Queries: mysql> alter table student add blood_grp char(4);
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> describe student;

Field	Type	Null	Key	Default	Extra
roll	int	YES		NULL	
name	char(20)	YES		NULL	
address	char(10)	YES		NULL	
mob_no	int	YES		NULL	
blood_grp	char(4)	YES		NULL	

5 rows in set (0.00 sec)

mysql> alter table student add date_birth date;
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> describe student;

Field	Type	Null	Key	Default	Extra
roll	int	YES		NULL	
name	char(20)	YES		NULL	
address	char(10)	YES		NULL	
mob_no	int	YES		NULL	
blood_grp	char(4)	YES		NULL	
date_birth	date	YES		NULL	

6 rows in set (0.00 sec)

mysql> alter table student alter date_birth set default "2003-05-10";
Query OK, 0 rows affected (0.02 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> describe student;

Field	Type	Null	Key	Default	Extra
roll	int	YES		NULL	
name	char(20)	YES		NULL	

```
| address | char(10) | YES | | NULL | |
| mob_no | int | YES | | NULL | |
| blood_grp | char(4) | YES | | NULL | |
| date_birth | date | YES | | 2003-05-10 | |
+------------+----------+------+-----+------------+-------+
6 rows in set (0.01 sec)

mysql> alter table student add ID int default "5";
Query OK, 0 rows affected (0.02 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> describe student;
+------------+----------+------+-----+------------+-------+
| Field | Type | Null | Key | Default | Extra |
+------------+----------+------+-----+------------+-------+
| roll | int | YES | | NULL | |
| name | char(20) | YES | | NULL | |
| address | char(10) | YES | | NULL | |
| mob_no | int | YES | | NULL | |
| blood_grp | char(4) | YES | | NULL | |
| date_birth | date | YES | | 2003-05-10 | |

| ID | int | YES | | 5 | |
+------------+----------+------+-----+------------+-------+
7 rows in set (0.00 sec)

mysql> alter table student modify ID varchar(10);
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> describe student;
+------------+-------------+------+-----+------------+-------+
| Field | Type | Null | Key | Default | Extra |
+------------+-------------+------+-----+------------+-------+
| roo | int | YES | | NULL | |
| name | char(20) | YES | | NULL | |
| address | char(10) | YES | | NULL | |
| mob_no | int | YES | | NULL | |
| blood_grp | char(4) | YES | | NULL | |
| date_birth | date | YES | | 2003-05-10 | |
| ID | varchar(10) | YES | | NULL | |
+------------+-------------+------+-----+------------+-------+
7 rows in set (0.01 sec)
```

mysql> alter table student modify ID int not NULL;
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> describe student;
+------------+----------+------+-----+------------+-------+
| Field | Type | Null | Key | Default | Extra |
+------------+----------+------+-----+------------+-------+
roo	int	YES		NULL	
name	char(20)	YES		NULL	
address	char(10)	YES		NULL	
mob_no	int	YES		NULL	
blood_grp	char(4)	YES		NULL	
date_birth	date	YES		2003-05-10	
ID	int	NO		NULL	
+------------+----------+------+-----+------------+-------+
7 rows in set (0.00 sec)

mysql> alter table student rename cloumn roo to roll;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'roo to roll' at
line 1
mysql> alter table student rename column date_birth to DOB;
Query OK, 0 rows affected (0.02 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> describe student;
+-----------+----------+------+-----+------------+-------+
| Field | Type | Null | Key | Default | Extra |
+-----------+----------+------+-----+------------+-------+
| roo | int | YES | | NULL | |
| name | char(20) | YES | | NULL | |

address	char(10)	YES		NULL	
mob_no	int	YES		NULL	
blood_grp	char(4)	YES		NULL	
DOB	date	YES		2003-05-10	
ID	int	NO		NULL	
+-----------+----------+------+-----+------------+-------+
7 rows in set (0.00 sec)

