**D427 Practice Test**

1. Seattle, WA 98111

USA

How many attributes are present in the address fragment?

1. 1
2. 2
3. 3
4. 4
5. The Book table has the following columns:

genre – varchar(20)

pages – integer

author\_id – char(3)

isbn\_number – varchar(20)

Which column should be designated at the primary key for the Book table?

1. genre
2. pages
3. author\_id
4. isbn\_number
5. The Book table has the following columns:

genre – varchar(20)

pages – integer

author\_id – char(3)

isbn\_number – varchar(20)

Which column should be designated at the foreign key for the Book table?

1. genre
2. pages
3. author\_id
4. isbn\_number
5. Which data type represents numbers with fractional values:
6. Integer
7. Decimal
8. Character
9. Binary
10. Which of the following are DDL commands?
11. INSERT
12. SELECT
13. CREATE INDEX
14. UPDATE
15. Which of the following is a DML command?
16. CREATE VIEW
17. CREATE TABLE
18. INSERT
19. ALTER INDEX

CREATE TABLE Invoice (

invoice\_id INT NOT NULL AUTO\_INCREMENT,

date DATE NOT NULL,

customer\_id INT NOT NULL,

PRIMARY KEY (invoice\_id),

FOREIGN KEY (customer\_id) REFERENCES Customer (customer\_id) **ON DELETE CASCADE**

);

Looking at the Customer and Invoice tables and the CREATE TABLE for the Invoice table with foreign key reference statement above, what would happen to invoices in the Invoice table that are linked to a customer if that customer is deleted.

1. Those invoices would remain in the database.
2. Those invoices would be deleted also.
3. The Customer ID for those invoices would be changed to NULL.
4. Nothing would happen.

Invoice ID (PK)

Date

Customer ID (FK)

Customer ID (PK)

Customer Last Name

Customer First Name

Street Address

City

State

Zip

CREATE TABLE Invoice (

invoice\_id INT NOT NULL AUTO\_INCREMENT,

date DATE NOT NULL,

customer\_id INT NOT NULL,

PRIMARY KEY (invoice\_id),

FOREIGN KEY (customer\_id) REFERENCES Customer (customer\_id) **ON DELETE RESTRICT**

);

Looking at the Customer and Invoice tables and the CREATE TABLE for the Invoice table with foreign key reference statement above, what would happen to invoices in the Invoice table that are linked to a customer if that customer is deleted.

1. Those invoices would remain in the database.
2. Those invoices would be deleted also.
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4. The delete of the Customer would not be allowed.

Invoice ID (PK)

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CREATE TABLE Invoice (

invoice\_id INT NOT NULL AUTO\_INCREMENT,

date DATE NOT NULL,

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PRIMARY KEY (invoice\_id),

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);

Looking at the Customer and Invoice tables and the CREATE TABLE for the Invoice table with foreign key reference statement above, what would happen to invoices in the Invoice table that are linked to a customer if that customer is deleted.

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10.

Which of the following are true about materialized view (Choose 2)?

1. It is a base table.
2. It is stored.
3. It must be refreshed whenever the base table changes.
4. The results are stored as a temporary table.

11.

The Customer table will have the following columns:  
CustomerID—positive integer  
FirstName—variable-length string with up to 50 characters  
MiddleInitial—fixed-length string with 1 character  
LastName—variable-length string with up to 50 characters  
DateOfBirth—date  
CreditLimit—positive decimal value representing a cost of up to $19,999, with 2 digits for cents  
Write a SQL statement to create the Customer table.  
Do not add any additional constraints to any column beyond what is stated.

12.

The Genre table has the following columns:  
GenreCode—variable-length string, primary key  
GenreDescription—variable-length string  
The Book table should have the following columns:  
Title—variable-length string, maximum 30 characters  
GenreCode—variable-length string, maximum 5 characters  
Write a SQL statement to create the Book table. Designate the GenreCode column in the Book table as a foreign key to the GenreCode column in the Genre table.

13.

The Automobile table has the following columns:  
ID—integer, primary key  
Make—variable-length string  
Model—variable-length string  
Year—integer  
A new column must be added to the Automobile table:  
Column name: SafetyRating  
Data type: decimal(3,1)  
Write a SQL statement to add the SafetyRating column to the Automobile table.

14.

The Book table has the following columns:  
ID—integer, primary key  
Title—variable-length string  
Genre—variable-length string  
Year—integer  
Write a SQL statement to create a view named MyBooks that contains the Title, Genre, and Year columns for all movies. Ensure your result set returns the columns in the order indicated.

15.

A database has a view named BookView.  
Write a SQL statement to delete the view named BookView from the database.

16.

The Book table has the following columns:  
ID—integer, primary key  
Title—variable-length string  
Genre—variable-length string  
Year—integer  
Write a SQL statement to modify the Book table to make the ID column the primary key.

17.

