

Name: \_\_\_\_\_

Consider two objects  $x$  and  $y$  that are equal, but not identical and they each have a collection associated with them, and these collections are equal. Can the collections be identical if:

- a.) The collections are associated with the objects via ownership semantics.
- b.) The collections are associated with the objects via reference semantics.
- c.) Explain briefly.

Based on the project for this course, write up the Artist entity as an object in an object oriented database.

Compare path expressions in object oriented databases to relational algebra. What are the differences, what are the similarities?

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Are the following two sets equivalent? Explain.

Set X	Set Y
$A \rightarrow C$	$A \rightarrow C$
$C \rightarrow BE$	$A \rightarrow BE$
$D \rightarrow C$	$D \rightarrow CE$
	$C \rightarrow BE$

Give a minimal cover for one of the above sets, indicate which set it is for.

Design a set of tables for the functional dependencies in the previous question. Choose the most restrictive normal form of (1st, 2nd, 3rd, BCNF) that it satisfies and briefly explain why it is the appropriate one.