PROGRAM 4

Consider the following Student enrolment database for course:

STUDENT (snum: integer, sname: string, major: string, level: string, age:integer)

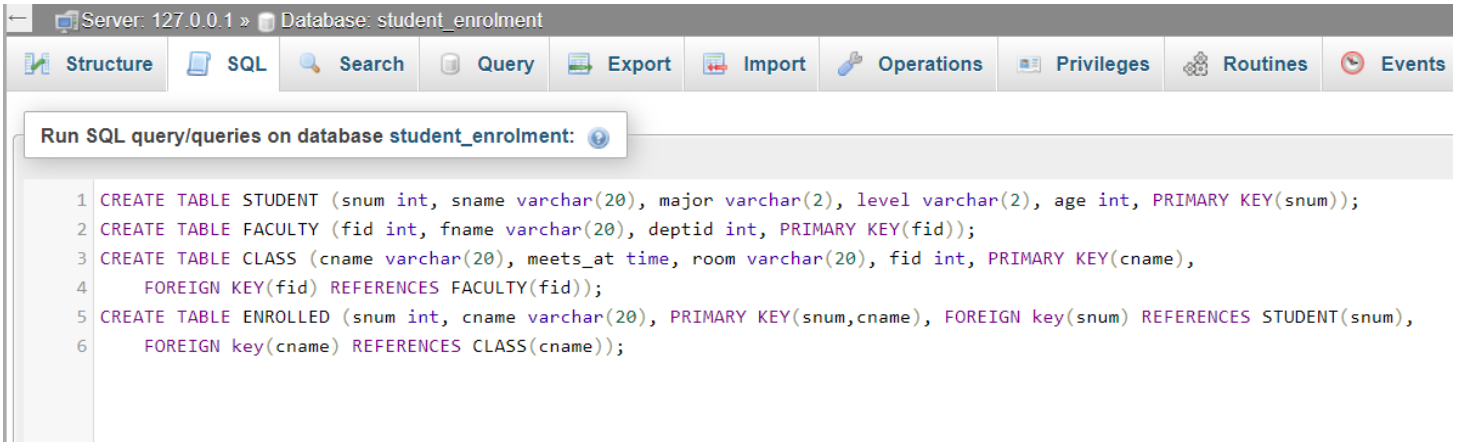
CLASS (name: string, meets at: time, room: string, fid: integer)

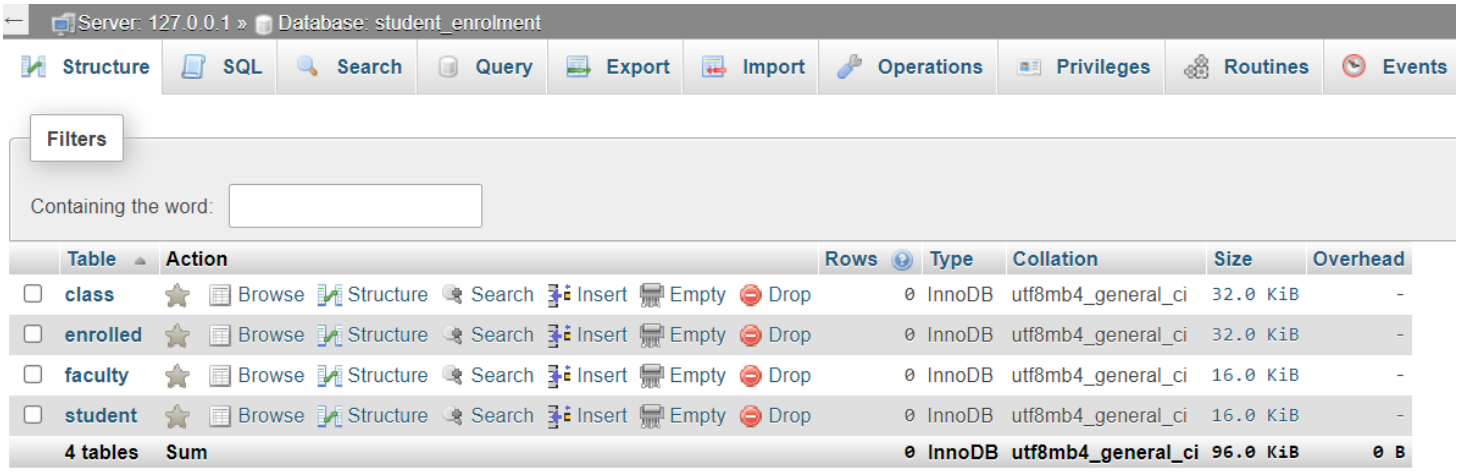
ENROLLED (snum: integer, cname: string)

FACULTY (fid: integer, fname: string, deptid: integer)

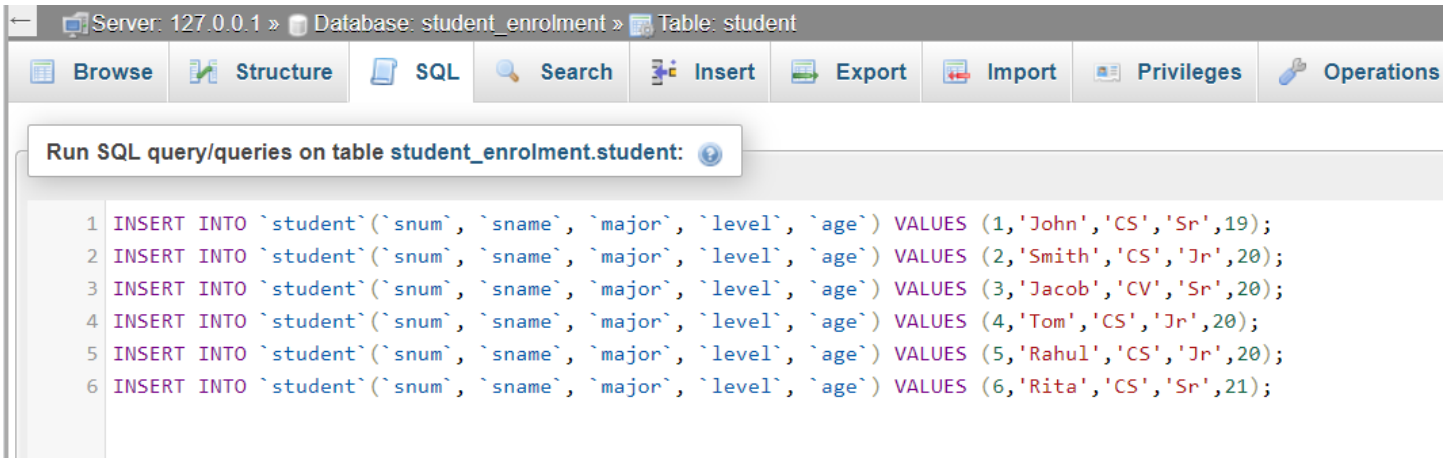
The meaning of these relations is straightforward; for example, Enrolled has one record per student-class pair such that the student is enrolled in the class. Level is a two character code with 4 different values (example: Junior: JR etc)

