Assignment – 1

DBMS(CSP 362)

Deepansh Lodhi **2018ucs0083**

Q1 Create table student with following attribute.

·S_ID

·S_NAME

·D_NAME

TOT_CRED

ANS

```
CREATE TABLE student(S_ID VARCHAR (20),
 S_NAME VARCHAR (20),
 D_NAME VARCHAR (20),
 TOT_CRED INT ,
PRIMARY KEY (S_ID));
```

Q2 Create table instructor with following attribute

·INST_ID

·INST_NAME

·D_NAME

·SAL

ANS

```
CREATE TABLE INSTRUCTOR(
INST_ID INT NOT NULL,
INST_NAME VARCHAR (20) NOT NULL,
D_NAME VARCHAR (20),
SAL INT,
PRIMARY KEY (INST_ID));
```

Q3

Create table course with following attribute

·C_ID

·TITLE

·D_NAME

·CRED

ANS

```
create table course(c_id varchar(10),
title varchar(30),
d_name varchar(20),
cred numeric(2,0),
primary key (c_id)
);
```

Q4

create table takes with following attribute

·S_ID
·C_ID
SEC_ID
SEM
YEAR
GRADE

ANS

```
create table takes
(s_id varchar(5),
c_id varchar(10),
sec_id varchar(8),
sem varchar(10),
year numeric(4,0),
grade varchar(5),
primary key (s_id, c_id, sec_id, sem)
);
```

Q5

create table department with following fields

•D_NAME
•BUILDING
•BUDGET

ANS

```
create table department
(d_name varchar(20),
building varchar(20),
budget INT ,
primary key (d_name)
);
```

Q6

Create table section with following fields

•C_ID
•SEC_ID
•SEM
•YEAR

ANS

```
create table section
(c_id varchar(10),
sec_id varchar(8),
sem varchar(10),
year numeric(4,0)
);
```

Q7

create table teaches with following fields

•INST_ID
•C_ID
•SEC_ID
•SEM
•YEAR

ANS

```
create table teaches
(INST_ID int,
c_id varchar(10),
sec_id varchar(8),
sem varchar(10),
year numeric(4,0),
primary key (INST_ID, c_id, sec_id, sem, year)
);
```

Q8

insert following data element into tables using insert into cmd

1. student

insert into student values ('00128', 'Zhang', 'Comp. Sci.', '102');
insert into student values ('12345', 'Shankar', 'Comp. Sci.', '32');
insert into student values ('19991', 'Brandt', 'History', '80');
insert into student values ('23121', 'Chavez', 'Finance', '110');
insert into student values ('44553', 'Peltier', 'Physics', '56');
insert into student values ('45678', 'Levy', 'Physics', '46');
insert into student values ('54321', 'Williams', 'Comp. Sci.', '54');
insert into student values ('55739', 'Sanchez', 'Music', '38');
insert into student values ('70557', 'Snow', 'Physics', '0');
insert into student values ('76543', 'Brown', 'Comp. Sci.', '58');
insert into student values ('76653', 'Aoi', 'Elec. Eng.', '60');
insert into student values ('98765', 'Bourikas', 'Elec. Eng.', '98');
insert into student values ('98988', 'Tanaka', 'Biology', '120');

	S_ID	S_NAME	D_NAME	TOT_CRE
	Filter	Filter	Filter	Filter
1	00128	Zhang	Comp. Sci.	102
2	12345	Shankar	Comp. Sci.	32
3	19991	Brandt	History	80
4	23121	Chavez	Finance	110
5	44553	Peltier	Physics	56
6	45678	Levy	Physics	46
7	54321	Williams	Comp. Sci.	54
8	55739	Sanchez	Music	38
9	70557	Snow	Physics	0
10	76543	Brown	Comp. Sci.	58
11	76653	Aoi	Elec. Eng.	60
12	98765	Bourikas	Elec. Eng.	98
13	98988	Tanaka	Biology	120