The Book table has the following columns:  
ID—integer, primary key  
Title—variable-length string  
Genre—variable-length string  
Year—integer  
The YearSales table has the following columns:  
Year—integer  
TotalSales—bigint unsigned  
Releases—integer  
Write a SQL statement to designate the Year column in the Book table as a foreign key to the Year column in the YearSales table.

18.

The Book table has the following columns:  
ID—integer, primary key  
Title—variable-length string  
Genre—variable-length string  
Year—integer  
Write a SQL statement to create an index named idx\_year on the Year column of the Book table.

19.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer  
The following data needs to be added to the Book table:  
Title Genre Year  
The Joy Luck Club Fiction 1989  
Write a SQL statement to insert the indicated data into the Book table.

20.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL statement to delete the row with the ID value of 3 from the Book table.

21.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL statement to update the Year value to be 2022 for all books with a Year value of 2020.

22. Which query illustrates performing an outer join of the Movie table with a different table?

1. SELECT B.Title, A.Author FROM Book B, Author A  
   WHERE B.AuthorID = A.AuthorID;
2. SELECT B.Title, A.Author FROM Book B  
   LEFT JOIN Book MB ON B.ID = MB.IF, Author A
3. SELECT Book.Title, A.Author FROM Book B  
   RIGHT JOIN Author A ON B.AuthorID = A.ID
4. SELECT B.Title, A.Author FROM Book B  
   INNER JOIN Author A ON B.AuthorID = A.ID

23.

Assume there are two tables, A and B.  
Which rows will always be included in the result set if Table A is inner joined with Table B?

a. Only rows in Tables A and B that share the join condition

b. All rows in Table B

c. All rows in Table A

d. Only rows in Tables A and B that do not share the join condition.

24.

The database contains a table named Book.  
Write a SQL query to return all data from the Book table without directly referencing any column names.

25.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL query to retrieve the Title and Genre values for all records in the Book table with a Year value of 2020. Ensure your result set returns the columns in the order indicated.

26.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL query to display all Title values in alphabetical order A–Z.

*Continued below*

27.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL query to output the unique Genre values and the number of books with each genre value from the Book table as GenreCount. Sort the results by the Genre in alphabetical order A–Z. Ensure your result set returns the columns in the order indicated.

28.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

The YearSales table has the following columns:  
Year—integer  
TotalSales—bigint unsigned  
Releases—integer  
Write a SQL query to display both the Title and the TotalSales (if available) for all books. Ensure your result set returns the columns in the order indicated.

29.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL query to return how many books have a Year value of 2019.

**D427 Practice Test ANSWER KEY**

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The Customer table will have the following columns:  
CustomerID—positive integer  
FirstName—variable-length string with up to 50 characters  
MiddleInitial—fixed-length string with 1 character  
LastName—variable-length string with up to 50 characters  
DateOfBirth—date  
CreditLimit—positive decimal value representing a cost of up to $19,999, with 2 digits for cents  
Write a SQL statement to create the Customer table.  
Do not add any additional constraints to any column beyond what is stated.

CREATE TABLE Customer (

CustomerID INT UNSIGNED,

FirstName VARCHAR(50),

MiddleInitial CHAR(1),

LastName VARCHAR(50),

DateOfBirth DATE,

CreditLimit DECIMAL(7,2) UNSIGNED

);

12.

The Genre table has the following columns:  
GenreCode—variable-length string, primary key  
GenreDescription—variable-length string

The Book table should have the following columns:  
Title—variable-length string, maximum 30 characters  
GenreCode—variable-length string, maximum 5 characters

Write a SQL statement to create the Book table. Designate the GenreCode column in the Book table as a foreign key to the GenreCode column in the Genre table.

**CREATE TABLE Book (**

**Title VARCHAR(30),**

**GenreCode VARCHAR(5),**

**FOREIGN KEY (GenreCode) REFERENCES Genre(GenreCode)**

**);**

13.

The Automobile table has the following columns:

ID—integer, primary key  
Make—variable-length string  
Model—variable-length string  
Year—integer

A new column must be added to the Automobile table:  
Column name: SafetyRating  
Data type: decimal(3,1)

Write a SQL statement to add the SafetyRating column to the Automobile table.

**ALTER TABLE Automobile**

**ADD SafetyRating DECIMAL(3,1);**

14.

The Book table has the following columns:  
ID—integer, primary key  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL statement to create a view named MyBooks that contains the Title, Genre, and Year columns for all ~~movies~~ books. Ensure your result set returns the columns in the order indicated.

**CREATE VIEW MyBooks AS**

**SELECT Title, Genre, Year**

**FROM Book;**

15.

A database has a view named BookView.  
Write a SQL statement to delete the view named BookView from the database.

**DROP VIEW BookView;**

16.

The Book table has the following columns:  
ID—integer, primary key  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL statement to modify the Book table to make the ID column the primary key.

**ALTER TABLE Book**

**ADD PRIMARY KEY (ID);**

17.

