

**Instructions:** Write SQL statements (DML or DDL) to perform the action requested in each problem. Use the tables displayed below as guides for answering the questions. Save your queries in a *single text file* and upload it to canvas. Before each query, include the following comment, replacing X with the corresponding problem number. If a single submission is made for two students working together, include both uwnetids delimited with a comma (e.g. (user1,user2)):

```
/* *** Homework 2: Question X (uwnetid) *** */
```

### Employee

EmployeeId	FirstName	LastName	Gender	ManagerId	EmailAddress
106	Petrina	Tillman	F	NULL	Petrina.Tillman@company.com
112	Alec	Wilhoit	M	106	Alec.Wilhoit@company.com
117	Lourie	Johns	F	106	Lourie.Johns@company.com
119	Florencio	Chaves	M	112	Florencio.Chaves@company.com
122	Tanya	Vanasse	F	112	Tanya.Vanasse@company.com
127	Chana	Thorman	F	112	Chana.Thorman@company.com
139	Geoffrey	Sjorgren	M	117	Geoffrey.Sjorgren@company.com
140	Gorardo	Borrego	M	117	Gorardo.Borrego@company.com
142	Blain	Wishon	M	117	Blain.Wishon@company.com
150	Danita	Lansford	F	122	Danita.Lansford@company.com

### Class

ClassId	Name	InstructorId	TotalHours
1001	Customer Service 101	119	10
1002	Synergy For Dummies	119	20
1003	Conflict Management	112	10
1004	Building Relationships	117	25
1005	Management Essentials	112	40
1006	Office Synergy	117	10
1007	How to Succeed	112	10

### Transcript

TranscriptId	EmployeeId	ClassId	Status
1	106	1005	COMPLETED
2	106	1002	REGISTERED
3	106	1003	COMPLETED
4	112	1003	REGISTERED
5	112	1001	COMPLETED
6	117	1001	COMPLETED
7	117	1002	COMPLETED
8	127	1001	REGISTERED
9	127	1002	REGISTERED
10	127	1003	COMPLETED
11	139	1004	REGISTERED
12	139	1006	REGISTERED
13	142	1003	COMPLETED
14	142	1005	REGISTERED
15	150	1005	COMPLETED

---

### DDL: Creating the Schema

1. Write a DDL statement that will create the table Employee described above.
2. Write a DDL statement that will create the table Transcript as described above. Use an Auto Incremented Primary Key for this table. Apply constraints to this table so that EmployeeId and ClassId cannot contain NULL values.
3. Write a DDL statement that will create the table Class as described above. Use an Auto Incremented Primary Key for this table, and begin the auto\_increment at 1001.
4. Write an ALTER statement to rename the column TotalHours (in the Class table) to CreditHours.

---

### DML: Inserting and Querying the Data

5. Write queries to populate the tables as described above. Use the Auto Incrementing keys to your advantage when possible.
6. Write a query that lists all employees that have completed or registered for a class with the name "Management" or "Synergy" in the title. Do not list employees that have NOT completed or registered. Include the course name, the employees first and last name, and their gender.
7. Write a query to count the number of employees that have either registered for or completed each class. Include classes that have no registration or completion. Sort your results in descending order by employee count (e.g. Most popular classes at the top, least popular at the bottom).
8. Write a SELECT query that sums the total number of credit hours completed for each Employee (including employees that have taken no courses). Also include the total number of credit hours for which each Employee has registered for. The result set should include 3 columns: *Name*, *HoursCompleted*, *HoursRegistered*. Name should be a concatenation of First and Last name (use CONCAT function) and all results with "zero" hours in either category should be displayed as 0 (not null). (use IFNULL function if necessary). Finally order the results by the employee's last name (ascending, A-Z)