mysql> alter table student rename info;
Query OK, 0 rows affected (0.01 sec)

```
mysql> describe info;
+-----------+-----------+------+-----+------------+-------+
| Field     | Type      | Null | Key | Default    | Extra |
+-----------+-----------+------+-----+------------+-------+
| roo       | int       | YES  |     | NULL       |       |
| name      | char(20)  | YES  |     | NULL       |       |
| address   | char(10)  | YES  |     | NULL       |       |
| mob_no    | int       | YES  |     | NULL       |       |
| blood_grp | char(4)   | YES  |     | NULL       |       |
| DOB       | date      | YES  |     | 2003-05-10 |       |
| ID        | int       | NO   |     | NULL       |       |
+-----------+-----------+------+-----+------------+-------+
7 rows in set (0.00 sec)

mysql> alter table info rename column roo to roll;
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> describe info;
+-----------+-----------+------+-----+------------+-------+
| Field     | Type      | Null | Key | Default    | Extra |
+-----------+-----------+------+-----+------------+-------+

| roll      | int       | YES  |     | NULL       |       |
| name      | char(20)  | YES  |     | NULL       |       |
| address   | char(10)  | YES  |     | NULL       |       |
| mob_no    | int       | YES  |     | NULL       |       |
| blood_grp | char(4)   | YES  |     | NULL       |       |
| DOB       | date      | YES  |     | 2003-05-10 |       |
| ID        | int       | NO   |     | NULL       |       |
+-----------+-----------+------+-----+------------+-------+
7 rows in set (0.00 sec)

mysql> truncate table info;
Query OK, 0 rows affected (0.03 sec)

mysql> describe info;
+-----------+-----------+------+-----+------------+-------+
| Field     | Type      | Null | Key | Default    | Extra |
+-----------+-----------+------+-----+------------+-------+
| roll      | int       | YES  |     | NULL       |       |
| name      | char(20)  | YES  |     | NULL       |       |
| address   | char(10)  | YES  |     | NULL       |       |
| mob_no    | int       | YES  |     | NULL       |       |
```

```
| blood_grp | char(4) | YES | | NULL | |
| DOB | date | YES | | 2003-05-10 | |
| ID | int | NO | | NULL | |
+-----------+----------+------+-----+------------+-------+
7 rows in set (0.00 sec)

mysql> drop table info;
Query OK, 0 rows affected (0.04 sec)

mysql> describe info;
ERROR 1146 (42S02): Table 'student.info' doesn't exist

mysql> create table student (roll integer not NULL,name varchar(10) not NULL,addr
varchar(10),DOB date default "1999-01-01",phone integer,primary key roll);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near ')' at line 1
mysql> create table info (roll integer not NULL,name varchar(10) not NULL,addr
varchar(10),DOB date default "1999-01-01",phone integer,primary key roll);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near ')' at line 1
mysql> create table info (roll integer not NULL,name varchar(10) not NULL,addr
varchar(10),DOB date default "1999-01-01",phone integer,primary key (roll));
Query OK, 0 rows affected (0.03 sec)

mysql> describe info;
+-------+-------------+------+-----+------------+-------+
| Field | Type | Null | Key | Default | Extra |
+-------+-------------+------+-----+------------+-------+
| roll | int | NO | PRI | NULL | |
| name | varchar(10) | NO | | NULL | |
| addr | varchar(10) | YES | | NULL | |
| DOB | date | YES | | 1999-01-01 | |
| phone | int | YES | | NULL | |
+-------+-------------+------+-----+------------+-------+
5 rows in set (0.01 sec)

mysql> alter table info rename student;
Query OK, 0 rows affected (0.03 sec)

mysql> describe student;
+-------+-------------+------+-----+------------+-------+
| Field | Type | Null | Key | Default | Extra |
+-------+-------------+------+-----+------------+-------+
| roll | int | NO | PRI | NULL | |
```

name	varchar(10)	NO		NULL	
addr	varchar(10)	YES		NULL	
DOB	date	YES		1999-01-01	

| phone | int | YES | | NULL | |
+-------+-------------+------+-----+------------+-------+
5 rows in set (0.00 sec)

mysql> insert into student values(5,"xyz","pune","2000-05-01",9557675299);
ERROR 1264 (22003): Out of range value for column 'phone' at row 1
mysql> alter table student student modify phone numeric(10);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near 'student modify
phone numeric(10)' at line 1
mysql> alter table student modify phone numeric(10);
Query OK, 0 rows affected (0.02 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> describe student;
+-------+---------------+------+-----+------------+-------+
| Field | Type | Null | Key | Default | Extra |
+-------+---------------+------+-----+------------+-------+
roll	int	NO	PRI	NULL	
name	varchar(10)	NO		NULL	
addr	varchar(10)	YES		NULL	
DOB	date	YES		1999-01-01	
phone	decimal(10,0)	YES		NULL	
+-------+---------------+------+-----+------------+-------+
5 rows in set (0.01 sec)

