PROGRAM 10

Consider the schema for College Database:

 STUDENT (USN, SName, Address, Phone, Gender)

 SEMSEC (SSID, Sem, Sec)
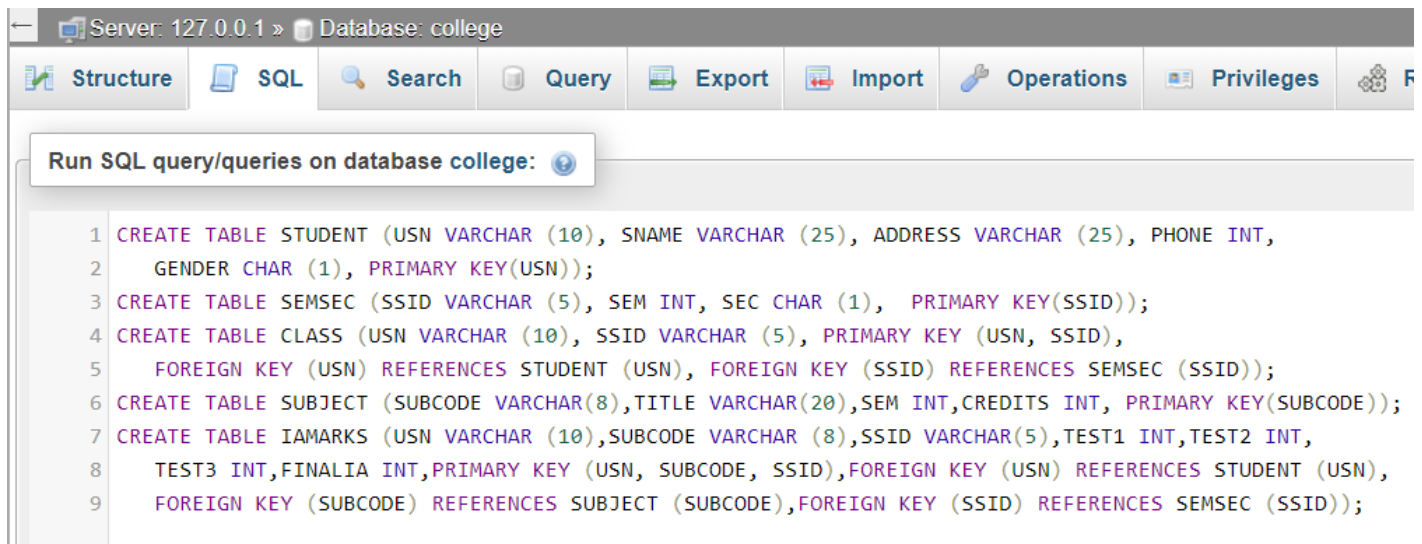
 CLASS (USN, SSID)

 SUBJECT (Subcode, Title, Sem, Credits)

 IAMARKS (USN, Subcode, SSID, Test1, Test2, Test3, FinalIA)
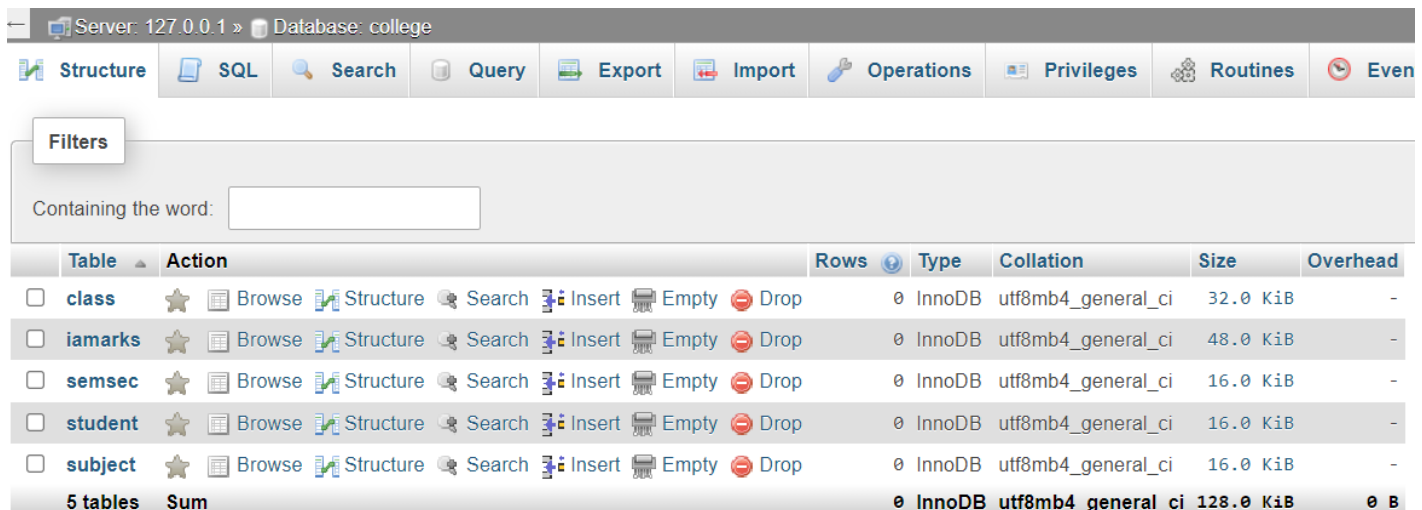
Write SQL queries to