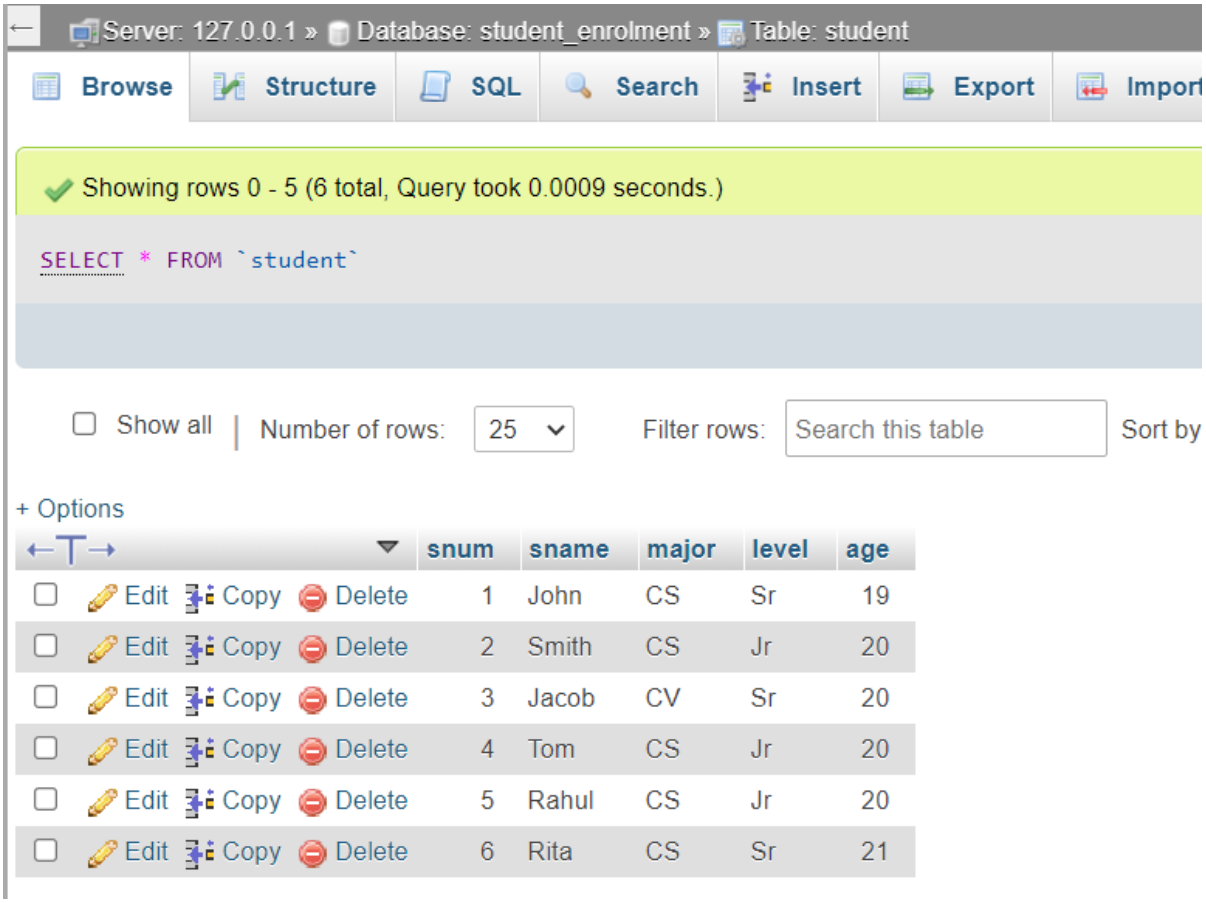
Write the following queries in SQL. No duplicates should be printed in any of the answers.