mysql> insert into student values(5,"xyz","pune","2000-05-01",9557675299);
Query OK, 1 row affected (0.04 sec)

mysql> describe student;
+-------+---------------+------+-----+------------+-------+
| Field | Type | Null | Key | Default | Extra |
+-------+---------------+------+-----+------------+-------+
| roll | int | NO | PRI | NULL | |

name	varchar(10)	NO		NULL	
addr	varchar(10)	YES		NULL	
DOB	date	YES		1999-01-01	
phone	decimal(10,0)	YES		NULL	
+-------+---------------+------+-----+------------+-------+

5 rows in set (0.01 sec)

mysql> insert into student(roll,name,phone,addr,DOB) values(5,"xyz",9557675299);
ERROR 1136 (21S01): Column count doesn't match value count at row 1
mysql> insert into student(roll,name,phone,addr,DOB)
values(10,"xyz",9557675299,"pune","2001-01-05");
Query OK, 1 row affected (0.00 sec)

mysql> describe student;
+-------+--------------+------+-----+------------+-------+
| Field | Type | Null | Key | Default | Extra |
+-------+--------------+------+-----+------------+-------+
roll	int	NO	PRI	NULL	
name	varchar(10)	NO		NULL	
addr	varchar(10)	YES		NULL	
DOB	date	YES		1999-01-01	
phone	decimal(10,0)	YES		NULL	
+-------+--------------+------+-----+------------+-------+
5 rows in set (0.00 sec)

mysql> insert into student(roll,name,phone) values(57,"xyz",9557675299);
Query OK, 1 row affected (0.01 sec)

mysql> describe student;
+-------+--------------+------+-----+------------+-------+
| Field | Type | Null | Key | Default | Extra |
+-------+--------------+------+-----+------------+-------+
| roll | int | NO | PRI | NULL | |

name	varchar(10)	NO		NULL	
addr	varchar(10)	YES		NULL	
DOB	date	YES		1999-01-01	
phone	decimal(10,0)	YES		NULL	
+-------+--------------+------+-----+------------+-------+
5 rows in set (0.01 sec)

mysql> select * from student;
+------+------+------+------------+------------+
| roll | name | addr | DOB | phone |
+------+------+------+------------+------------+
5	xyz	pune	2000-05-01	9557675299
10	xyz	pune	2001-01-05	9557675299
57	xyz	NULL	1999-01-01	9557675299
+------+------+------+------------+------------+

3 rows in set (0.00 sec)

mysql> alter table student modify addr varchar(10) not NULL;
ERROR 1138 (22004): Invalid use of NULL value
mysql> insert into student(roll,phone) values(57,9557675299);
ERROR 1364 (HY000): Field 'name' doesn't have a default value
mysql> create table department (ID varchar(10),name varchar(10),budget integer);
Query OK, 0 rows affected (0.03 sec)

mysql> describe department;
+--------+-------------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
ID	varchar(10)	YES		NULL	
name	varchar(10)	YES		NULL	
budget	int	YES		NULL	
+--------+-------------+------+-----+---------+-------+
3 rows in set (0.01 sec)

mysql> truncate table department;
Query OK, 0 rows affected (0.03 sec)

mysql> describe department;
+--------+-------------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
ID	varchar(10)	YES		NULL	
name	varchar(10)	YES		NULL	
budget	int	YES		NULL	
+--------+-------------+------+-----+---------+-------+
3 rows in set (0.01 sec)

mysql> select * from department;
Empty set (0.00 sec)