Creation of Tables:

Server: 127.0.0.1 » Database: college

Structure   SQL   Search   Query   Export   Import   Operations   Privileges   R

Run SQL query/queries on database college:

```
1  CREATE TABLE STUDENT (USN VARCHAR (10), SNAME VARCHAR (25), ADDRESS VARCHAR (25), PHONE INT,
2     GENDER CHAR (1), PRIMARY KEY(USN));
3  CREATE TABLE SEMSEC (SSID VARCHAR (5), SEM INT, SEC CHAR (1),  PRIMARY KEY(SSID));
4  CREATE TABLE CLASS (USN VARCHAR (10), SSID VARCHAR (5), PRIMARY KEY (USN, SSID),
5     FOREIGN KEY (USN) REFERENCES STUDENT (USN), FOREIGN KEY (SSID) REFERENCES SEMSEC (SSID));
6  CREATE TABLE SUBJECT (SUBCODE VARCHAR(8),TITLE VARCHAR(20),SEM INT,CREDITS INT, PRIMARY KEY(SUBCODE));
7  CREATE TABLE IAMARKS (USN VARCHAR (10),SUBCODE VARCHAR (8),SSID VARCHAR(5),TEST1 INT,TEST2 INT,
8     TEST3 INT,FINALIA INT,PRIMARY KEY (USN, SUBCODE, SSID),FOREIGN KEY (USN) REFERENCES STUDENT (USN),
9     FOREIGN KEY (SUBCODE) REFERENCES SUBJECT (SUBCODE),FOREIGN KEY (SSID) REFERENCES SEMSEC (SSID));
```

Server: 127.0.0.1 » Database: college

Structure   SQL   Search   Query   Export   Import   Operations   Privileges   Routines   Even

Filters

Containing the word:

Table	Action							Rows	Type	Collation	Size	Overhead
class	★	Browse	Structure	Search	Insert	Empty	Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
iamarks	★	Browse	Structure	Search	Insert	Empty	Drop	0	InnoDB	utf8mb4_general_ci	48.0 KiB	-
semsec	★	Browse	Structure	Search	Insert	Empty	Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
student	★	Browse	Structure	Search	Insert	Empty	Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
subject	★	Browse	Structure	Search	Insert	Empty	Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
5 tables	Sum							0	InnoDB	utf8mb4_general_ci	128.0 KiB	0 B

Insertion into tables:

'STUDENT' table:

Server: 127.0.0.1 » Database: college » Table: student

Browse | Structure | SQL | Search | Insert | Export | Import | Privileges

Run SQL query/queries on table college.student:

```sql
1  INSERT INTO STUDENT VALUES ('1RN13CS020','AKSHAY','BELAGAVI','8877881122','M');
2  INSERT INTO STUDENT VALUES ('1RN13CS062','SANDHYA','BENGALURU','7722829912','F');
3  INSERT INTO STUDENT VALUES ('1RN13CS091','TEESHA','BENGALURU','7712312312','F');
4  INSERT INTO STUDENT VALUES ('1RN13CS066','SUPRIYA','MANGALURU','8877881122','F');
5  INSERT INTO STUDENT VALUES ('1RN14CS010','ABHAY','BENGALURU','9900211201','M');
6  INSERT INTO STUDENT VALUES ('1RN14CS032','BHASKAR','BENGALURU','9923211099','M');
7  INSERT INTO STUDENT VALUES ('1RN14CS025','ASMI','BENGALURU','7894737377','F');
8  INSERT INTO STUDENT VALUES ('1RN15CS011','AJAY','TUMKUR','9845091341','M');
9  INSERT INTO STUDENT VALUES ('1RN15CS029','CHITRA','DAVANGERE','7696772121','F');
10 INSERT INTO STUDENT VALUES ('1RN15CS045','JEEVA','BELLARY','9944850121','M');
11 INSERT INTO STUDENT VALUES ('1RN15CS091','SANTOSH','MANGALURU','8812332201','M');
12 INSERT INTO STUDENT VALUES ('1RN16CS045','ISMAIL','KALBURGI','9900232201','M');
13 INSERT INTO STUDENT VALUES ('1RN16CS088','SAMEERA','SHIMOGA','9905542212','F');
14 INSERT INTO STUDENT VALUES ('1RN16CS122','VINAYAKA','CHIKAMAGALUR','8800880011','M');
```