2. instructor

insert into INSTRUCTOR values ('22222', 'Einstein', 'Physics', '95000');
insert into INSTRUCTOR values ('12121', 'Wu', 'Finance', '90000');
insert into INSTRUCTOR values ('32343', 'El Said', 'History', '60000');
insert into INSTRUCTOR values ('45565', 'Katz', 'Comp. Sci.', '75000');
insert into INSTRUCTOR values ('98345', 'Kim', 'Elec. Eng.', '80000');
insert into INSTRUCTOR values ('76766', 'Crick', 'Biology', '72000');
insert into INSTRUCTOR values ('10101', 'Srinivasan', 'Comp. Sci.', '65000');
insert into INSTRUCTOR values ('58583', 'Califieri', 'History', '62000');
insert into INSTRUCTOR values ('83821', 'Brandt', 'Comp. Sci.', '92000');
insert into INSTRUCTOR values ('15151', 'Mozart', 'Music', '40000');
insert into INSTRUCTOR values ('33456', 'Gold', 'Physics', '87000');
insert into INSTRUCTOR values ('76543', 'Singh', 'Finance', '80000');

		* INST_I	* INST_NAME	D_NAME	SAL
		Filter	Filter	Filter	Filter
	1	10101	Srinivasan	Comp. Sci.	65000
	2	12121	Wu	Finance	90000
	3	15151	Mozart	Music	40000
	4	22222	Einstein	Physics	95000
	5	32343	El Said	History	60000
	6	33456	Gold	Physics	87000
	7	45565	Katz	Comp. Sci.	75000
	8	58583	Califieri	History	62000
	9	76543	Singh	Finance	80000
	10	76766	Crick	Biology	72000
	11	83821	Brandt	Comp. Sci.	92000
	12	98345	Kim	Elec. Eng.	80000

3. course

insert into course values ('BIO-101', 'Intro. to Biology', 'Biology', '4');
insert into course values ('BIO-301', 'Genetics', 'Biology', '4');
insert into course values ('BIO-399', 'Computational Biology', 'Biology', '3');

insert into course values ('CS-101', 'Intro. to Computer Science', 'Comp. Sci.', '4');
insert into course values ('CS-190', 'Game Design', 'Comp. Sci.', '4');
insert into course values ('CS-315', 'Robotics', 'Comp. Sci.', '3');
insert into course values ('CS-319', 'Image Processing', 'Comp. Sci.', '3');
insert into course values ('CS-347', 'Database System Concepts', 'Comp. Sci.', '3');
insert into course values ('EE-181', 'Intro. to Digital Systems', 'Elec. Eng.', '3');
insert into course values ('FIN-201', 'Investment Banking', 'Finance', '3');
insert into course values ('HIS-351', 'World History', 'History', '3');
insert into course values ('MU-199', 'Music Video Production', 'Music', '3');
insert into course values ('PHY-101', 'Physical Principles', 'Physics', '4');

	c_id	title	d_name	cred
	Filter	Filter	Filter	Filter
1	BIO-101	Intro. to Biology	Biology	4
2	BIO-301	Genetics	Biology	4
3	BIO-399	Computational Biology	Biology	3
4	CS-101	Intro. to Computer Scienc	Comp. Sci.	4
5	CS-190	Game Design	Comp. Sci.	4
6	CS-315	Robotics	Comp. Sci.	3
7	CS-319	Image Processing	Comp. Sci.	3
8	CS-347	Database System Concep	Comp. Sci.	3
9	EE-181	Intro. to Digital Systems	Elec. Eng.	3
10	FIN-201	Investment Banking	Finance	3
11	HIS-351	World History	History	3
12	MU-199	Music Video Production	Music	3
13	PHY-101	Physical Principles	Physics	4

4. teaches

insert into teaches values ('10101', 'CS-101', '1', 'Fall', '2009');