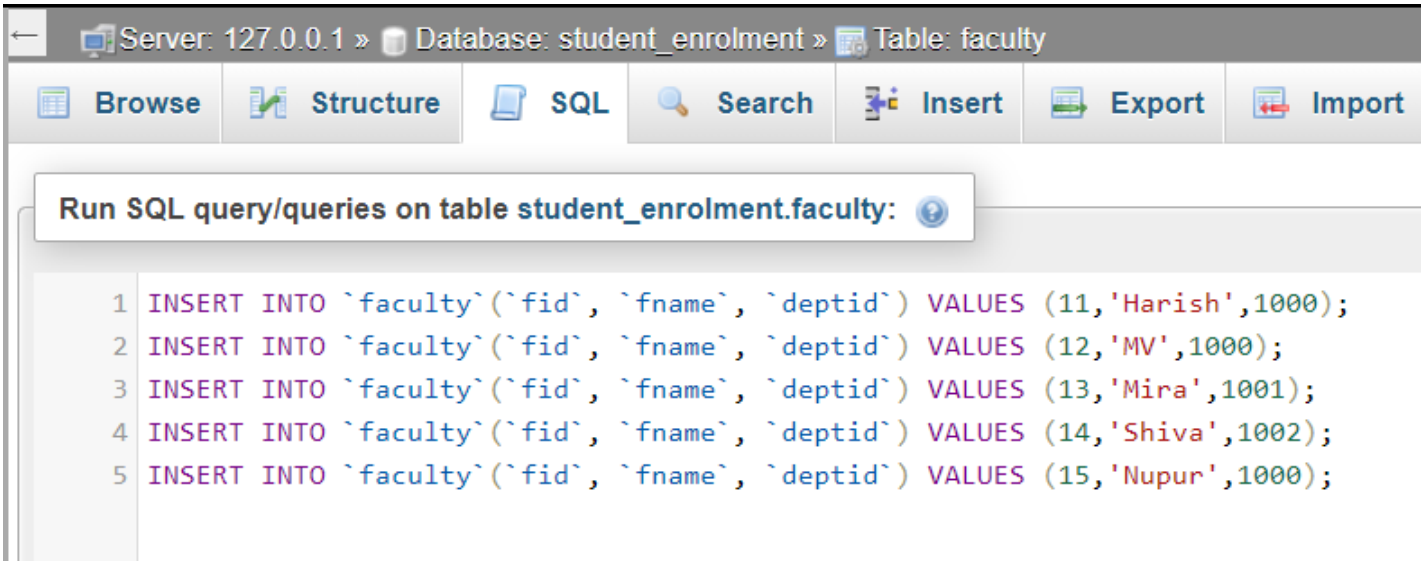


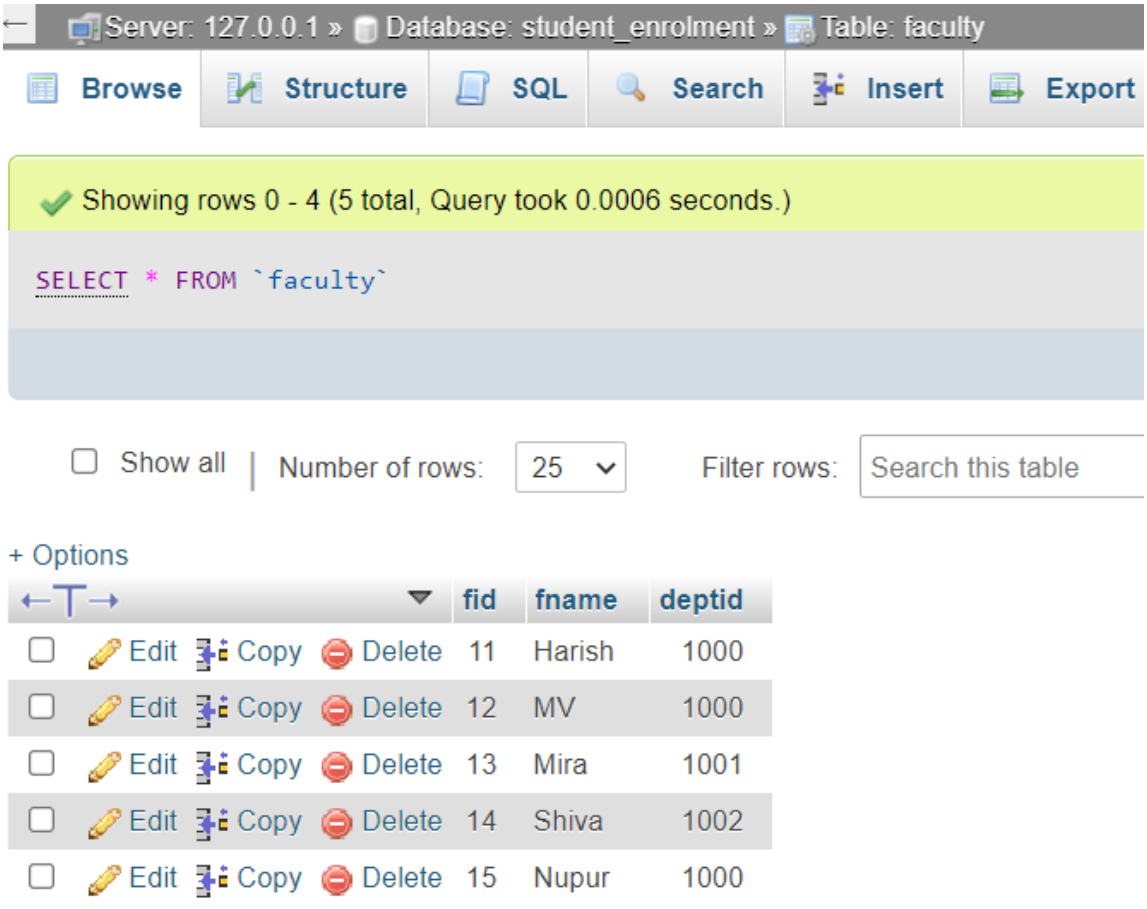
‘STUDENT’ table:



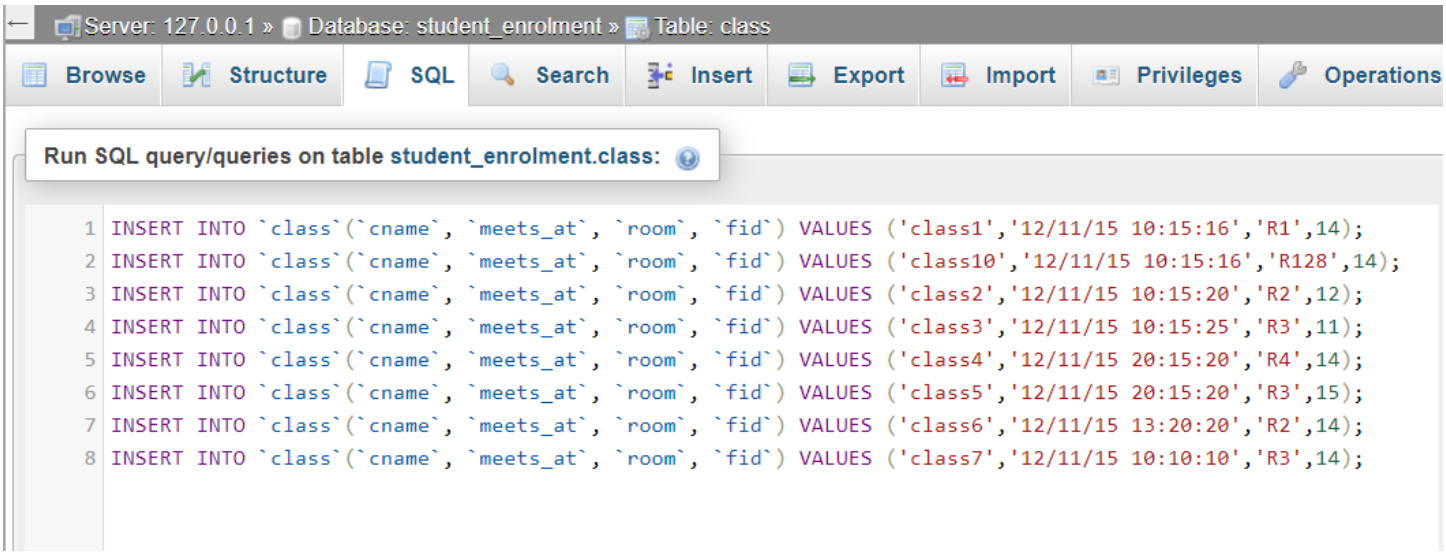


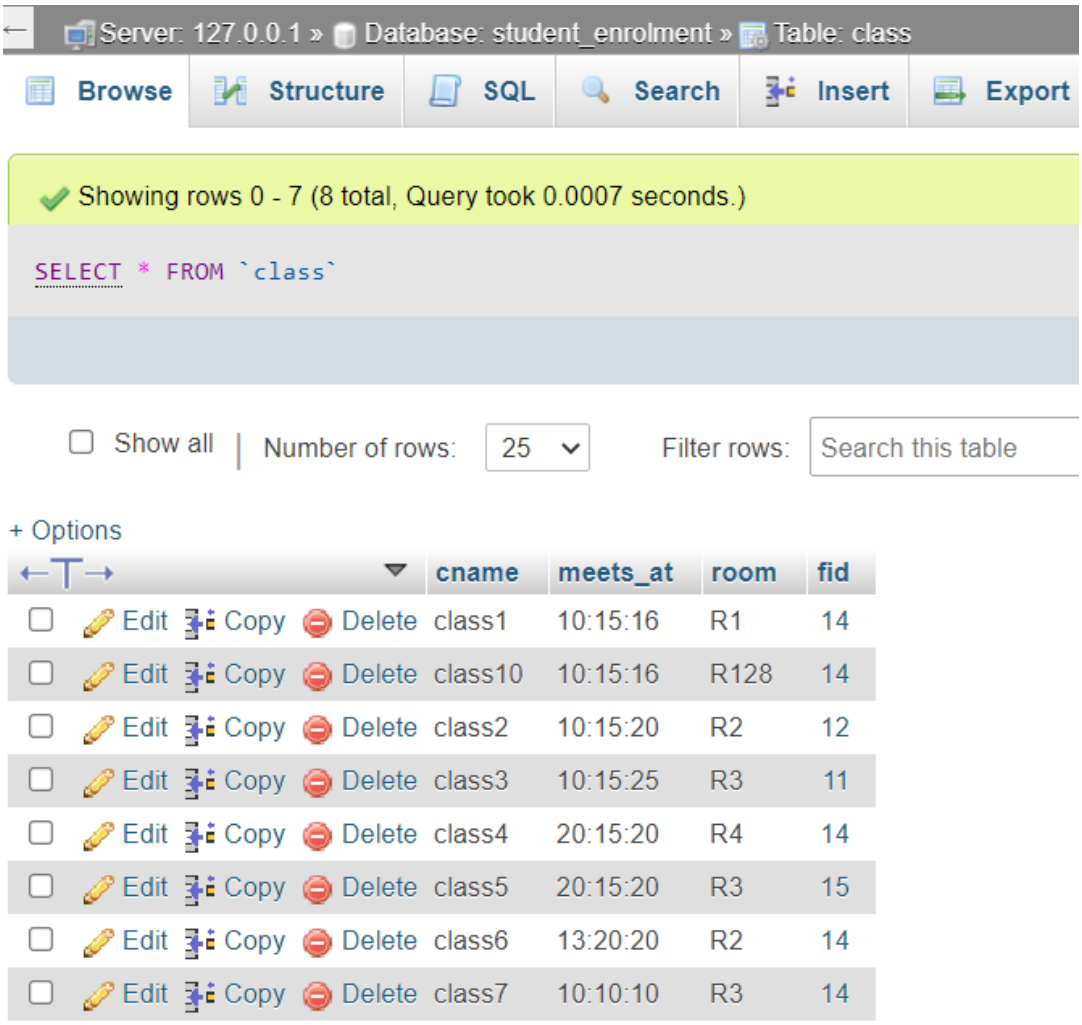
‘FACULTY’ table:



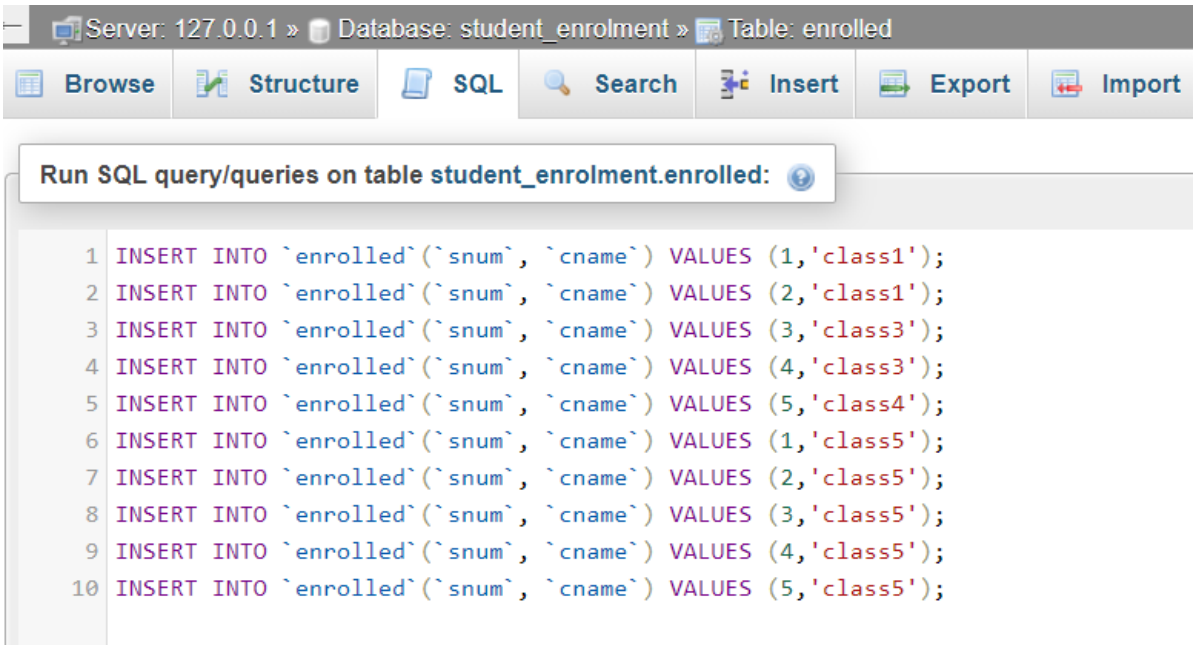


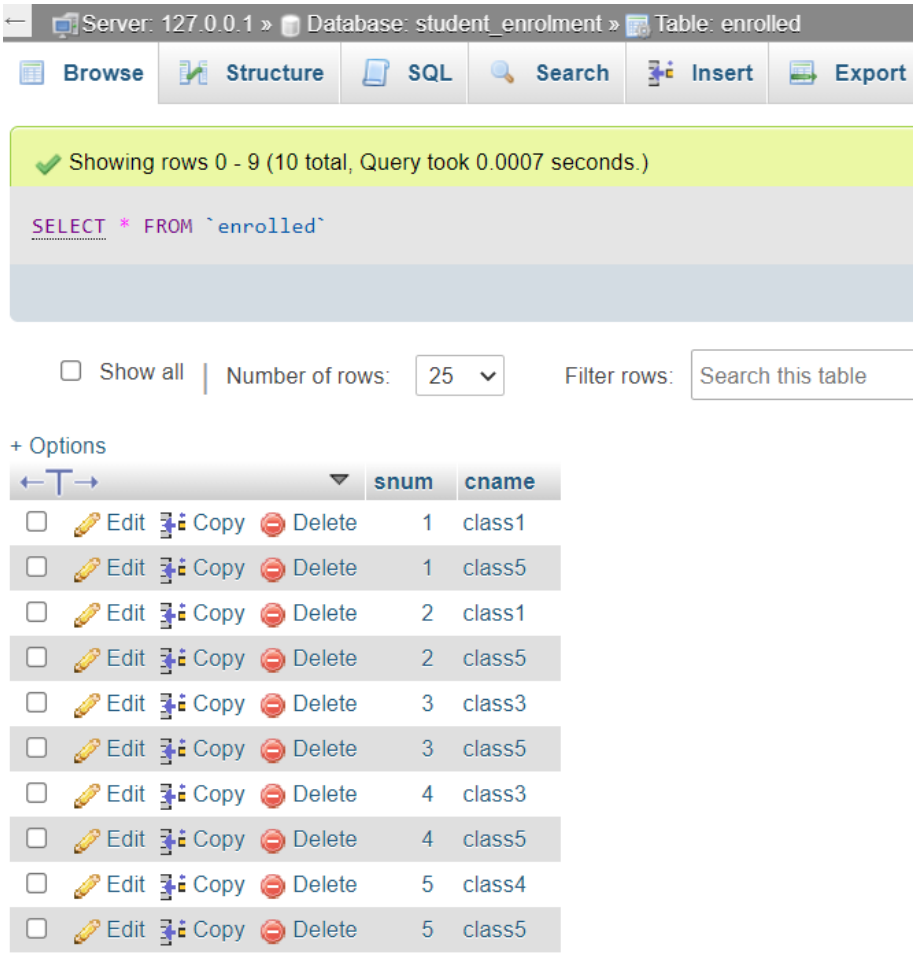
‘CLASS’ table:


Server: 127.0.0.1 » Database: student_enrolment » Table: class
Browse
Structure
SQL
Search
Insert
Export
Import
Privileges
Operations
Run SQL query/queries on table student_enrolment.class:
INSERT INTO `class`(`cname`, `meets_at`, `room`, `fid`) VALUES ('class1','12/11/15 10:15:16','R1',14);
INSERT INTO `class`(`cname`, `meets_at`, `room`, `fid`) VALUES ('class10','12/11/15 10:15:16','R128',14);
INSERT INTO `class`(`cname`, `meets_at`, `room`, `fid`) VALUES ('class2','12/11/15 10:15:20','R2',12);
INSERT INTO `class`(`cname`, `meets_at`, `room`, `fid`) VALUES ('class3','12/11/15 10:15:25','R3',11);
INSERT INTO `class`(`cname`, `meets_at`, `room`, `fid`) VALUES ('class4','12/11/15 20:15:20','R4',14);
INSERT INTO `class`(`cname`, `meets_at`, `room`, `fid`) VALUES ('class5','12/11/15 20:15:20','R3',15);
INSERT INTO `class`(`cname`, `meets_at`, `room`, `fid`) VALUES ('class6','12/11/15 13:20:20','R2',14);
INSERT INTO `class`(`cname`, `meets_at`, `room`, `fid`) VALUES ('class7','12/11/15 10:10:10','R3',14);