Server: 127.0.0.1 » Database: college » Table: student

Browse | Structure | SQL | Search | Insert | Export | Import

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key:

+ Options

	USN	SNAME	ADDRESS	PHONE	GENDER
Edit Copy Delete	1RN13CS020	AKSHAY	BELAGAVI	8877881122	M
Edit Copy Delete	1RN13CS062	SANDHYA	BENGALURU	7722829912	F
Edit Copy Delete	1RN13CS066	SUPRIYA	MANGALURU	8877881122	F
Edit Copy Delete	1RN13CS091	TEESHA	BENGALURU	7712312312	F
Edit Copy Delete	1RN14CS010	ABHAY	BENGALURU	9900211201	M
Edit Copy Delete	1RN14CS025	ASMI	BENGALURU	7894737377	F
Edit Copy Delete	1RN14CS032	BHASKAR	BENGALURU	9923211099	M
Edit Copy Delete	1RN15CS011	AJAY	TUMKUR	9845091341	M
Edit Copy Delete	1RN15CS029	CHITRA	DAVANGERE	7696772121	F
Edit Copy Delete	1RN15CS045	JEEVA	BELLARY	9944850121	M
Edit Copy Delete	1RN15CS091	SANTOSH	MANGALURU	8812332201	M
Edit Copy Delete	1RN16CS045	ISMAIL	KALBURGI	9900232201	M
Edit Copy Delete	1RN16CS088	SAMEERA	SHIMOGA	9905542212	F
Edit Copy Delete	1RN16CS122	VINAYAKA	CHIKAMAGALUR	8800880011	M

'SEMSEC' table:

Run SQL query/queries on table college.semsec:

```
 1  INSERT INTO SEMSEC VALUES ('CSE8A',8,'A');
 2  INSERT INTO SEMSEC VALUES ('CSE8B',8,'B');
 3  INSERT INTO SEMSEC VALUES ('CSE8C',8,'C');
 4  INSERT INTO SEMSEC VALUES ('CSE7A',7,'A');
 5  INSERT INTO SEMSEC VALUES ('CSE7B',7,'B');
 6  INSERT INTO SEMSEC VALUES ('CSE7C',7,'C');
 7  INSERT INTO SEMSEC VALUES ('CSE6A',6,'A');
 8  INSERT INTO SEMSEC VALUES ('CSE6B',6,'B');
 9  INSERT INTO SEMSEC VALUES ('CSE6C',6,'C');
10  INSERT INTO SEMSEC VALUES ('CSE5A',5,'A');
11  INSERT INTO SEMSEC VALUES ('CSE5B',5,'B');
12  INSERT INTO SEMSEC VALUES ('CSE5C',5,'C');
13  INSERT INTO SEMSEC VALUES ('CSE4A',4,'A');
14  INSERT INTO SEMSEC VALUES ('CSE4B',4,'B');
15  INSERT INTO SEMSEC VALUES ('CSE4C',4,'C');
16  INSERT INTO SEMSEC VALUES ('CSE3A',3,'A');
17  INSERT INTO SEMSEC VALUES ('CSE3B',3,'B');
18  INSERT INTO SEMSEC VALUES ('CSE3C',3,'C');
19  INSERT INTO SEMSEC VALUES ('CSE2A',2,'A');
20  INSERT INTO SEMSEC VALUES ('CSE2B',2,'B');
21  INSERT INTO SEMSEC VALUES ('CSE2C',2,'C');
22  INSERT INTO SEMSEC VALUES ('CSE1A',1,'A');
23  INSERT INTO SEMSEC VALUES ('CSE1B',1,'B');
24  INSERT INTO SEMSEC VALUES ('CSE1C',1,'C');
```

