Reading Homework 7 (Due Monday 3/12, 3:20PM)

Due Mar 12, 2018 at 3:20pm **Points** 12 **Questions** 12 **Time Limit** None

Instructions

The reading assignment here is: Chapters 8.1, 8.3.1, 8.3.2 (in order to understand Section 8.3.1 and 8.3.2, you will need to read the introductory text of Section 8.3 which discusses the notation the textbook uses in those sections).

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	18 minutes	4 out of 12

Score for this quiz: **4** out of 12
Submitted Mar 12, 2018 at 11:53am
This attempt took 18 minutes.

Question 1

1 / 1 pts

Larger schemas (in terms of being wide / having many attributes) typically lead to more data inconsistencies compared to equivalent smaller schemas.

Correct!

- (•) True
- ( ) False

Question 2

0 / 1 pts

Decomposition of "classroom(building, room_number, capacity)" into two relations, "classroom(building, room_number)" and "classroom(building, capacity)", is a lossy decomposition.

orrect Answer

- True

'ou Answered

- False

Question 3

1 / 1 pts

For a functional dependency to hold on a relation schema, it must be true for most, but not necessarily all, legal instances of the relation.

- True

Correct!

- False

Question 4

0 / 1 pts

Which of the following FDs hold on this relation instance?

A	B	C
a_1	b_1	c_1
a_1	b_1	c_2
a_2	b_1	c_1
a_2	b_1	c_3

orrect Answer

- A --> B

'ou Answered

- A --> C

- B --> C

Question 5

0 / 1 pts

On the following table, which is Figure 8.4 of your textbook, the book states that A --> C is satisfied. Name one other (non-trivial) functional dependency that is satisfied that has only one attribute on the left side of the arrow, and one attribute on the right side of the arrow. (If you believe there is no other such dependency, answer N --> N)

C --> D

A	B	C	D
a_1	b_1	c_1	d_1
a_1	b_2	c_1	d_2
a_2	b_2	c_2	d_2
a_2	b_3	c_2	d_3
a_3	b_3	c_2	d_4

Answer 1:

'ou Answered: C

orrect Answer: D

orrect Answer: d

Answer 2:

'ou Answered: D

orrect Answer: B

orrect Answer: b

Question 6

0 / 1 pts

On the following table (same one as above), we already mentioned that the book states that A --> C is satisfied. Which of the following is one of the tables that are created during the process of BCNF decomposition using the A --> C functional dependency.

A	B	C	D
a_1	b_1	c_1	d_1
a_1	b_2	c_1	d_2
a_2	b_2	c_2	d_2
a_2	b_3	c_2	d_3
a_3	b_3	c_2	d_4

- (A, B)
- (A)
- (C,D)

'ou Answered
- (A, B, C)

orrect Answer
- (A, B, D)
- (A, B, C, D)

Question 7

0 / 1 pts

After performing the the BCNF decomposition from the previous question, the new schema is in Boyce-Codd Normal Form.

'ou Answered
- True

orrect Answer
- False

Question 8

1 / 1 pts

On the following table (same one as previous question), does the FD: "AB --> C" hold?

A	B	C	D
a_1	b_1	c_1	d_1
a_1	b_2	c_1	d_2
a_2	b_2	c_2	d_2
a_2	b_3	c_2	d_3
a_3	b_3	c_2	d_4

Correct!

- (•) True
- ( ) False

Question 9

0 / 1 pts

On the above table, does the FD: "AC --> D" hold?

'ou Answered

- (•) True

orrect Answer

- ( ) False

Question 10

0 / 1 pts

On the instructor table: instructor(ID, name, dept_name, salary), which of the following FDs (all of which are valid FDs) are trivial? Pick all that are true.

ID --> name

ID --> ID, name

orrect Answer

ID, name --> ID

'ou Answered

ID, name, dept_name --> salary

orrect Answer

ID, name, dept_name --> dept_name

orrect Answer

ID, name --> ID, name

Question 11

0 / 1 pts

Consider the relation: advisor(s_id, i_id, s_name, s_dept_name, i_name, i_dept_name), obtained by combining attributes from several relations. Which of the following is NOT a valid FD on this relation? Keep in mind that: s_id is the primary key for the original advisor(s_id, i_id) relation.

s_id --> i_id

orrect Answer

i_id --> s_dept_name

'ou Answered

s_id --> i_name

i_id --> i_name

Question 12

1 / 1 pts

On the flights table from the SQL assignment: "flight_id --> source, dest" is a valid FD.

Correct!

- (•) True
- ( ) False

Quiz Score: **4** out of 12