mysql> use student;
Database changed
mysql> select * from student;
+------+------+------+------------+------------+
| roll | name | addr | DOB | phone |
+------+------+------+------------+------------+
5	xyz	pune	2000-05-01	9557675299
10	xyz	pune	2001-01-05	9557675299
57	xyz	NULL	1999-01-01	9557675299

```
+------+------+------+-----------+------------+
3 rows in set (0.00 sec)

mysql> truncate student;
Query OK, 0 rows affected (0.02 sec)

mysql> select * from student;

Empty set (0.00 sec)

mysql> describe student;
+-------+--------------+------+-----+------------+-------+
| Field | Type | Null | Key | Default | Extra |
+-------+--------------+------+-----+------------+-------+
| roll | int | NO | PRI | NULL | |
| name | varchar(10) | NO | | NULL | |
| addr | varchar(10) | YES | | NULL | |
| DOB | date | YES | | 1999-01-01 | |
| phone | decimal(10,0) | YES | | NULL | |
+-------+--------------+------+-----+------------+-------+
5 rows in set (0.00 sec)

mysql> alter table student modify addr varchar(10) not NULL;
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> describe department;
+--------+-------------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| ID | varchar(10) | YES | | NULL | |
| name | varchar(10) | YES | | NULL | |
| budget | int | YES | | NULL | |
+--------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql> alter table department add primary key (ID);
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> describe department;
+--------+-------------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
```

ID	varchar(10)	NO	PRI	NULL	
name	varchar(10)	YES		NULL	
budget	int	YES		NULL	
+--------+-------------+------+-----+---------+-------+
3 rows in set (0.01 sec)

8/3/23- Assignment 3

mysql> create database university_27012;
Query OK, 1 row affected (0.01 sec)

mysql> use university_27012;
Database changed
mysql> create table department(deptname varchar(20),building int,budget int);
Query OK, 0 rows affected (0.06 sec)

mysql> create table instructor(id int,name varchar(20),salary int,deptname varchar(20));
Query OK, 0 rows affected (0.03 sec)

mysql> create table student(sid varchar(20),sname varchar(20),tot_credits int,deptname varchar(20));
Query OK, 0 rows affected (0.03 sec)

mysql> describe department;
+----------+-------------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| deptname | varchar(20) | YES | | NULL | |
| building | int | YES | | NULL | |

| budget | int | YES | | NULL | |
+----------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql> create table advisor(cbuilding int,roomno int,capacity int);
Query OK, 0 rows affected (0.05 sec)

mysql> alter table advisor rename classroom;
Query OK, 0 rows affected (0.03 sec)

mysql> create table advisor(id int,sid varchar(20));
Query OK, 0 rows affected (0.03 sec)

mysql> insert into department(deptname,building,budget) values("biology",5,700000),

("computer",1,500000),("history",4,300000),("music",2,100000),("physics",3,400000);
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0

mysql> describe department;
+----------+-------------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
deptname	varchar(20)	YES		NULL	
building	int	YES		NULL	
budget	int	YES		NULL	
+----------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql> select * from department;
+----------+----------+--------+
| deptname | building | budget |
+----------+----------+--------+

biology	5	700000
computer	1	500000
history	4	300000
music	2	100000
physics	3	400000
+----------+----------+--------+
5 rows in set (0.00 sec)

mysql> insert into instructor(id,name,salary,deptname)
values(111,"abc",65000,"computer"),(112,"pqr",90000,"music"),
(113,"efg",70000,"physics"),(114,"xyz",50000,"history"),(115,"lmn",90000,"music"),
(116,"uvw",70000,"physics"),(117,"stu",55000,"biology");
Query OK, 7 rows affected (0.01 sec)
Records: 7 Duplicates: 0 Warnings: 0

mysql> select * from instructor;
+------+------+--------+----------+
| id | name | salary | deptname |
+------+------+--------+----------+
111	abc	65000	computer
112	pqr	90000	music
113	efg	70000	physics
114	xyz	50000	history
115	lmn	90000	music
116	uvw	70000	physics

```
| 117 | stu | 55000 | biology |
+------+------+--------+----------+
7 rows in set (0.00 sec)

mysql> insert into student(sid,sname,tot_credits,deptname)
values("s1","ashish",8,"music"),("s2","rakesh",9,"computer"),("s3","chetan",9,"music"),
("s4","mayuri",9,"physics"),("s5","priya",7,"biology"),("s6","tanvi",6,"computer"),
("s7","anushka",9,"history");
Query OK, 7 rows affected (0.02 sec)

Records: 7 Duplicates: 0 Warnings: 0

mysql> select * from student;
+------+---------+-------------+----------+
| sid | sname | tot_credits | deptname |
+------+---------+-------------+----------+
| s1 | ashish | 8 | music |
| s2 | rakesh | 9 | computer |
| s3 | chetan | 9 | music |
| s4 | mayuri | 9 | physics |
| s5 | priya | 7 | biology |
| s6 | tanvi | 6 | computer |
| s7 | anushka | 9 | history |
+------+---------+-------------+----------+
7 rows in set (0.00 sec)

mysql> insert into advisor(id,sid) values(111,"s2"),(112,"s1"),(112,"s5"),(113,"s4"),
(114,"s3");
Query OK, 5 rows affected (0.04 sec)
Records: 5 Duplicates: 0 Warnings: 0

mysql> select * from advisor;
+------+------+
| id | sid |
+------+------+
| 111 | s2 |
| 112 | s1 |
| 112 | s5 |
| 113 | s4 |
| 114 | s3 |
+------+------+
5 rows in set (0.00 sec)

mysql> insert into classroom(cbuilding,roomno,capacity) values(1,11,120),(2,21,120),
```