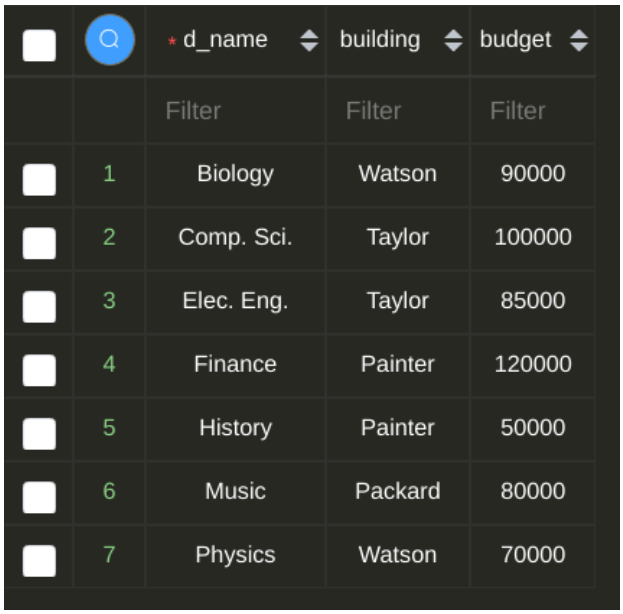
insert into teaches values ('10101', 'CS-315', '1', 'Spring', '2010');
insert into teaches values ('10101', 'CS-347', '1', 'Fall', '2009');
insert into teaches values ('12121', 'FIN-201', '1', 'Spring', '2010');
insert into teaches values ('15151', 'MU-199', '1', 'Spring', '2010');
insert into teaches values ('22222', 'PHY-101', '1', 'Fall', '2009');
insert into teaches values ('32343', 'HIS-351', '1', 'Spring', '2010');
insert into teaches values ('45565', 'CS-101', '1', 'Spring', '2010');
insert into teaches values ('45565', 'CS-319', '1', 'Spring', '2010');
insert into teaches values ('76766', 'BIO-101', '1', 'Summer', '2009');
insert into teaches values ('76766', 'BIO-301', '1', 'Summer', '2010');
insert into teaches values ('83821', 'CS-190', '1', 'Spring', '2009');
insert into teaches values ('83821', 'CS-190', '2', 'Spring', '2009');
insert into teaches values ('83821', 'CS-319', '2', 'Spring', '2010');
insert into teaches values ('98345', 'EE-181', '1', 'Spring', '2009');

	INST_I	c_id	sec_id	sem	year
	Filter	Filter	Filter	Filter	Filter
1	10101	CS-101	1	Fall	2009
2	10101	CS-315	1	Spring	2010
3	10101	CS-347	1	Fall	2009
4	12121	FIN-201	1	Spring	2010
5	15151	MU-199	1	Spring	2010
6	22222	PHY-101	1	Fall	2009
7	32343	HIS-351	1	Spring	2010
8	45565	CS-101	1	Spring	2010
9	45565	CS-319	1	Spring	2010
10	76766	BIO-101	1	Summer	2009
11	76766	BIO-301	1	Summer	2010
12	83821	CS-190	1	Spring	2009
13	83821	CS-190	2	Spring	2009
14	83821	CS-319	2	Spring	2010
15	98345	EE-181	1	Spring	2009

5. department

insert into department values ('Biology', 'Watson', '90000');
insert into department values ('Comp. Sci.', 'Taylor', '100000');
insert into department values ('Elec. Eng.', 'Taylor', '85000');

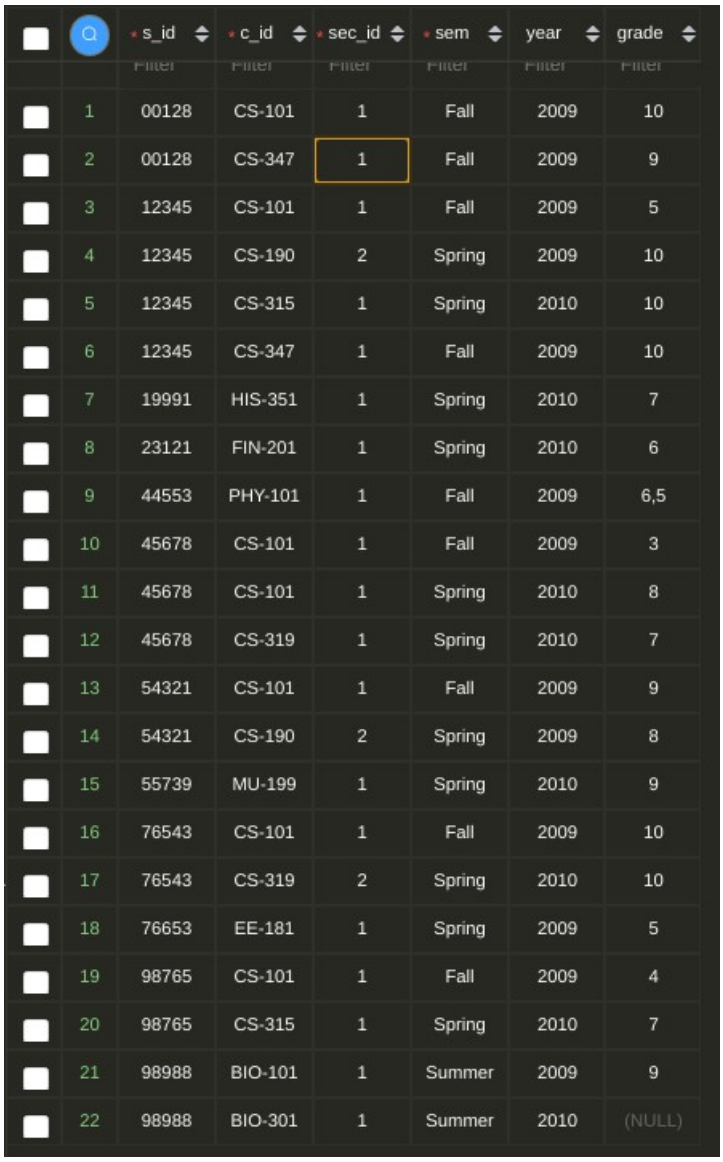
insert into department values ('Finance', 'Painter', '120000');
insert into department values ('History', 'Painter', '50000');
insert into department values ('Music', 'Packard', '80000');
insert into department values ('Physics', 'Watson', '70000');



