (i), *every researcher must work on a project* and we know exactly how much time each spends on that project. In (ii) every researcher works on a project, but we only know the total time for the project.
(b) In (i) every project must have some (>=1? >1) researchers and we know exactly how much time each researcher spends on each project they work on. In (ii) every project has some researchers working on it, but we only know the total time for the project. (should be 1 or more)
(c) In (i) every researcher works on one project and we know exactly how much time each researcher spends on the project they work on. In (ii) every researcher works on at least one project, and we know the total time they spend working on all of their projects.
(d) In (i) every project must have some researchers and we know exactly how much time each researcher spends on each project they work on. In (ii) every project has some researchers working on it, and we know the total time each researcher spends working on all of their projects.
(e) None of the above answers is correct.

(i)

PROJECT	RESEARCHER	TIME
01	A	5
01	B	10

(ii)

TITLE	TIME
PROJECT1	5
PROJECT2	10

(d)

Researcher_name	**Staff#**	Time
A	z5201111	100hr

(d) In (i) every project must have some researchers and we know exactly how much time each researcher spends on each project they work on. In (ii) every project has some researchers working on it, and we know the total time each researcher spends working on all of their projects.

(e) None of the above answers is correct.

(d)

Researcher_name	**Staff#**	Time
A	z5201111	100hr
B	z111111	80hr

分析:

i. 每个project都有至少一个Researcher负责;
有一些Researcher会负责多个proj, 不是每个researcher都有proj;
我们知道每个Researcher花了多少时间在具体的proj上;

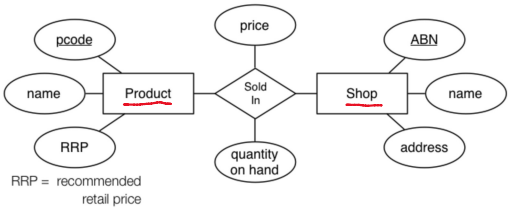
ii. ...一样;
我们只知道每个proj的总项目时间(不知道每个Researcher具体花了多少时间)

Confused:

b选项: https://webcms3.cse.unsw.edu.au/COMP3311/20T3/forums/2778133#2778133
some == more than one

❖ Example: Relationship Semantics (cont)

In some cases, a relationship needs associated attributes.



pcode	name	RRP
xx1	旺仔	$2
XX2	椰汁	$5

商店	商品名	Price	Quantity
TONGLI	旺仔	10	1

Shop

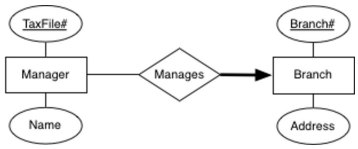
ABN	name	Addr.
通利001	TONGLI	ANZPARADE
Jas002	Jasmine	AnzParade

(Price and quantity are related to products in a particular shop)

Question 3 (1 mark)
Which of the ER diagrams below most accurately implements the following banking scenario:

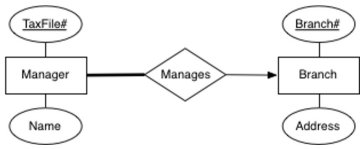
- every manager is associated with exactly one bank branch (the one they manage)
- not all branches have a manager(partial), but some may have more than one manager

(a)



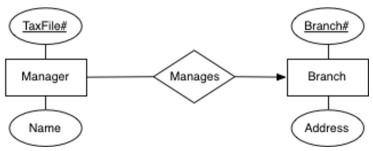
every branch have 1 or more managers

(b)



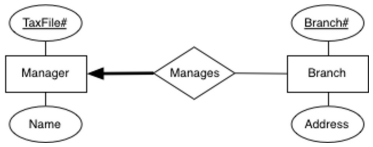
all manager manages 1 branch; A branch is managed by at least 1 managers.

(c)



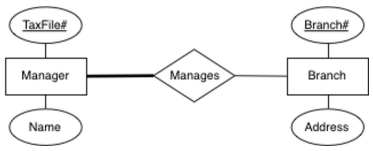
not all managers have branch

(d)



A manager manage different branches

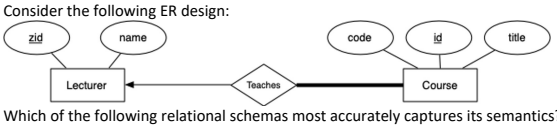
(e)



All managers manage at least 1 branches.

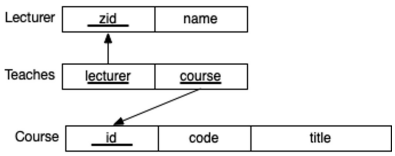
(f) None of the above is correct

Question 4 (1 mark)
Consider the following ER design:

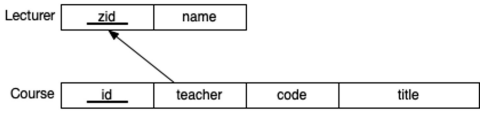


Which of the following relational schemas most accurately captures its semantics?

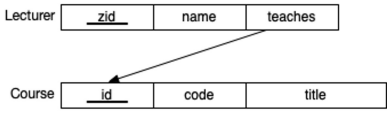
(a)



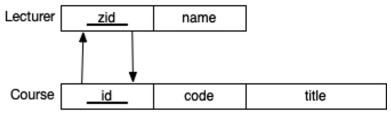
(b)



(c)



(d)



(e) None of the above is correct

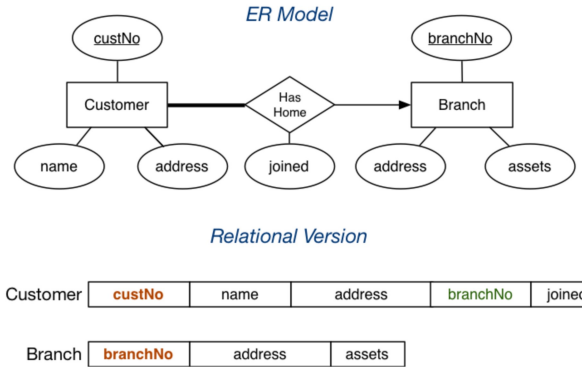
分析:

所有的课程都有老师教, 都由一个老师来教;
不是所有的老师都教课;
一个老师可能教多个课程;

a. 每个课程由不同老师来带
b. 每个课程由一个老师来带
c. 一个老师只带一门课
d. ???

❖ Mapping 1:N Relationships

Example:



Relational Version

Customer	custNo	name	address	branchNo	joined

Branch	branchNo	address	assets

https://cgi.cse.unsw.edu.au/~cs3311/20T3/notes/B/notes.html