(3,32,60),(4,42,180),(5,52,60);
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0

mysql> select * from classroom;
+-----------+--------+----------+
| cbuilding | roomno | capacity |
+-----------+--------+----------+
1	11	120
2	21	120
3	32	60
4	42	180
5	52	60
+-----------+--------+----------+
5 rows in set (0.00 sec)
mysql> create table course(course_id varchar(20),title varchar(20),deptname
varchar(20),credits int);
Query OK, 0 rows affected (0.03 sec)

mysql> insert into course(course_id,title,deptname,credits) values("bio 1","intro to
bio","biology",4),("bio 2","genetics","biology",3),("cs 1","intro to cs","computer",3),("cs
2","intro to cs","computer",4),("his 1","world history","history",4),("mu 1","music
audio","music",3),("mu 2","music video pro","music",4),("phy 2","physics
principles","physics",4);
Query OK, 8 rows affected (0.01 sec)
Records: 8 Duplicates: 0 Warnings: 0

mysql> select * from course;
+-----------+--------------------+----------+---------+
| course_id | title | deptname | credits |
+-----------+--------------------+----------+---------+
bio 1	intro to bio	biology	4
bio 2	genetics	biology	3
cs 1	intro to cs	computer	3

cs 2	intro to cs	computer	4
his 1	world history	history	4
mu 1	music audio	music	3
mu 2	music video pro	music	4
phy 2	physics principles	physics	4
+-----------+--------------------+----------+---------+
8 rows in set (0.00 sec)

mysql> create table time_slot(tid varchar(20),starttime timestamp,endtime timestamp,day

varchar(20));
Query OK, 0 rows affected (0.03 sec)
mysql> create table takes(sid varchar(20),course_id varchar(20),sec_id
varchar(20),semester varchar(20),year varchar(20),grade varchar(20));
Query OK, 0 rows affected (0.02 sec)

mysql> insert into takes(sid,course_id,sec_id,semester,year,grade) values("s1","his
1","s15","I","fy","b+"),("s3","mu2","s14","II","ty","b"),("s4","phy
2","s12","II","fy","a+"),("s5","bio1","s11","I","fy","c"),("s5","bio2","s11","I","fy","a"),
("s5","cs 1","s13","II","sy","o");
Query OK, 6 rows affected (0.04 sec)
Records: 6 Duplicates: 0 Warnings: 0

mysql> select * from takes;
+------+-----------+--------+----------+------+-------+
| sid | course_id | sec_id | semester | year | grade |
+------+-----------+--------+----------+------+-------+
s1	his 1	s15	I	fy	b+
s3	mu 2	s14	II	ty	b
s4	phy 2	s12	II	fy	a+
s5	bio 1	s11	I	fy	c
s5	bio 2	s11	I	fy	a
s5	cs 1	s13	II	sy	o
+------+-----------+--------+----------+------+-------+