Server: 127.0.0.1 » Database: student_enrolment » Table: class
Browse
Structure
SQL
Search
Insert
Export
Showing rows 0 - 7 (8 total, Query took 0.0007 seconds.)
SELECT * FROM `class`
Show all
Number of rows: 25
Filter rows: Search this table
+ Options
cname meets_at room fid
Edit Copy Delete class1 10:15:16 R1 14
Edit Copy Delete class10 10:15:16 R128 14
Edit Copy Delete class2 10:15:20 R2 12
Edit Copy Delete class3 10:15:25 R3 11
Edit Copy Delete class4 20:15:20 R4 14
Edit Copy Delete class5 20:15:20 R3 15
Edit Copy Delete class6 13:20:20 R2 14
Edit Copy Delete class7 10:10:10 R3 14

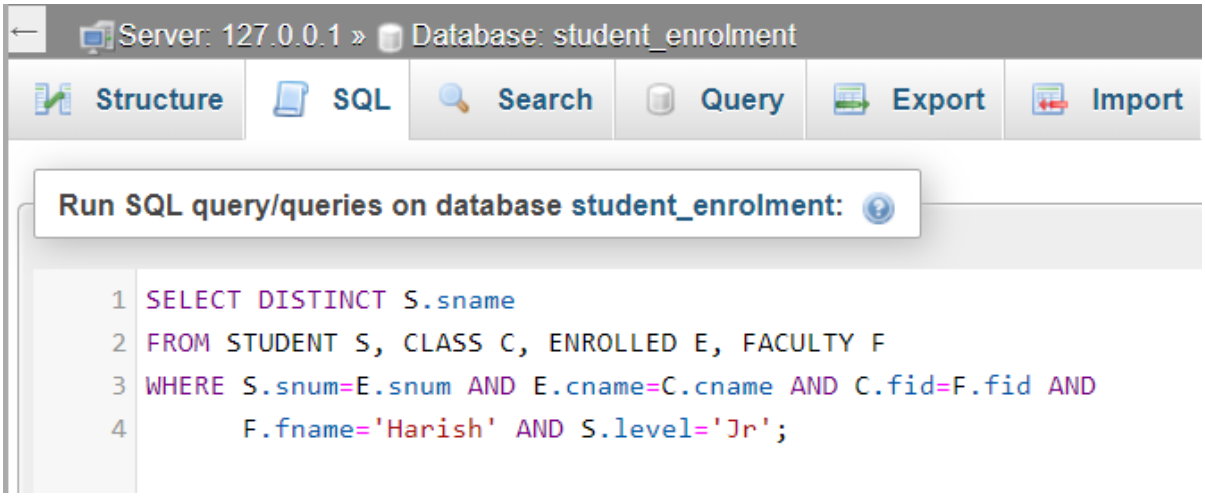
‘ENROLLED’ table:

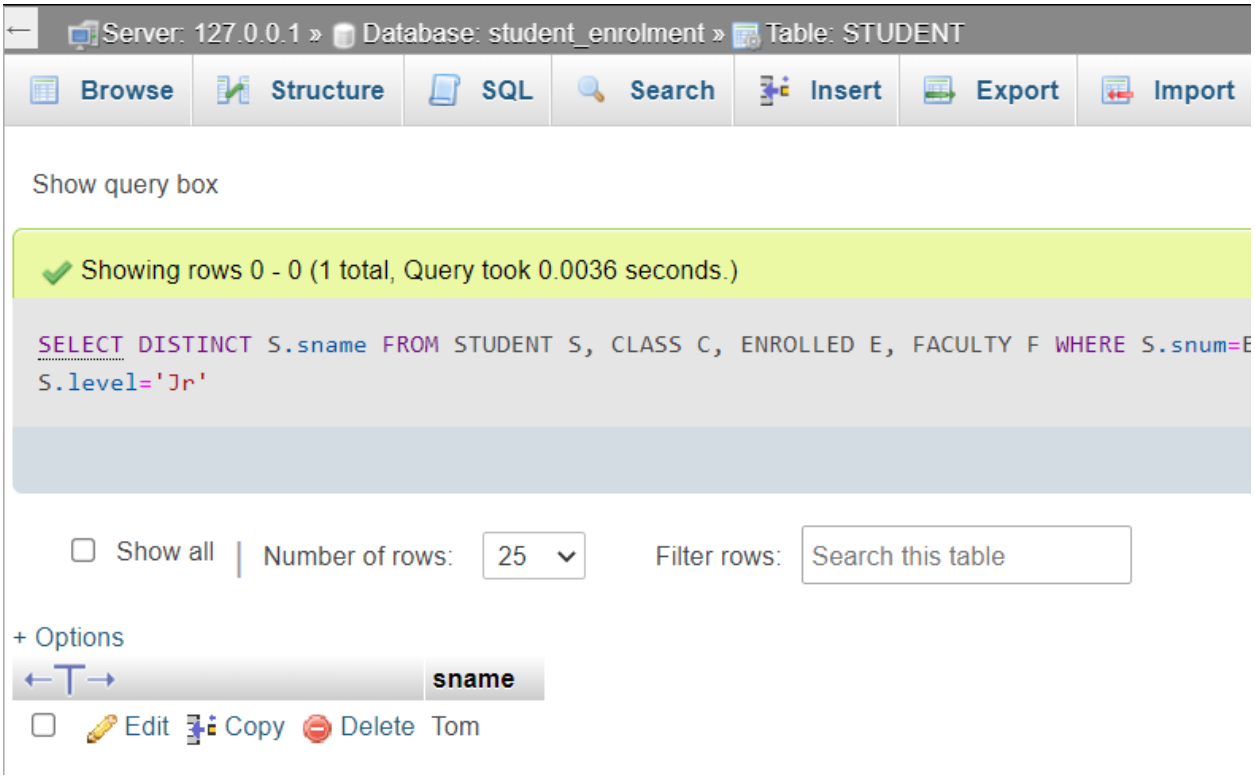




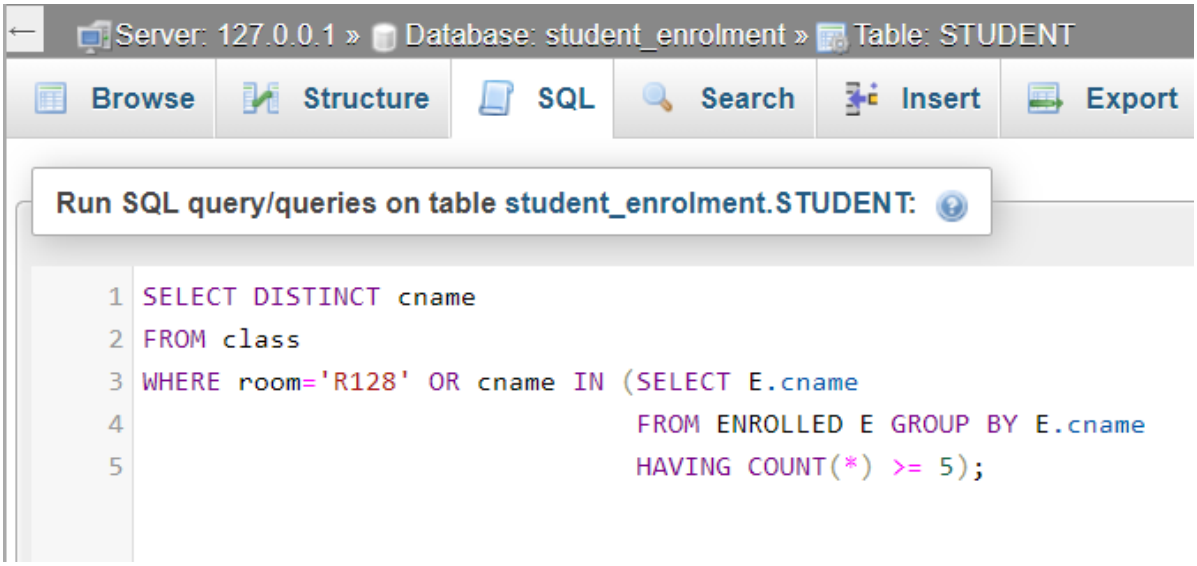
	snum	cname
Edit Copy Delete	1	class1
Edit Copy Delete	1	class5
Edit Copy Delete	2	class1
Edit Copy Delete	2	class5
Edit Copy Delete	3	class3
Edit Copy Delete	3	class5
Edit Copy Delete	4	class3
Edit Copy Delete	4	class5
Edit Copy Delete	5	class4
Edit Copy Delete	5	class5

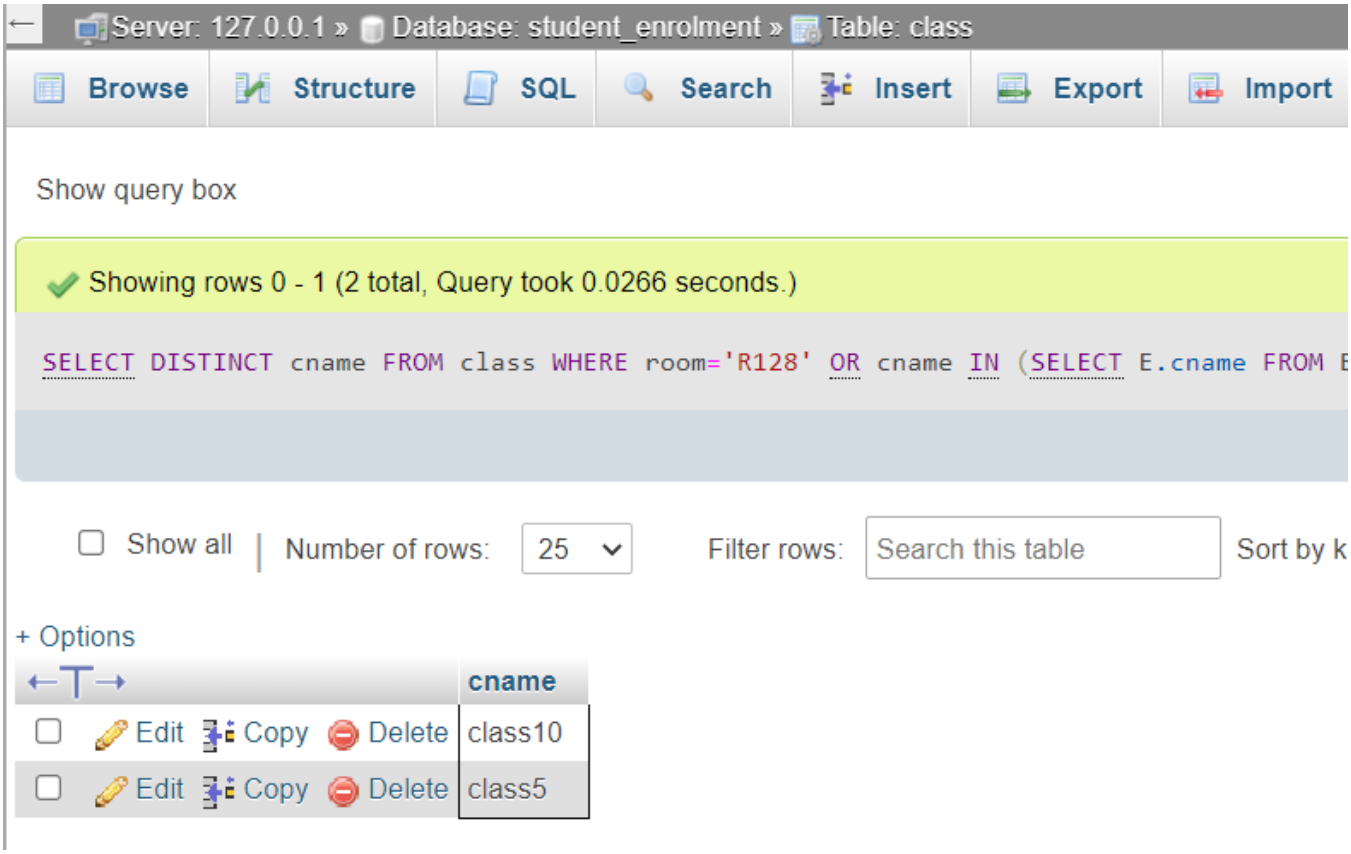
1)Find the names of all Juniors (level = Jr) who are enrolled in a class taught by 'Harish'.