+ Options

	SSID	SEM	SEC
Edit Copy Delete	CSE1A	1	A
Edit Copy Delete	CSE1B	1	B
Edit Copy Delete	CSE1C	1	C
Edit Copy Delete	CSE2A	2	A
Edit Copy Delete	CSE2B	2	B
Edit Copy Delete	CSE2C	2	C
Edit Copy Delete	CSE3A	3	A
Edit Copy Delete	CSE3B	3	B
Edit Copy Delete	CSE3C	3	C
Edit Copy Delete	CSE4A	4	A
Edit Copy Delete	CSE4B	4	B
Edit Copy Delete	CSE4C	4	C
Edit Copy Delete	CSE5A	5	A
Edit Copy Delete	CSE5B	5	B
Edit Copy Delete	CSE5C	5	C
Edit Copy Delete	CSE6A	6	A
Edit Copy Delete	CSE6B	6	B
Edit Copy Delete	CSE6C	6	C
Edit Copy Delete	CSE7A	7	A
Edit Copy Delete	CSE7B	7	B
Edit Copy Delete	CSE7C	7	C
Edit Copy Delete	CSE8A	8	A
Edit Copy Delete	CSE8B	8	B
Edit Copy Delete	CSE8C	8	C

'CLASS' table:

Browse   Structure   SQL   Search   Insert   Export   Import   Privileg

Run SQL query/queries on table college.class:

```sql
1  INSERT INTO CLASS VALUES ('1RN13CS020','CSE8A');
2  INSERT INTO CLASS VALUES ('1RN13CS062','CSE8A');
3  INSERT INTO CLASS VALUES ('1RN13CS066','CSE8B');
4  INSERT INTO CLASS VALUES ('1RN13CS091','CSE8C');
5  INSERT INTO CLASS VALUES ('1RN14CS010','CSE7A');
6  INSERT INTO CLASS VALUES ('1RN14CS025','CSE7A');
7  INSERT INTO CLASS VALUES ('1RN14CS032','CSE7A');
8  INSERT INTO CLASS VALUES ('1RN15CS011','CSE4A');
9  INSERT INTO CLASS VALUES ('1RN15CS029','CSE4A');
10 INSERT INTO CLASS VALUES ('1RN15CS045','CSE4B');
11 INSERT INTO CLASS VALUES ('1RN15CS091','CSE4C');
12 INSERT INTO CLASS VALUES ('1RN16CS045','CSE3A');
13 INSERT INTO CLASS VALUES ('1RN16CS088','CSE3B');
14 INSERT INTO CLASS VALUES ('1RN16CS122','CSE3C');
```

Browse   Structure   SQL   Search   Insert   Export

Showing rows 0 - 13 (14 total, Query took 0.0005 seconds.)

```sql
SELECT * FROM `class`
```

Show all | Number of rows: 25   Filter rows: Search this table

+ Options

	USN	SSID
Edit Copy Delete	1RN13CS020	CSE8A
Edit Copy Delete	1RN13CS062	CSE8A
Edit Copy Delete	1RN13CS066	CSE8B
Edit Copy Delete	1RN13CS091	CSE8C
Edit Copy Delete	1RN14CS010	CSE7A
Edit Copy Delete	1RN14CS025	CSE7A
Edit Copy Delete	1RN14CS032	CSE7A
Edit Copy Delete	1RN15CS011	CSE4A
Edit Copy Delete	1RN15CS029	CSE4A
Edit Copy Delete	1RN15CS045	CSE4B
Edit Copy Delete	1RN15CS091	CSE4C
Edit Copy Delete	1RN16CS045	CSE3A
Edit Copy Delete	1RN16CS088	CSE3B
Edit Copy Delete	1RN16CS122	CSE3C

'IAMARKS' table:

Browse | Structure | SQL | Search | Insert | Export | Import | Privil

Run SQL query/queries on table college.iamarks:

```
1  INSERT INTO IAMARKS VALUES ('1RN13CS091','10CS81','CSE8C', 15, 16,18,NULL);
2  INSERT INTO IAMARKS VALUES ('1RN13CS091','10CS82','CSE8C', 12, 19,14,NULL);
3  INSERT INTO IAMARKS VALUES ('1RN13CS091','10CS83','CSE8C', 19, 15,20,NULL);
4  INSERT INTO IAMARKS VALUES ('1RN13CS091','10CS84','CSE8C', 20, 16,19,NULL);
5  INSERT INTO IAMARKS VALUES ('1RN13CS091','10CS85','CSE8C', 15, 15,12,NULL);
```

