

## SQL Exercise 8: Practice Final Exam

This SQL practice exam is your trial run for the final exam next week. Read each question carefully and answer it as required. Do not provide any unsolicited information.

This practice final is comprehensive: you may use whatever scripting strategies you wish, as long as you carry out the assigned tasks. As in other SQL exercises, you should include successfully run scripts and their outputs for the following tasks:

1. Add two new columns to the Course table called StartDate and EndDate. Populate these columns with start date as 20th January 2012 and end date as 20th May 2012 for all rows. Include both the script for adding the new columns and the script for inserting the new data.

CourseID	CourseName	Description	Credits	Level	FacultyID	Location	Schedule	StartDate	EndDate
54311	Statistics	Analytical	2	G	1246	A333	M/W 9:00-10:45	2012-01-20	2012-05-20
54312	Java	Programming	3	U	1234	A104	T/T 9:30-11:15	2012-01-20	2012-05-20
54313	Web Design	Programming	3	U	1245	A102	M/W 4:45-6:00	2012-01-20	2012-05-20
54314	Economics	Conceptual	2	G	1240	A501	M/W 8:45-10:15	2012-01-20	2012-05-20
54315	Human Computer Interaction	Conceptual	3	U	NULL	A334	M/W 5:30-6:45	2012-01-20	2012-05-20
54320	Fin. Accounting	Analytical	1	G	1241	A244	T/T 3:00-4:45	2012-01-20	2012-05-20
54321	Database Design	Programming	1	G	1234	A397	M/W 3:00-4:45	2012-01-20	2012-05-20
54322	Systems Analysis	Conceptual	3	U	1235	A345	T/T 11:00-12:45	2012-01-20	2012-05-20
54323	Security	Conceptual	3	U	1236	A554	T/T 2:30-3:15	2012-01-20	2012-05-20
54324	Visual Basic	Programming	3	G	1237	A674	M/W 10:15-12:00	2012-01-20	2012-05-20
54325	E-Commerce	Conceptual	2	U	1238	A298	T/T 1:00-2:45	2012-01-20	2012-05-20

2. The administration decided to relocate the Archival Information dept to room # B402 and rename it as "Archival Studies". Make the necessary modification to the Department table to reflect this change.

DepartmentID	DepartmentName	Location	Phone	Chair
50	Archival Studies	B402	4321	Robin
51	Information Retrieval	B431	4322	Sheela
52	Information Organization	B410	4323	Craig
53	Information Policy	B204	4324	Michael
54	Information Management	B219	4331	Chris
55	Information Security	B225	4332	Steve
56	Information Technology	B336	4333	Arthur
57	Information Design	B300	4334	Amy
58	Health Informatics	B428	4330	Ravi
59	Information Ethics	B356	4320	Simon

3. One faculty member in the Faculty table has no department affiliation. Assign this faculty member to Department # 56 without using identifying information (e.g. FName, LName, FacultyID, Email, etc.) in your script.

FacultyID	LName	FName	Office	Phone	Email	DepartmentID	DateOfBirth	DateHired	Title	Salary
1234	Joans	Dean	C234	5432	abc@sois.edu	57	1974-04-11	1995-08-20	Prof	110000.00
1235	Shepard	Sean	C334	5433	bcd@sois.edu	54	1973-01-01	2000-08-22	Assoc Prof	90000.00
1236	Jackson	Eric	C123	5434	cde@sois.edu	58	1981-09-01	2007-08-21	Assoc Prof	87000.00
1237	Johnson	Thomas	C531	5435	def@sois.edu	55	1982-11-14	2010-01-24	Lect	57000.00
1238	Holmes	Gary	C313	5436	efg@sois.edu	57	1977-10-04	1996-08-24	Prof	100000.00
1239	Carr	Davis	C411	5437	fgh@sois.edu	52	1972-03-15	2003-08-20	Assoc Prof	87000.00
1240	Robbertson	Richard	C278	5442	ghi@sois.edu	58	1972-12-14	2011-08-21	Asst Prof	77000.00
1241	Dickson	Sandy	C145	5443	hij@sois.edu	53	1982-05-02	2010-03-01	Lect	61000.00
1242	Davidson	James	C245	5444	ijk@sois.edu	57	1979-02-25	1999-08-23	Prof	115000.00
1243	Roise	Adam	C125	5445	nost@sois.edu	54	1959-10-31	2013-03-15	Lect	55000.00
1244	Singh	Rahul	C499	5446	klm@sois.edu	59	1979-10-31	2002-08-19	Assoc Prof	98000.00
1245	Iyer	Laxmi	C211	5447	lmn@sois.edu	51	1974-05-06	2008-08-22	Asst Prof	81000.00
1246	Yu	She	C987	5448	mno@sois.edu	56	1981-11-26	2010-08-20	Asst Prof	85000.00

