## CS 443 Database Systems

## MyDB 4 (50 points)

## Due Thursday July 13th in dropbox as a single file.

**MyDB 4: Step 4 of your Personal Database Application (MyDB)**

Note: This assignment is a modification of material developed by Stanford Database Group

1. (40 pts.) Write four queries on your MyDB, using the select-from-where construct of SQL. To receive full, credit your queries should be as given below. None of your queries should return more than 20 tuples. Hand in screen shots of your queries along with a print out of the execution of the three queries (query results).

* One query is just a simple select from one relation with a limit clause that limits the results to 20 or fewer tuples.

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| Selecting Item |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\A) Select and Limit Item.png |

* One query must involve a join for two tables with a limit clause that limits the results to 20 or fewer tuples.

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| Joining Item and IncludedIn |
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* One query with joins on foreign keys across three or more tables. Limit the results to 20 or fewer tuples.

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| Joining Item, IncludedIn and CustomerOrder |
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* One query must be aggregate using a group by clause.

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| Employees with Pricey Orders |
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1. (30 pts.) Write three data modification commands on your project. One should be a simple insert, another a simple update, and the last an update that updates several tuples at once. Each of these commands should be legal, given the constraints you created for you database in MyDB 1 and MyDB 2. You might want to try out your commands on small data before trying it on your full database. Hand in screen shots that show your modification commands running in a convincing fashion.

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| **SIMPLE INSERT:** Inserting a New Customer |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\A) Insert New Customer.png |
| System Response |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\A) Insert New Customer Success.png |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\A) Insert New Customer Success2.png |

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| **SIMPLE UPDATE:** Updating a Customer’s Order’s Date |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\B) Update CustomerOrder Date.png |
| System Response |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\B) Update CustomerOrder Date Success.png |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\B) Update CustomerOrder Date Success2.png |

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| **UPDATING MULTIPLE TUPLES:** Updating the Quantity of Orders in IncludedIn |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\C) IncludedIn Updating orderNo 1.png |
| IncludedIn Table BEFORE Change |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\C) IncludedIn Before Change.png |
| IncludedIn Table AFTER Change |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\C) IncludedIn After Change.png |

1. (30 pts.) Views: Watch the captures, review the notes, and read the view section your textbook. Then do the following:
2. Create a view based on a simple relation. Show your CREATE VIEW statements and the response of the system. Also, show a query involving the view and the system response. Your query should return at most 20 tuples.

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| Item Desc View Query and System Response |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\A) Item Desc View Query.png |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\A) Item Desc View System Response.png |
| Item Desc View |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\A) Item Desc View.png |

1. Show an insert statement into your base table and the system response to running the statement. Run before and after (the insert) select statements on both the view and the base table to show how both change.

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| Inserting New Item into Item Table |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\B1) Insert New Item.png |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\B1) Insert New Item Success.png |

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| Item Table BEFORE and AFTER Change |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\B2) Item Base Table Before.png |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\B2) Item Base Table After.png |

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| Item Desc View BEFORE and AFTER Change |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\B2) Item Desc View Before.png |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\B2) Item Desc View After.png |

1. Create a view based on at least two relations (a join). Show your CREATE VIEW statements and the response of the system. Also, show a query involving the view and the system response. Your query should return at most 20 tuples.

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| Customer Item Info View and System Response |
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| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\C) Customer Item Info View System Response.png |

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| Customer Item Info View |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\C) Customer Item Info View.png |

1. Show a system response to and insert statement into one of the base tables involved in the view. Select \* from the view to show the effects of the inserted values.

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| Inserting an Item into a Customer’s Order |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\D) Customer Item Info View Insert Query.png |
| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\D) Customer Item Info View Insert Query System Response.png |

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| Customer Item Info View BEFORE and AFTER Change |
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| C:\Users\Student\AppData\Local\Microsoft\Windows\INetCache\Content.Word\D) Customer Item Info View After.png |

**Submit as a single document containing the screen shots.**