Browse | Structure | SQL | Search | Insert | Export | Import | Privilege

Showing rows 0 - 4 (5 total, Query took 0.0005 seconds.)

```
SELECT * FROM `iamarks`
```

Show all | Number of rows: 25 ⌄   Filter rows: Search this table   Sort by key: None

+ Options

	USN	SUBCODE	SSID	TEST1	TEST2	TEST3	FINALIA
Edit Copy Delete	1RN13CS091	10CS81	CSE8C	15	16	18	NULL
Edit Copy Delete	1RN13CS091	10CS82	CSE8C	12	19	14	NULL
Edit Copy Delete	1RN13CS091	10CS83	CSE8C	19	15	20	NULL
Edit Copy Delete	1RN13CS091	10CS84	CSE8C	20	16	19	NULL
Edit Copy Delete	1RN13CS091	10CS85	CSE8C	15	15	12	NULL

'SUBJECT' table:

Browse | Structure | SQL | Search | Insert | Export | Import

Run SQL query/queries on table college.subject:

```
 1  INSERT INTO SUBJECT VALUES ('10CS81','ACA', 8, 4);
 2  INSERT INTO SUBJECT VALUES ('10CS82','SSM', 8, 4);
 3  INSERT INTO SUBJECT VALUES ('10CS83','NM', 8, 4);
 4  INSERT INTO SUBJECT VALUES ('10CS84','CC', 8, 4);
 5  INSERT INTO SUBJECT VALUES ('10CS85','PW', 8, 4);
 6  INSERT INTO SUBJECT VALUES ('10CS71','OOAD', 7, 4);
 7  INSERT INTO SUBJECT VALUES ('10CS72','ECS', 7, 4);
 8  INSERT INTO SUBJECT VALUES ('10CS73','PTW', 7, 4);
 9  INSERT INTO SUBJECT VALUES ('10CS74','DWDM', 7, 4);
10  INSERT INTO SUBJECT VALUES ('10CS75','JAVA', 7, 4);
11  INSERT INTO SUBJECT VALUES ('10CS76','SAN', 7, 4);
12  INSERT INTO SUBJECT VALUES ('15CS51', 'ME', 5, 4);
13  INSERT INTO SUBJECT VALUES ('15CS52','CN', 5, 4);
14  INSERT INTO SUBJECT VALUES ('15CS53','DBMS', 5, 4);
15  INSERT INTO SUBJECT VALUES ('15CS54','ATC', 5, 4);
16  INSERT INTO SUBJECT VALUES ('15CS55','JAVA', 5, 3);
17  INSERT INTO SUBJECT VALUES ('15CS56','AI', 5, 3);
18  INSERT INTO SUBJECT VALUES ('15CS41','M4', 4, 4);
19  INSERT INTO SUBJECT VALUES ('15CS42','SE', 4, 4);
20  INSERT INTO SUBJECT VALUES ('15CS43','DAA', 4, 4);
21  INSERT INTO SUBJECT VALUES ('15CS44','MPMC', 4, 4);
22  INSERT INTO SUBJECT VALUES ('15CS45','OOC', 4, 3);
23  INSERT INTO SUBJECT VALUES ('15CS46','DC', 4, 3);
24  INSERT INTO SUBJECT VALUES ('15CS31','M3', 3, 4);
25  INSERT INTO SUBJECT VALUES ('15CS32','ADE', 3, 4);
26  INSERT INTO SUBJECT VALUES ('15CS33','DSA', 3, 4);
27  INSERT INTO SUBJECT VALUES ('15CS34','CO', 3, 4);
28  INSERT INTO SUBJECT VALUES ('15CS35','USP', 3, 3);
29  INSERT INTO SUBJECT VALUES ('15CS36','DMS', 3, 3);
```