4. Faculty member Adam Roise had to quit for health reasons. Remove his record from the database.

FacultyID	LName	FName	Office	Phone	Email	DepartmentID	DateOfBirth	DateHired	Title	Salary
1234	Joans	Dean	C234	5432	abc@sois.edu	57	1974-04-11	1995-08-20	Prof	110000.00
1235	Shepard	Sean	C334	5433	bcd@sois.edu	54	1973-01-01	2000-08-22	Assoc Prof	90000.00
1236	Jackson	Eric	C123	5434	cde@sois.edu	58	1981-09-01	2007-08-21	Assoc Prof	87000.00
1237	Johnson	Thomas	C531	5435	def@sois.edu	55	1982-11-14	2010-01-24	Lect	57000.00
1238	Holmes	Gary	C313	5436	efg@sois.edu	57	1977-10-04	1996-08-24	Prof	100000.00
1239	Carr	Davis	C411	5437	fgh@sois.edu	52	1972-03-15	2003-08-20	Assoc Prof	87000.00
1240	Robbertson	Richard	C278	5442	ghi@sois.edu	58	1972-12-14	2011-08-21	Asst Prof	77000.00
1241	Dickson	Sandy	C145	5443	hij@sois.edu	53	1982-05-02	2010-03-01	Lect	61000.00
1242	Davidson	James	C245	5444	ijk@sois.edu	57	1979-02-25	1999-08-23	Prof	115000.00
1244	Singh	Rahul	C499	5446	klm@sois.edu	59	1979-10-31	2002-08-19	Assoc Prof	98000.00
1245	Iyer	Laxmi	C211	5447	lmn@sois.edu	51	1974-05-06	2008-08-22	Asst Prof	81000.00
1246	Yu	She	C987	5448	mno@sois.edu	56	1981-11-26	2010-08-20	Asst Prof	85000.00

5. Display all faculty members with an annual salary exceeding 80,000 as "Tenured Faculty".

**Tenured Faculty**

Dean Joans

Sean Shepard

Eric Jackson

Gary Holmes

Davis Carr

James Davidson

Rahul Singh

Laxmi Iyer

She Yu

6. Display the names of all faculty members who are not teaching any course this semester.

**Non-Teaching Faculty Members**

Davis Carr

James Davidson

Rahul Singh

7. Display the names and description of all courses taught by Rahul Singh and Dean Joans, ordered alphabetically by course names.

Professor Joans and Singh's Courses ▲	Description
Database Design	Programming
Java	Programming

8. Display the names of all departments with ID other than 52, 53, or 54, using the IN operator.

DepartmentName
Archival Studies
Information Retrieval
Information Security
Information Technology
Information Design
Health Informatics
Information Ethics

9. Display the different salary figures earned by faculty members arranged in descending order, without any duplication. Do not display any other information.

Faculty Salary
115000.00
110000.00
100000.00
98000.00
90000.00
87000.00
85000.00
81000.00
77000.00
61000.00
57000.00

10. Display NAME (names of faculty members), AFFILIATION (names of department they belong to), and DATE JOINED (in the form MM/DD/YYYY) for all who were hired between 2000 and 2004.

NAME	AFFILIATION	DATE JOINED
Sean Shepard	Information Management	08/22/2000
Davis Carr	Information Organization	08/20/2003
Rahul Singh	Information Ethics	08/19/2002

11. Display COURSE (names of courses alone) and CLASSROOM (room numbers) that meet in the first floor. (Note: Classrooms in the first floor are numbered as A1##).

COURSE	CLASSROOM
Java	A104
Web Design	A102

12. Display the lowest salary received by a faculty member.

Lowest Salary
57000.00

13. Display the different faculty titles and the number of faculty with each title.

Faculty Titles	Total
Assoc Prof	4
Asst Prof	3
Lect	2
Prof	3

14. Display the name of the lowest paid faculty member and his/ her monthly salary.

Lowest Paid Faculty Member	Monthly Salary
Thomas Johnson	4750.00

15. Display all department names along with their annual budget allocated for faculty salaries.

Department	Annual Budget
Archival Studies	NULL
Information Retrieval	81000.00
Information Organization	87000.00
Information Policy	61000.00
Information Management	90000.00
Information Security	57000.00
Information Technology	85000.00
Information Design	325000.00
Health Informatics	164000.00
Information Ethics	98000.00