	d_name	building	budget
	Filter	Filter	Filter
1	Biology	Watson	90000
2	Comp. Sci.	Taylor	100000
3	Elec. Eng.	Taylor	85000
4	Finance	Painter	120000
5	History	Painter	50000
6	Music	Packard	80000
7	Physics	Watson	70000

6. takes

insert into takes values ('00128', 'CS-101', '1', 'Fall', '2009', '10');
insert into takes values ('00128', 'CS-347', '1', 'Fall', '2009', '9');
insert into takes values ('12345', 'CS-101', '1', 'Fall', '2009', '5');
insert into takes values ('12345', 'CS-190', '2', 'Spring', '2009', '10');
insert into takes values ('12345', 'CS-315', '1', 'Spring', '2010', '10');
insert into takes values ('12345', 'CS-347', '1', 'Fall', '2009', '10');
insert into takes values ('19991', 'HIS-351', '1', 'Spring', '2010', '7');
insert into takes values ('23121', 'FIN-201', '1', 'Spring', '2010', '6');
insert into takes values ('44553', 'PHY-101', '1', 'Fall', '2009', '6,5');
insert into takes values ('45678', 'CS-101', '1', 'Fall', '2009', '3');
insert into takes values ('45678', 'CS-101', '1', 'Spring', '2010', '8');
insert into takes values ('45678', 'CS-319', '1', 'Spring', '2010', '7');
insert into takes values ('54321', 'CS-101', '1', 'Fall', '2009', '9');
insert into takes values ('54321', 'CS-190', '2', 'Spring', '2009', '8');
insert into takes values ('55739', 'MU-199', '1', 'Spring', '2010', '9');
insert into takes values ('76543', 'CS-101', '1', 'Fall', '2009', '10');
insert into takes values ('76543', 'CS-319', '2', 'Spring', '2010', '10');
insert into takes values ('76653', 'EE-181', '1', 'Spring', '2009', 'C');
insert into takes values ('98765', 'CS-101', '1', 'Fall', '2009', '4');
insert into takes values ('98765', 'CS-315', '1', 'Spring', '2010', '7');
insert into takes values ('98988', 'BIO-101', '1', 'Summer', '2009', '9');
insert into takes values ('98988', 'BIO-301', '1', 'Summer', '2010', null);



	s_id	c_id	sec_id	sem	year	grade
1	00128	CS-101	1	Fall	2009	10
2	00128	CS-347	1	Fall	2009	9
3	12345	CS-101	1	Fall	2009	5
4	12345	CS-190	2	Spring	2009	10
5	12345	CS-315	1	Spring	2010	10
6	12345	CS-347	1	Fall	2009	10
7	19991	HIS-351	1	Spring	2010	7
8	23121	FIN-201	1	Spring	2010	6
9	44553	PHY-101	1	Fall	2009	6,5
10	45678	CS-101	1	Fall	2009	3
11	45678	CS-101	1	Spring	2010	8
12	45678	CS-319	1	Spring	2010	7
13	54321	CS-101	1	Fall	2009	9
14	54321	CS-190	2	Spring	2009	8
15	55739	MU-199	1	Spring	2010	9
16	76543	CS-101	1	Fall	2009	10
17	76543	CS-319	2	Spring	2010	10
18	76653	EE-181	1	Spring	2009	5
19	98765	CS-101	1	Fall	2009	4
20	98765	CS-315	1	Spring	2010	7
21	98988	BIO-101	1	Summer	2009	9
22	98988	BIO-301	1	Summer	2010	(NULL)