Browse | Structure | SQL | Search | Insert | Export | Import

				SUBCODE	TITLE	SEM	CREDITS
☐	Edit	Copy	Delete	10CS71	OOAD	7	4
☐	Edit	Copy	Delete	10CS72	ECS	7	4
☐	Edit	Copy	Delete	10CS73	PTW	7	4
☐	Edit	Copy	Delete	10CS74	DWDM	7	4
☐	Edit	Copy	Delete	10CS75	JAVA	7	4
☐	Edit	Copy	Delete	10CS76	SAN	7	4
☐	Edit	Copy	Delete	10CS81	ACA	8	4
☐	Edit	Copy	Delete	10CS82	SSM	8	4
☐	Edit	Copy	Delete	10CS83	NM	8	4
☐	Edit	Copy	Delete	10CS84	CC	8	4
☐	Edit	Copy	Delete	10CS85	PW	8	4
☐	Edit	Copy	Delete	15CS31	M3	3	4
☐	Edit	Copy	Delete	15CS32	ADE	3	4
☐	Edit	Copy	Delete	15CS33	DSA	3	4
☐	Edit	Copy	Delete	15CS34	CO	3	4
☐	Edit	Copy	Delete	15CS35	USP	3	3
☐	Edit	Copy	Delete	15CS36	DMS	3	3
☐	Edit	Copy	Delete	15CS41	M4	4	4
☐	Edit	Copy	Delete	15CS42	SE	4	4
☐	Edit	Copy	Delete	15CS43	DAA	4	4
☐	Edit	Copy	Delete	15CS44	MPMC	4	4
☐	Edit	Copy	Delete	15CS45	OOC	4	3
☐	Edit	Copy	Delete	15CS46	DC	4	3
☐	Edit	Copy	Delete	15CS51	ME	5	4
☐	Edit	Copy	Delete	15CS52	CN	5	4
☐	Edit	Copy	Delete	15CS53	DBMS	5	4
☐	Edit	Copy	Delete	15CS54	ATC	5	4
☐	Edit	Copy	Delete	15CS55	JAVA	5	3
☐	Edit	Copy	Delete	15CS56	AI	5	3

i. List all the student details studying in fourth semester 'C' section.

Query:

SELECT S.*, SS.SEM, SS.SEC FROM STUDENT S, SEMSEC SS, CLASS C WHERE S.USN = C.USN AND SS.SSID = C.SSID AND SS.SEM = 4 AND SS.SEC='C';

Server: 127.0.0.1 » Database: college

Structure | SQL | Search | Query | Export | Import
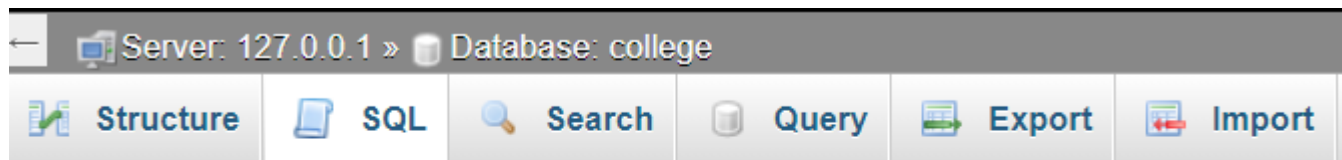
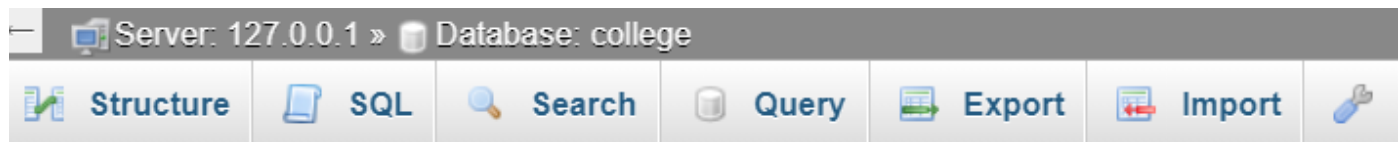Run SQL query/queries on database college:

```
1 SELECT S.*, SS.SEM, SS.SEC
2 FROM STUDENT S, SEMSEC SS, CLASS C
3 WHERE S.USN = C.USN
4 AND SS.SSID = C.SSID
5 AND SS.SEM = 4
6 AND SS.SEC='C';
```

Server: 127.0.0.1 » Database: college

Structure | SQL | Search | Query | Export | Import

Show query box

✔ Showing rows 0 - 0 (1 total, Query took 0.0023 seconds.)