The Book table has the following columns:  
ID—integer, primary key  
Title—variable-length string  
Genre—variable-length string  
Year—integer

The YearSales table has the following columns:  
Year—integer  
TotalSales—bigint unsigned  
Releases—integer

Write a SQL statement to designate the Year column in the Book table as a foreign key to the Year column in the TotalSales table.

**ALTER TABLE Book**

**ADD FOREIGN KEY (Year) REFERENCES YearSales (Year);**

18.

The Book table has the following columns:  
ID—integer, primary key  
Title—variable-length string  
Genre—variable-length string  
Year—integer  
Write a SQL statement to create an index named idx\_year on the Year column of the Book table.

**CREATE INDEX idx\_year ON Book(Year);**

19.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

The following data needs to be added to the Book table:  
Title Genre Year  
The Joy Luck Club Fiction 1989

Write a SQL statement to insert the indicated data into the Book table.

**INSERT INTO Book (Title, Genre, Year) VALUES**

**(‘The Joy Luck Club’, ‘Fiction’, 1989);**

20.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL statement to delete the row with the ID value of 3 from the Book table.

**DELETE from Book WHERE ID = 3;**

21.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL statement to update the Year value to be 2022 for all books with a Year value of 2020.

**UPDATE Book  
SET Year = 2022  
WHERE Year = 2020;**

22. Which query illustrates performing an outer join of the Movie table with a different table?

1. SELECT B.Title, A.Author FROM Book B, Author A  
   WHERE B.AuthorID = A.AuthorID;
2. SELECT B.Title, A.Author FROM Book B  
   LEFT JOIN Book MB ON B.ID = MB.IF, Author A
3. SELECT Book.Title, A.Author FROM Book B  
   RIGHT JOIN Author A ON B.AuthorID = A.ID
4. SELECT B.Title, A.Author FROM Book B  
   INNER JOIN Author A ON B.AuthorID = A.ID

This question is asking which statement illustrates an OUTER JOIN, not an INNER JOIN. The only 2 statements above that include outer joins are b and c (LEFT JOIN and RIGHT JOIN).

B is an invalid statement, so C has to be the answer. Please review this document to get a good understanding of outer versus inner joins:

[Left joins / Right Joins / Inner Joins - Examples](https://westerngovernorsuniversity-my.sharepoint.com/:w:/g/personal/maria_schenk_wgu_edu/Eafty6p0RX9PhR5ytuM4igUB1ykNDPOm3eurRHGlA0U7HQ?e=R5Ujvj)

23.

Assume there are two tables, A and B.  
Which rows will always be included in the result set if Table A is inner joined with Table B?

a. Only rows in Tables A and B that share the join condition

b. All rows in Table B

c. All rows in Table A

d. Only rows in Tables A and B that do not share the join condition.

24.

The database contains a table named Book.  
Write a SQL query to return all data from the Book table without directly referencing any column names.

**SELECT \* FROM Book;**

25.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL query to retrieve the Title and Genre values for all records in the Book table with a Year value of 2020. Ensure your result set returns the columns in the order indicated.

**SELECT Title, Genre**

**FROM Book**

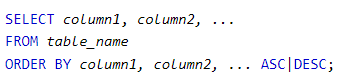
**WHERE Year = 2020;**

26.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL query to display all Title values in alphabetical order A–Z.

This question is testing to see if the student knows how to use the ORDER BY clause. Here is the general syntax:



And here is the correct answer.

**SELECT Title**

**FROM Book**

**ORDER BY Title ASC;**

Or, this is also correct because ascending order is the default.

**SELECT Title**

**FROM Book**

**ORDER BY Title;**

27.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL query to output the unique Genre values and the number of books with each genre value from the Book table as GenreCount. Sort the results by the Genre in alphabetical order A–Z. Ensure your result set returns the columns in the order indicated.

In this case you are being asked to count the number of Movies having each type of Genre. For this reason, you must use GROUP BY to group all moves with each Genre together and then do **a count. The attribute you are grouping on must be listed first.**

**SELECT Genre, COUNT(\*) AS GenreCount  
FROM Book  
GROUP BY Genre  
ORDER BY Genre ASC;**

Please take a look at these resources:

[GROUP BY](https://www.w3schools.com/sql/sql_groupby.asp)   
[COUNT](https://www.w3schools.com/sql/sql_count_avg_sum.asp)

28.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

The YearSales table has the following columns:  
Year—integer  
TotalSales—bigint unsigned  
Releases—integer  
Write a SQL query to display both the Title and the TotalSales (if available) for all books. Ensure your result set returns the columns in the order indicated.

Here, you must have a JOIN because you are pulling a value from each of the tables.

**SELECT Title, TotalSales   
FROM Book LEFT JOIN YearSales  
ON Book.Year = YearSales.Year;**

29.

The Book table has the following columns:  
ID—integer, primary key, auto\_increment  
Title—variable-length string  
Genre—variable-length string  
Year—integer

Write a SQL query to return how many books have a Year value of 2019.

**SELECT COUNT(\*)**

**FROM Book**

**WHERE Year = 2019;**