6 rows in set (0.00 sec)

mysql> insert into teaches(id,course_id,sec_id,semester,year) values("117","bio
1","s11","I","fy"),("117","bio 2","s11","I","fy"),("111","cs 2","s13","II","sy"),("115","mu
1","s14","II","ty"),("113","phy 2","s12","II","fy");
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0

mysql> select * from teaches;
+------+-----------+--------+----------+------+
| id | course_id | sec_id | semester | year |
+------+-----------+--------+----------+------+
117	bio 1	s11	I	fy
117	bio 2	s11	I	fy
111	cs 2	s13	II	sy
115	mu 1	s14	II	ty
113	phy 2	s12	II	fy
+------+-----------+--------+----------+------+
5 rows in set (0.00 sec)

```
mysql> insert into
time_slot(tid,starttime,endtime,day)values('t1','09:00:00','14:00:00','monday'),
('t2','10:00:00','15:00:00','monday'),('t3','09:00:00','14:00:00','tuseday'),
('t4','08:00:00','10:00:00','thursday'),('t5','07:00:00','09:00:00','friday');
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0
mysql> select * from time_slot;
+------+-----------+----------+----------+
| tid | starttime | endtime | day |
+------+-----------+----------+----------+
| t1 | 09:00:00 | 14:00:00 | monday |
| t2 | 10:00:00 | 15:00:00 | monday |
| t3 | 09:00:00 | 14:00:00 | tuseday |

| t4 | 08:00:00 | 10:00:00 | thursday |
| t5 | 07:00:00 | 09:00:00 | friday |
+------+-----------+----------+----------+
5 rows in set (0.00 sec)

mysql> alter table time_slot modify starttime time;
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table time_slot modify endtime time;
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0

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mysql> alter table course add foreign key(deptname)references department(deptname);
Query OK, 8 rows affected (0.04 sec)
Records: 8 Duplicates: 0 Warnings: 0

mysql> create index courseindex on course(course_id);
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table instructor add foreign key(deptname)references department(deptname);
Query OK, 7 rows affected (0.06 sec)
Records: 7 Duplicates: 0 Warnings: 0

mysql> alter table student add foreign key(deptname)references department(deptname);
Query OK, 7 rows affected (0.07 sec)
```

Records: 7 Duplicates: 0 Warnings: 0

mysql> create index departmentindex on department(deptname);
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> create index instructorindex on instructor(id);
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> create index studentindex on student(sid);
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> create index time_slotindex on time_slot(tid);
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> create index classroomindex on classroom(cbuilding,roomno);
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> create index sectionindex on section(sec_id,semester,year);
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table section add foreign key(tid)references time_slot(tid);
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table section add foreign key(course_id)references course(course_id);
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table teaches add foreign key(id)references instructor(id);

Query OK, 5 rows affected (0.04 sec)
Records: 5 Duplicates: 0 Warnings: 0
mysql> alter table takes add foreign key(sid)references student(sid);
Query OK, 6 rows affected (0.05 sec)
Records: 6 Duplicates: 0 Warnings: 0

3/5/23 - Assignment 4

1]

```
mysql> select name from instructor where salary>60000 and deptname="computer";
+------+
| name |
+------+
| abc |
+------+
1 row in set (0.00 sec)

2]
mysql> select *from instructor where deptname = 'physics';
+-----+------+--------+----------+
| id | name | salary | deptname |
+-----+------+--------+----------+
| 113 | efg | 70000 | physics |
| 116 | uvw | 70000 | physics |
+-----+------+--------+----------+
2 rows in set (0.00 sec)

3]
mysql> select deptname from department where budget>500000;
+----------+
| deptname |

+----------+
| biology |
+----------+
1 row in set (0.04 sec)

4]
mysql> select sname from student where deptname="computer";
+--------+
| sname |
+--------+
| rakesh |
| tanvi |
+--------+
2 rows in set (0.00 sec)

5]
mysql> select sname from student where deptname="music";
+--------+
| sname |
+--------+
| ashish |
```

| chetan |
+--------+
2 rows in set (0.00 sec)

mysql> select sname from student where tot_credits>7;
+---------+
| sname |
+---------+
| ashish |
| rakesh |
| chetan |
| mayuri |

| anushka |
+---------+
5 rows in set (0.00 sec)

6]
mysql> select roomno,capacity from classroom;
+--------+----------+
| roomno | capacity |
+--------+----------+
11	120
21	120
32	60
42	180
52	60
+--------+----------+
5 rows in set (0.00 sec)

7]
mysql> select title,deptname from course where deptname="biology";
+--------------+----------+
| title | deptname |
+--------------+----------+
| intro to bio | biology |
| genetics | biology |
+--------------+----------+
2 rows in set (0.01 sec)

8]
mysql> select title from course where deptname="music";
+-----------------+
| title |

```
+-----------------+
| music audio |
| music video pro |
+-----------------+
2 rows in set (0.00 sec)
```