SELECT S.*, SS.SEM, SS.SEC FROM STUDENT S, SEMSEC SS, CLASS C WHERE S.USN = C

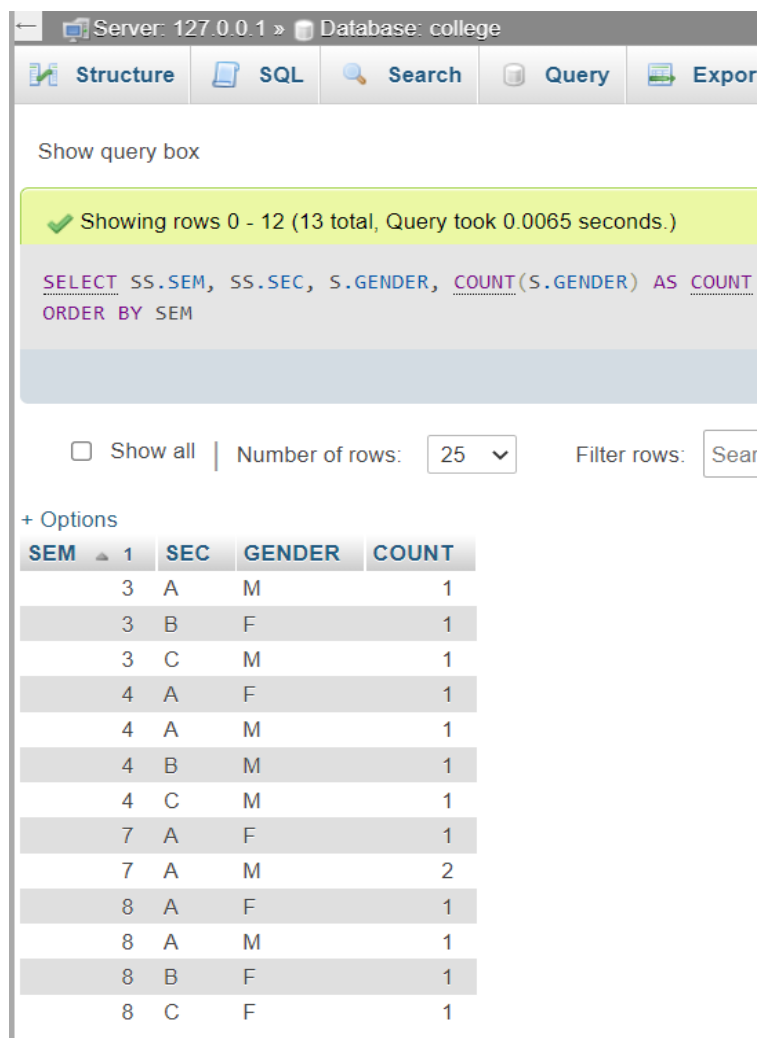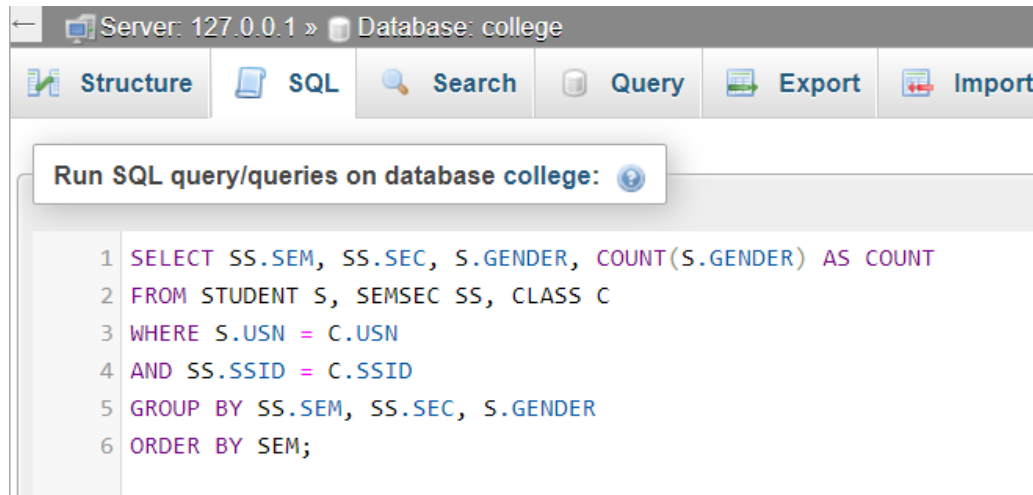☐ Show all | Number of rows: 25 ∨   Filter rows: Search this table

+ Options

USN	SNAME	ADDRESS	PHONE	GENDER	SEM	SEC
1RN15CS091	SANTOSH	MANGALURU	8812332201	M	4	C

ii. Compute the total number of male and female students in each semester and in each section.

