

## CST363 online Database - Quiz 3

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Answer the following with short answers using complete sentences.

1. What is meant by and what is the purpose of concurrency control in a DBMS?

The concurrency control is what is used to make sure that the data in a database is maintained correctly when inserts, updates, and drops are used. It determines what is to happen when multiple transactions are trying to access the same row or record, and based on how the control is setup up, determines what steps to take in handling the error.

2. Explain the tradeoff that exists in concurrency control.

When locking tables, rows, databases, it can consume lots of resources and lead to improper utilization of the database. These tradeoffs need to be considered when designing a database and an application so that you can make it the most efficient and utilize the database properly.

3. Define the terms: dirty read, non repeatable read and phantom read.

Dirty read: Happens when a transaction is allowed to read data from a row that was modified by another process, but has yet to be committed.

Nonrepeatable read: Happens when executing a transaction, a row is received twice and the values within the row differ between reads.

Phantom read: Happens when executing a transaction and new rows are added by another process to the records that are being read

4. Use the Art Course database.

- a. Create a view named CourseView that shows unique course names and fees.

```
create view CourseView as
select distinct course, fee
from COURSE
```

- b. Code an SQL statement that displays the data in the view CourseView sorted alphabetically by Course.

```
select *
from CourseView
order by course
```

5. Using the PET database

- a. Create an SQL statement named CatBreedView that shows PedID, PetName, PetBreed and DOB for cats.

```
create view CatBreedView as
select PetID, PetName, PetBreed, PetDOB
```

```
from PET
where PetType = 'Cat'
```

- b. Create an SQL statement that selects from CatBreedView sorted alphabetically by PetName.

```
select *
from CatBreedView
order by PetName
```

- c. Are you able to perform an update of CatBreedView? If yes, give an example of a successful update. If not, explain why not. You may want to read

<https://dev.mysql.com/doc/refman/5.7/en/view-updatability.html>

Yes we are able to perform an update of CatBreedView.

```
update CatBreedView
set PetDOB='2018-01-28'
where PetID=6
```

- d. Are you able to insert and delete from CatBreedView? If not, explain why not.

No we are not able to perform an insert or delete from CatBreedView. We are not able to insert because the table doesn't have a default value for the information that is not part of the view we created. When you try and do an insert to the view, you will get an error because of missing information from the underlying table.