MONASH University

FIT9132 Introduction to databases - S1 2022

Started on	Friday, 22 April 2022, 2:22 PM
State	Finished
Completed on	Wednesday, 15 June 2022, 12:42 AM
Time taken	53 days 10 hours
Marks	8.00/13.00
Grade	**6.15** out of 10.00 (**62**%)

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Question 1

Correct

Mark 1.00 out of 1.00

A _____ derives its name from the fact that a collection of multiple entries of the same type can exist for any single key attribute occurrence.

Select one:

- ○ a.   primary key
- ○ b.   transitive dependency
- ○ c.   partial dependency
- ⦿ d.   repeating group   ✔ Correct

The correct answer is: repeating group

Question 2

Correct

Mark 1.00 out of 1.00

A(n) _____ exists when there are functional dependencies such that Y is functionally dependent on X, Z is functionally dependent on Y, and X is the primary key.

Select one:

- ○ a.   partial dependency
- ○ b.   repeating group
- ⦿ c.   transitive dependency   ✔ Correct
- ○ d.   atomic attribute

Question 3

Correct

Mark 1.00 out of 1.00

Normalization works through a series of stages called normal forms. For most purposes in business database design, _____ stages are as high as you need to go in the normalization process.

Select one:

○ a. two

○ b. four

◉ c. three   ✔ Correct

○ d. five

The correct answer is: three

Question 4

Correct

Mark 1.00 out of 1.00

A relation that has key attributes defined and has no repeating groups is said to be in _____.

Select one:

◉ a. 1NF   ✔ Correct

○ b. 2NF

○ c. 3NF

○ d. UNF

The correct answer is: 1NF

Question 5

Correct

Mark 1.00 out of 1.00

Given the relation PROJECT(PROJ_NUM, PROJ_NAME), what is the highest form this relation is in:

Select one:

◉ a. 3NF   ✔ Correct

○ b. UNF

○ c. 2NF

○ d. 1NF

The correct answer is: 3NF

Question 6

Incorrect

Mark 0.00 out of 1.00

Given the relation EMPLOYEE (<u>EMP_NUM</u>, EMP_NAME, JOB_CLASS, CHG_HOUR), which is the highest form this relation is in:

Select one:

○ a.   2NF

○ b.   UNF

◉ c.   1NF   ✖   Incorrect

○ d.   3NF

The correct answer is: 2NF

Question 7

Correct

Mark 1.00 out of 1.00

Given the relation ASSIGNMENT (<u>PROJ_NUM, EMP_NUM</u>, PROJ_NAME, EMP_NAME, JOB_CLASS, CHG_HOUR, HOURS), which of the following is a transitive dependency?

Select one:

○ a.   PROJ_NUM, EMP_NUM --> HOURS

○ b.   EMP_NUM —> EMP_NAME

◉ c.   JOB_CLASS —> CHG_HOUR   ✔   Correct

○ d.   PROJ_NUM —> PROJ_NAME

The correct answer is: JOB_CLASS —> CHG_HOUR

Question 8

Incorrect

Mark 0.00 out of 1.00

Given the relation ASSIGNMENT (<u>PROJ_NUM, EMP_NUM</u>, EMP_NAME, PROJ_NAME, JOB_CLASS, CHG_HOUR, HOURS) and PROJ_NUM —> PROJ_NAME is a partial dependency, which of the following is a correct elimination result for **this** partial dependency?

Select one:

○ a.   PROJECT (<u>PROJ_NUM</u>, PROJ_NAME)

ASSIGNMENT (<u>PROJ_NUM, EMP_NUM</u>, EMP_NAME, JOB_CLASS, CHG_HOUR, HOURS)

◉ b.   PROJECT (<u>PROJ_NUM</u>, PROJ_NAME)   ✖   Incorrect

ASSIGNMENT (<u>PROJ_NUM, EMP_NUM</u>, EMP_NAME, PROJ_NAME, JOB_CLASS, CHG_HOUR, HOURS)

○ c.   PROJECT (PROJ_NUM, PROJ_NAME, JOB_CLASS, CHG_HOUR, HOURS)

ASSIGNMENT (PROJ_NUM, EMP_NUM, EMP_NAME)

  d.   PROJECT (PROJ_NUM, PROJ_NAME)

ASSIGNMENT (EMP_NUM, EMP_NAME, JOB_CLASS, CHG_HOUR, HOURS)

The correct answer is:
PROJECT (PROJ_NUM, PROJ_NAME)
ASSIGNMENT (PROJ_NUM, EMP_NUM, EMP_NAME, JOB_CLASS, CHG_HOUR, HOURS)

Question 9

Correct

Mark 1.00 out of 1.00

Dependencies based on only a part of a composite primary key are known as _____ dependencies.

Select one:

  a.   composite

  b.   incomplete

  c.   partial   ✔ Correct

  d.   transitive

The correct answer is: partial

Question 10

Incorrect

Mark 0.00 out of 1.00

Given the relation EMPLOYEE (EMP_NUM, EMP_NAME, JOB_CLASS, CHG_HOUR) and JOB_CLASS —> CHG_HOUR is a transitive dependency , which of the following is a correct transitive dependency elimination result?

Select one:

  a.   ✖ Incorrect

      JOB (JOB_CLASS, CHG_HOUR)
      EMPLOYEE (EMP_NUM, EMP_NAME)

  b.

      JOB (EMP_NUM, JOB_CLASS, CHG_HOUR)
      EMPLOYEE(EMP_NUM, EMP_NAME)

  c.

      JOB (JOB_CLASS, CHG_HOUR)
      EMPLOYEE (EMP_NUM, EMP_NAME, JOB_CLASS, CHG_HOUR)

  d.

      JOB (JOB_CLASS, CHG_HOUR)
      EMPLOYEE(EMP_NUM, EMP_NAME, JOB_CLASS)

JOB (<u>JOB_CLASS</u>, CHG_HOUR)
EMPLOYEE(<u>EMP_NUM</u>, EMP_NAME, JOB_CLASS)

Question 11

Correct

Mark 1.00 out of 1.00

A relation that is in 2NF and contains no transitive dependencies is said to be in _____.

Select one:

○ a. UNF

○ b. 2NF

○ c. 1NF

◉ d. 3NF ✔ Correct

The correct answer is: 3NF

Question 12

Incorrect

Mark 0.00 out of 1.00

Given the relation ASSIGNMENT (<u>PROJ_NUM, EMP_NUM</u>, PROJ_NAME, EMP_NAME, JOB_CLASS, CHG_HOUR, HOURS), which of the following is a partial dependency?

Select one:

○ a. PROJ_NUM, EMP_NUM —> JOB_CLASS

○ b. JOB_CLASS —> CHG_HOUR

◉ c. PROJ_NUM, EMP_NUM --> CHG_HOUR ✖ Incorrect

○ d. EMP_NUM —> EMP_NAME, JOB_CLASS, CHG_HOUR

The correct answer is: EMP_NUM —> EMP_NAME, JOB_CLASS, CHG_HOUR

Question 13

Incorrect

Mark 0.00 out of 1.00

Dependencies that are based on only a part of a composite primary key are called transitive dependencies.

Select one:

◉ True ✖

○ False

The correct answer is 'False'.

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