Query:

SELECT SS.SEM, SS.SEC, S.GENDER, COUNT(S.GENDER) AS COUNT FROM STUDENT S, SEMSEC SS, CLASS C WHERE S.USN = C.USN AND SS.SSID =C.SSID GROUP BY SS.SEM, SS.SEC, S.GENDER ORDER BY SEM;

Server: 127.0.0.1 » Database: college

Structure   SQL   Search   Query   Export   Import

Run SQL query/queries on database college:

```
1  SELECT SS.SEM, SS.SEC, S.GENDER, COUNT(S.GENDER) AS COUNT
2  FROM STUDENT S, SEMSEC SS, CLASS C
3  WHERE S.USN = C.USN
4  AND SS.SSID = C.SSID
5  GROUP BY SS.SEM, SS.SEC, S.GENDER
6  ORDER BY SEM;
```

Server: 127.0.0.1 » Database: college

Structure   SQL   Search   Query   Expor

Show query box

✔ Showing rows 0 - 12 (13 total, Query took 0.0065 seconds.)

SELECT SS.SEM, SS.SEC, S.GENDER, COUNT(S.GENDER) AS COUNT
ORDER BY SEM

☐ Show all | Number of rows: 25 ∨   Filter rows: Sear

+ Options

SEM ▲ 1	SEC	GENDER	COUNT
3	A	M	1
3	B	F	1
3	C	M	1
4	A	F	1
4	A	M	1
4	B	M	1
4	C	M	1
7	A	F	1
7	A	M	2
8	A	F	1
8	A	M	1
8	B	F	1
8	C	F	1

iii. Create a view of Test1 marks of student USN '1RN13CS091' in all subjects.
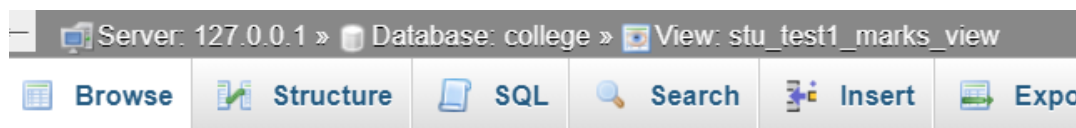
Query:

CREATE VIEW STU_TEST1_MARKS_VIEW AS SELECT TEST1, SUBCODE FROM IAMARKS WHERE USN = '1RN13CS091';

Server: 127.0.0.1 » Database: college

Structure   SQL   Search   Query   Export   Import
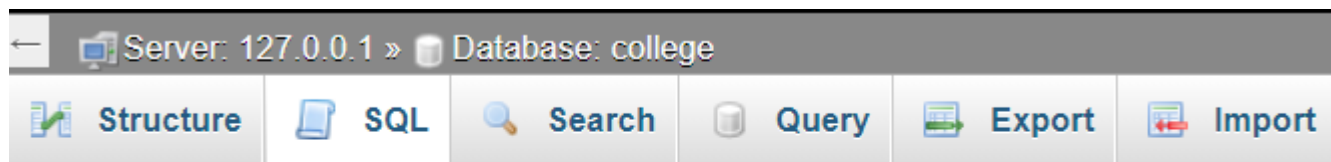
Run SQL query/queries on database college:

```
1  CREATE VIEW STU_TEST1_MARKS_VIEW AS
2  SELECT TEST1, SUBCODE
3  FROM IAMARKS
4  WHERE USN = '1RN13CS091';
```

Server: 127.0.0.1 » Database: college » View: stu_test1_marks_view

Browse   Structure   SQL   Search   Insert   Expo

⚠ Current selection does not contain a unique column. Grid edit, Edit, Copy and Dele

✔ Showing rows 0 - 4 (5 total, Query took 0.0006 seconds.)

SELECT * FROM `stu_test1_marks_view`

☐ Show all | Number of rows: 25 ▾   Filter rows: Search this table

+ Options

	TEST1	SUBCODE
☐ 🖉 Edit ⌷ Copy ⊖ Delete	15	10CS81
☐ 🖉 Edit ⌷ Copy ⊖ Delete	12	10CS82
☐ 🖉 Edit ⌷ Copy ⊖ Delete	19	10CS83
☐ 🖉 Edit ⌷ Copy ⊖ Delete	20	10CS84
☐ 🖉 Edit ⌷ Copy ⊖ Delete	15	10CS85