CS281
Access Database

courses

courses			
cid	cname	sec	semester
CS281	Data Organization	01	S12
CS281	Data Organization	01	S13
ECON101	Economics	01	F13
EE522	Circuit Design	01	S14
EE522	Circuit Design	01	S15
RUS111	Foreign Language	01	F14

department

department			
dept_id	d_name	d_location	d_capacity
D1	Computer Engineering	EA building	50
D2	Electrical and Electronics Engineering	EE building	50
D3	Music and Performing Arts	MSSF building	20
D4	Molecular Biology and Genetics	SB building	30
D5	Department of Law	B building	40
D6	Turkish Literature	F building	10

enrollment

enrollment				
sid	cid	grade	sec	semester
S1	RUS111	FZ	01	F14
S4	EE522	C	01	S14
S5	CS281	F	01	S12
S5	CS281	A-	01	S13
S5	ECON101	B	01	F13
S6	CS281	D+	01	S13
S7	CS281	A	01	S12
S7	ECON101	F	01	F13

facultyMember

fid	fname	office	title	salary	fcity	dept_id
A1	Zeynep Nadir	EA-477	Professor	10,500.00	ankara	D1
A2	Ahmet Galip	EA-588	Associate Professor	5,250.00	ankara	D1
A3	Mevlut Karataş	F-333	instructor	3,150.00	konya	D6
A4	Thomas Ray	B-214	Associate Professor	7,560.00	ankara	D2

students

sid	sname	bdate	status	city	CGPA	advisor_id
S1	Tarık	11/19/1987	PhD	ankara	3.5	A1
S2	Aslı	9/20/1989	UG	ankara	1.9	A2
S3	Mustafa	12/25/1991	UG	adana	1.4	A4
S4	Ahmet	1/22/1991	MS	ankara	3.01	A4
S5	Ezgi	1/11/1992	UG	izmir	2.3	A4
S6	Ayşe	1/1/1992	UG	istanbul	2.9	A1
S7	Ece	1/1/1991	UG	izmir	3.2	A1

Query 1
```sql
SELECT city, sname, sid
FROM students
WHERE (city='ankara') And (status In ('MS','PhD'));
```

Query 2
```sql
SELECT SUM(d_capacity) AS EngineeringCapacity
FROM department
WHERE d_name LIKE '*EngineeRing*';
```

Query 3
```sql
SELECT *
FROM students AS s, enrollment AS e
WHERE s.sid=e.sid And e.cid="CS281";
```

Query 4
```sql
SELECT AVG(cgpa) AS avgCGPA
FROM students AS s, facultyMember AS f
WHERE s.advisor_id=f.fid And f.fname='Zeynep Nadir';
```

Query 5
```sql
SELECT cid, COUNT(*) AS totalStudents, AVG(cgpa) AS avgCGPA
FROM students AS s, enrollment AS e
WHERE s.sid=e.sid
GROUP BY cid
HAVING count(*)>0;
```

Query 6
```sql
SELECT s.status, COUNT(*) AS totalStudents
FROM students AS s
GROUP BY s.status;
```

Query 7
```sql
SELECT *
FROM students AS s
WHERE s.CGPA < (SELECT AVG(CGPA) FROM students);
```

Query 8
```sql
SELECT s.sid
FROM students AS s, enrollment AS e
WHERE s.sid = e.sid AND e.cid = "CS281" AND e.grade IN ("A", "A-") AND s.sid NOT IN
(
SELECT s.sid FROM students s, enrollment e WHERE s.sid = e.sid AND e.cid = "ECON101" AND e.grade IN
("F", "FX", "FZ")
);
```

Query 9
SELECT *
FROM department AS d
WHERE NOT EXISTS
(
SELECT *
FROM facultyMember f
WHERE d.dept_id = f.dept_id
);

Query 10
SELECT s.sid
FROM students s, enrollment e
WHERE s.sid = e.sid AND e.cid = "CS281" AND e.semester = "S13"
UNION SELECT s.sid
FROM students s, enrollment e
WHERE s.sid = e.sid AND e.cid = "CS281" AND e.semester = "S12";

Query 11
SELECT s.sid
FROM students AS s, enrollment AS e1
WHERE s.sid = e1.sid AND e1.cid = "CS281" AND s.sid NOT IN
(
SELECT e2.sid
FROM enrollment e2
WHERE e2.cid = "CS281"
GROUP BY e2.sid
HAVING COUNT (*) > 1
);