7. section

insert into section values ('BIO-101', '1', 'Summer', '2009');
insert into section values ('BIO-301', '1', 'Summer', '2010');
insert into section values ('CS-101', '1', 'Fall', '2009');
insert into section values ('CS-101', '1', 'Spring', '2010');
insert into section values ('CS-190', '1', 'Spring', '2009');
insert into section values ('CS-190', '2', 'Spring', '2009');
insert into section values ('CS-315', '1', 'Spring', '2010');
insert into section values ('CS-319', '1', 'Spring', '2010');
insert into section values ('CS-319', '2', 'Spring', '2010');
insert into section values ('CS-347', '1', 'Fall', '2009');
insert into section values ('EE-181', '1', 'Spring', '2009');
insert into section values ('FIN-201', '1', 'Spring', '2010');
insert into section values ('HIS-351', '1', 'Spring', '2010');
insert into section values ('MU-199', '1', 'Spring', '2010');

insert into section values ('PHY-101', '1', 'Fall', '2009');

	c_id	sec_id	sem	year
1	BIO-101	1	Summer	2009
2	BIO-301	1	Summer	2010
3	CS-101	1	Fall	2009
4	CS-101	1	Spring	2010
5	CS-190	1	Spring	2009
6	CS-190	2	Spring	2009
7	CS-315	1	Spring	2010
8	CS-319	1	Spring	2010
9	CS-319	2	Spring	2010
10	CS-347	1	Fall	2009
11	EE-181	1	Spring	2009
12	FIN-201	1	Spring	2010
13	HIS-351	1	Spring	2010
14	MU-199	1	Spring	2010
15	PHY-101	1	Fall	2009

Q8 Add one new column (building) in section table.

ANS

ALTER TABLE section ADD COLUMN (building varchar(20));

	c_id	sec_id	sem	year	building
1	BIO-101	1	Summer	2009	(NULL)
2	BIO-301	1	Summer	2010	(NULL)
3	CS-101	1	Fall	2009	(NULL)
4	CS-101	1	Spring	2010	(NULL)
5	CS-190	1	Spring	2009	(NULL)
6	CS-190	2	Spring	2009	(NULL)
7	CS-315	1	Spring	2010	(NULL)
8	CS-319	1	Spring	2010	(NULL)
9	CS-319	2	Spring	2010	(NULL)
10	CS-347	1	Fall	2009	(NULL)
11	EE-181	1	Spring	2009	(NULL)
12	FIN-201	1	Spring	2010	(NULL)
13	HIS-351	1	Spring	2010	(NULL)
14	MU-199	1	Spring	2010	(NULL)
15	PHY-101	1	Fall	2009	(NULL)

Q.9 Insert building name in the sectiontable (To insert)

```
UPDATE section set building = 'Painter'
WHERE c_id in('BIO-101','BIO-301','HIS-351');
UPDATE section set building = 'Packard'
WHERE c_id in('CS-101','FIN-201','MU-199');
UPDATE section set building = 'Taylor'
WHERE c_id in('CS-190','CS-319','EE-181','CS-347');
UPDATE section set building = 'Watson'
WHERE c_id in('CS-315','PHY-101');
UPDATE section set building = 'Watson'
WHERE c_id=('CS-319') and sec_id='1'
```

	c_id	sec_id	sem	year	building
	Filter	Filter	Filter	Filter	Filter
1	BIO-101	1	Summer	2009	Painter
2	BIO-301	1	Summer	2010	Painter
3	CS-101	1	Fall	2009	Packard
4	CS-101	1	Spring	2010	Packard
5	CS-190	1	Spring	2009	Taylor
6	CS-190	2	Spring	2009	Taylor
7	CS-315	1	Spring	2010	Watson
8	CS-319	1	Spring	2010	Watson
9	CS-319	2	Spring	2010	Taylor
10	CS-347	1	Fall	2009	Taylor
11	EE-181	1	Spring	2009	Taylor
12	FIN-201	1	Spring	2010	Packard
13	HIS-351	1	Spring	2010	Painter
14	MU-199	1	Spring	2010	Packard
15	PHY-101	1	Fall	2009	Watson