9]
```
mysql> update instructor set salary=salary+10000 where salary<55000;
Query OK, 1 row affected (0.04 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> select* from instructor;
+-----+------+--------+----------+
| id | name | salary | deptname |
+-----+------+--------+----------+
| 111 | abc | 65000 | computer |
| 112 | pqr | 90000 | music |
| 113 | efg | 70000 | physics |
| 114 | xyz | 60000 | history |
| 115 | lmn | 90000 | music |
| 116 | uvw | 70000 | physics |
| 117 | stu | 55000 | biology |
+-----+------+--------+----------+
7 rows in set (0.00 sec)
```

10]
```
mysql> update instructor set salary= case when salary<55000 then salary+10000 else
salary+20000 end;
Query OK, 7 rows affected (0.04 sec)
Rows matched: 7 Changed: 7 Warnings: 0

mysql> select*from instructor;
+-----+------+--------+----------+

| id | name | salary | deptname |
+-----+------+--------+----------+
| 111 | abc | 85000 | computer |
| 112 | pqr | 110000 | music |
| 113 | efg | 90000 | physics |
| 114 | xyz | 60000 | history |
| 115 | lmn | 110000 | music |
| 116 | uvw | 90000 | physics |
| 117 | stu | 75000 | biology |
```

```
+-----+------+--------+----------+
7 rows in set (0.00 sec)
```

11]
```
mysql> select instructor.name,instructor.deptname,department.building from
instructor,department where instructor.deptname=department.deptname;
+------+----------+----------+
| name | deptname | building |
+------+----------+----------+
| stu  | biology  | 5        |
| abc  | computer | 1        |
| xyz  | history  | 4        |
| pqr  | music    | 2        |
| lmn  | music    | 2        |
| efg  | physics  | 3        |
| uvw  | physics  | 3        |
+------+----------+----------+
7 rows in set (0.00 sec)
```

12]
```
mysql> select name,id from instructor where deptname="computer";
+------+-----+
| name | id  |
+------+-----+

| abc  | 111 |
+------+-----+
1 row in set (0.00 sec)
```

13]

14]
```
mysql> select instructor.name,course.title,course.course_id from instructor,course where
instructor.deptname=course.deptname;
+------+--------------------+-----------+
| name | title              | course_id |
+------+--------------------+-----------+
| abc  | intro to cs        | cs 1      |
| abc  | robotics           | cs 2      |
| pqr  | music audio        | mu 1      |
| pqr  | music video pro    | mu 2      |
| efg  | physics principles | phy 2     |
| xyz  | world history      | his 1     |
| lmn  | music audio        | mu 1      |
```

lmn	music video pro	mu 2
uvw	physics principles	phy 2
stu	intro to bio	bio 1
stu	genetics	bio 2
+------+-------------------+-----------+
11 rows in set (0.00 sec)

15]
mysql> select name,title from instructor,course where
instructor.deptname=course.deptname;
+------+-------------------+
| name | title |
+------+-------------------+
| abc | intro to cs |
| abc | robotics |

pqr	music audio
pqr	music video pro
efg	physics principles
xyz	world history
lmn	music audio
lmn	music video pro
uvw	physics principles
stu	intro to bio
stu	genetics
+------+-------------------+
11 rows in set (0.00 sec)

16]
mysql> select deptname from department where deptname like'%i%';
+----------+
| deptname |
+----------+
| biology |
| history |
| music |
| physics |
+----------+
4 rows in set (0.03 sec)

17]
mysql> select name from instructor where length(name)=3;
+------+
| name |

```
+------+
| abc |
| pqr |
| efg |

| xyz |
| lmn |
| uvw |
| stu |
+------+
7 rows in set (0.00 sec)
```

18]
```
mysql> select title,deptname from course where deptname like'%y';
+---------------+----------+
| title | deptname |
+---------------+----------+
| intro to bio | biology |
| genetics | biology |
| world history | history |
+---------------+----------+
3 rows in set (0.00 sec)
```

19]
```
mysql> select name from instructor order by name desc;
+------+
| name |
+------+
| xyz |
| uvw |
| stu |
| pqr |
| lmn |
| efg |
| abc |
+------+
7 rows in set (0.00 sec)
```