16. Display a table that combines all the columns from the Faculty and Department tables without duplication of columns.

DepartmentID	FacultyID	LName	FName	Office	Phone	Email	DateOfBirth	DateHired	Title	Salary	DepartmentName	Location	Phone	Chair
57	1234	Joans	Dean	C234	5432	abc@sois.edu	1974-04-11	1995-08-20	Prof	114400.00	Information Design	B300	4334	Amy
54	1235	Shepard	Sean	C334	5433	bcd@sois.edu	1973-01-01	2000-08-22	Assoc Prof	93600.00	Information Management	B219	4331	Chris
58	1236	Jackson	Eric	C123	5434	cde@sois.edu	1981-09-01	2007-08-21	Assoc Prof	90480.00	Health Informatics	B428	4330	Ravi
55	1237	Johnson	Thomas	C531	5435	def@sois.edu	1982-11-14	2010-01-24	Lect	59280.00	Information Security	B225	4332	Steve
57	1238	Holmes	Gary	C313	5436	efg@sois.edu	1977-10-04	1996-08-24	Prof	104000.00	Information Design	B300	4334	Amy
52	1239	Carr	Davis	C411	5437	fgh@sois.edu	1972-03-15	2003-08-20	Assoc Prof	90480.00	Information Organization	B410	4323	Craig
58	1240	Robertson	Richard	C278	5442	ghi@sois.edu	1972-12-14	2011-08-21	Asst Prof	80080.00	Health Informatics	B428	4330	Ravi
53	1241	Dickson	Sandy	C145	5443	hij@sois.edu	1982-05-02	2010-03-01	Lect	63440.00	Information Policy	B204	4324	Michael
57	1242	Davidson	James	C245	5444	ijk@sois.edu	1979-02-25	1999-08-23	Prof	119600.00	Information Design	B300	4334	Amy
59	1244	Singh	Rahul	C499	5446	klm@sois.edu	1979-10-31	2002-08-19	Assoc Prof	101920.00	Information Ethics	B356	4320	Simon
51	1245	Iyer	Laxmi	C211	5447	lmn@sois.edu	1974-05-06	2008-08-22	Asst Prof	84240.00	Information Retrieval	B431	4322	Sheela
56	1246	Yu	She	C987	5448	mno@sois.edu	1981-11-26	2010-08-20	Asst Prof	88400.00	Information Technology	B336	4333	Arthur

17. Using a subquery, display names of all faculty members who were hired before Davis Carr and their years of service (rounded to 0 decimal places).

Faculty Name	Years of Service
Dean Joans	19
Sean Shepard	14
Gary Holmes	18
James Davidson	15
Rahul Singh	12

18. The administration decides that all faculty will get a raise of 4%. Update the salaries in your Faculty table. Display faculty names and their new salaries rounded to two decimal places arranged from highest to lowest. Include both the script altering the faculty salaries and the script displaying the new salaries.

Faculty Name	New Salary
James Davidson	119600.00
Dean Joans	114400.00
Gary Holmes	104000.00
Rahul Singh	101920.00
Sean Shepard	93600.00
Eric Jackson	90480.00
Davis Carr	90480.00
She Yu	88400.00
Laxmi Iyer	84240.00
Richard Robbertson	80080.00
Sandy Dickson	63440.00
Thomas Johnson	59280.00

19. Display full names of faculty members and the number of courses they are presently teaching.

Faculty Name	Number of Courses
Dean Joans	2
Sean Shepard	1
Eric Jackson	1
Thomas Johnson	1
Gary Holmes	1
Davis Carr	0
Richard Robbertson	1
Sandy Dickson	1
James Davidson	0
Rahul Singh	0
Laxmi Iyer	1
She Yu	1

20. Display the names of faculty members, along with the course(s) they are teaching, if any.

Faculty Name	CourseName
Dean Joans	Java
Dean Joans	Database Design
Sean Shepard	Systems Analysis
Eric Jackson	Security
Thomas Johnson	Visual Basic
Gary Holmes	E-Commerce
Davis Carr	<i>NULL</i>
Richard Robbertson	Economics
Sandy Dickson	Fin. Accounting
James Davidson	<i>NULL</i>
Rahul Singh	<i>NULL</i>
Laxmi Iyer	Web Design
She Yu	Statistics

Save your work in a file named SQLExercise8\_YourName and submit it in the assignment D2L dropbox by 11:59pm on Sunday, December 14.