20]
```
mysql> select name from instructor where salary between 70000 and 80000;
+------+
| name |
+------+
| stu |
```

```
+------+
1 row in set (0.00 sec)

21]
mysql> select sum(salary) from instructor;
+-------------+
| sum(salary) |
+-------------+
| 620000 |
+-------------+
1 row in set (0.00 sec)

22]
mysql> select sum(salary) from instructor where deptname="music";
+-------------+
| sum(salary) |
+-------------+
| 220000 |
+-------------+
1 row in set (0.00 sec)

23]
mysql> select count(name) from instructor where deptname="physics";
+-------------+
| count(name) |
+-------------+
| 2 |

+-------------+
1 row in set (0.01 sec)

24]
mysql> select avg(salary) from instructor;
+-------------+
| avg(salary) |
+-------------+
| 88571.4286 |
+-------------+
1 row in set (0.00 sec)

25]
mysql> select min(salary) from instructor;
+-------------+
| min(salary) |
```

```
+-------------+
| 60000 |
+-------------+
1 row in set (0.00 sec)

26]
mysql> select max(salary) from instructor;
+-------------+
| max(salary) |
+-------------+
| 110000 |
+-------------+
1 row in set (0.00 sec)

27]
mysql> select deptname,min(tot_credits),max(tot_credits) from student group by
deptname;

+----------+------------------+------------------+
| deptname | min(tot_credits) | max(tot_credits) |
+----------+------------------+------------------+
| biology | 7 | 7 |
| computer | 6 | 9 |
| history | 9 | 9 |
| music | 8 | 9 |
| physics | 9 | 9 |
+----------+------------------+------------------+
5 rows in set (0.00 sec)

28]
mysql> select name from instructor where salary not between 50000 and 68000;
+------+
| name |
+------+
| abc |
| pqr |
| efg |
| lmn |
| uvw |
| stu |
+------+
6 rows in set (0.00 sec)
30]
mysql> select deptname,avg(salary) from instructor group by deptname;
```

```
+----------+-------------+
| deptname | avg(salary) |
+----------+-------------+
| biology  | 75000.0000  |
| computer | 85000.0000  |
| history  | 60000.0000  |

| music    | 110000.0000 |
| physics  | 90000.0000  |
+----------+-------------+
5 rows in set (0.00 sec)
```

32]
mysql> select deptname,count(name)from instructor group by deptname;
```
+----------+-------------+
| deptname | count(name) |
+----------+-------------+
| biology  | 1           |
| computer | 1           |
| history  | 1           |
| music    | 2           |
| physics  | 2           |
+----------+-------------+
5 rows in set (0.00 sec)
```

36]
mysql> select name,course_id from instructor,course where
instructor.deptname=course.deptname;
```
+------+-----------+
| name | course_id |
+------+-----------+
| abc  | cs 1      |
| abc  | cs 2      |
| pqr  | mu 1      |
| pqr  | mu 2      |
| efg  | phy 2     |
| xyz  | his 1     |
| lmn  | mu 1      |
| lmn  | mu 2      |

| uvw  | phy 2     |
| stu  | bio 1     |
| stu  | bio 2     |
+------+-----------+
```

11 rows in set (0.00 sec)

37]
mysql> select name,title from instructor,course where
instructor.deptname=course.deptname;
+------+--------------------+
| name | title |
+------+--------------------+
abc	intro to cs
abc	robotics
pqr	music audio
pqr	music video pro
efg	physics principles
xyz	world history
lmn	music audio
lmn	music video pro
uvw	physics principles
stu	intro to bio
stu	genetics
+------+--------------------+
11 rows in set (0.00 sec)

41]
mysql> select upper(sname) from student;
+--------------+
| upper(sname) |
+--------------+
| ASHISH |
| RAKESH |

| CHETAN |
| MAYURI |
| PRIYA |
| TANVI |
| ANUSHKA |
+--------------+
7 rows in set (0.00 sec)

42]
mysql> select lower(sname) from student;
+--------------+
| lower(sname) |
+--------------+
| ashish |

| rakesh |
| chetan |
| mayuri |
| priya |
| tanvi |
| anushka |
+--------------+
7 rows in set (0.00 sec)

43]
mysql> select length(title) from course;
+---------------+
| length(title) |
+---------------+
| 12 |
| 8 |
| 11 |
| 8 |
| 13 |

| 11 |
| 15 |
| 18 |
+---------------+
8 rows in set (0.00