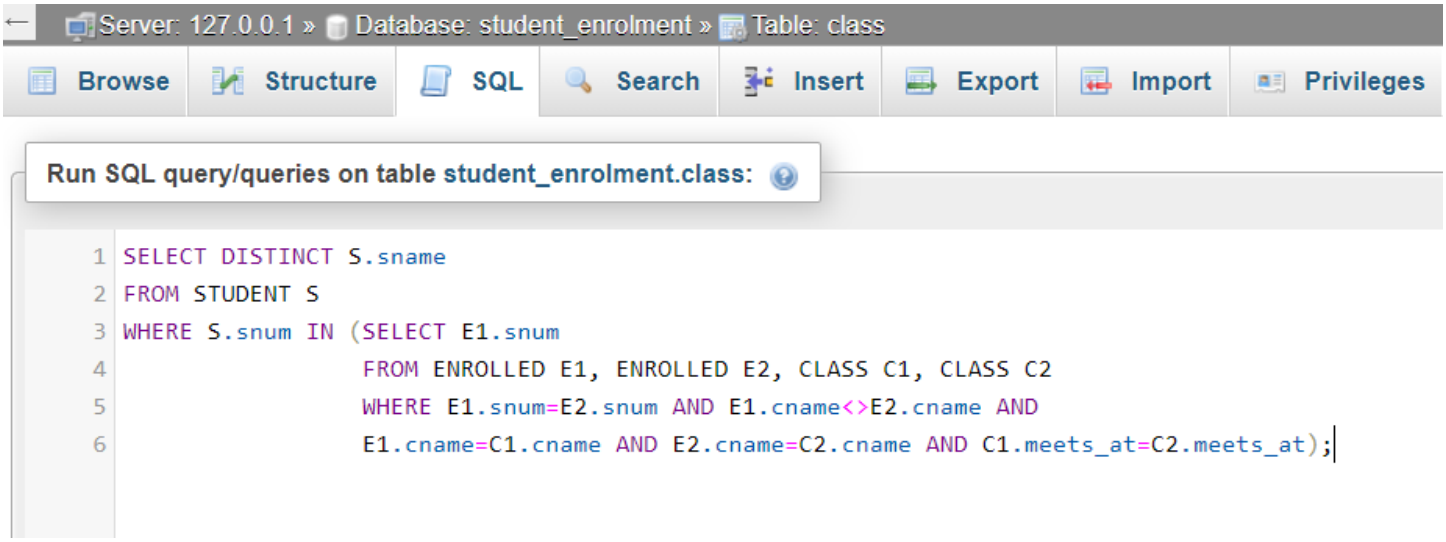


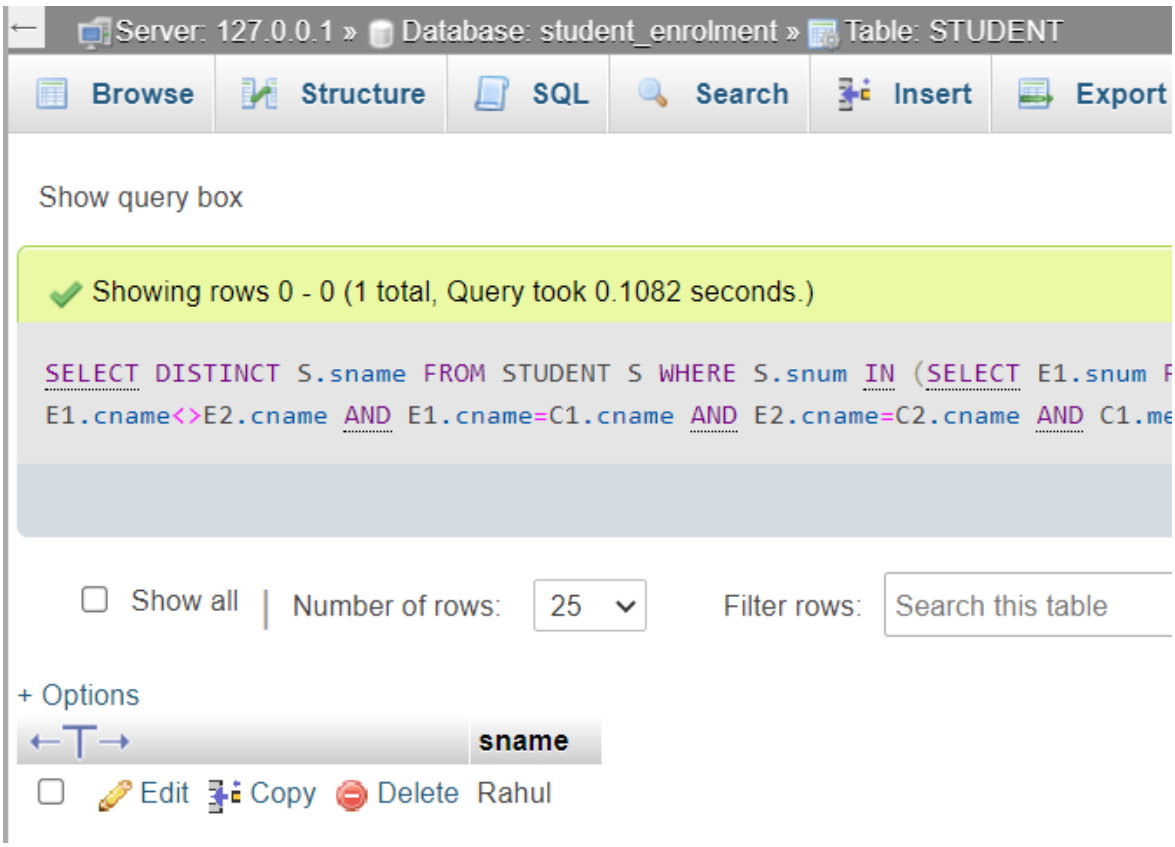
2)Find the names of all classes that either meet in room R128 or have five or more Students enrolled.



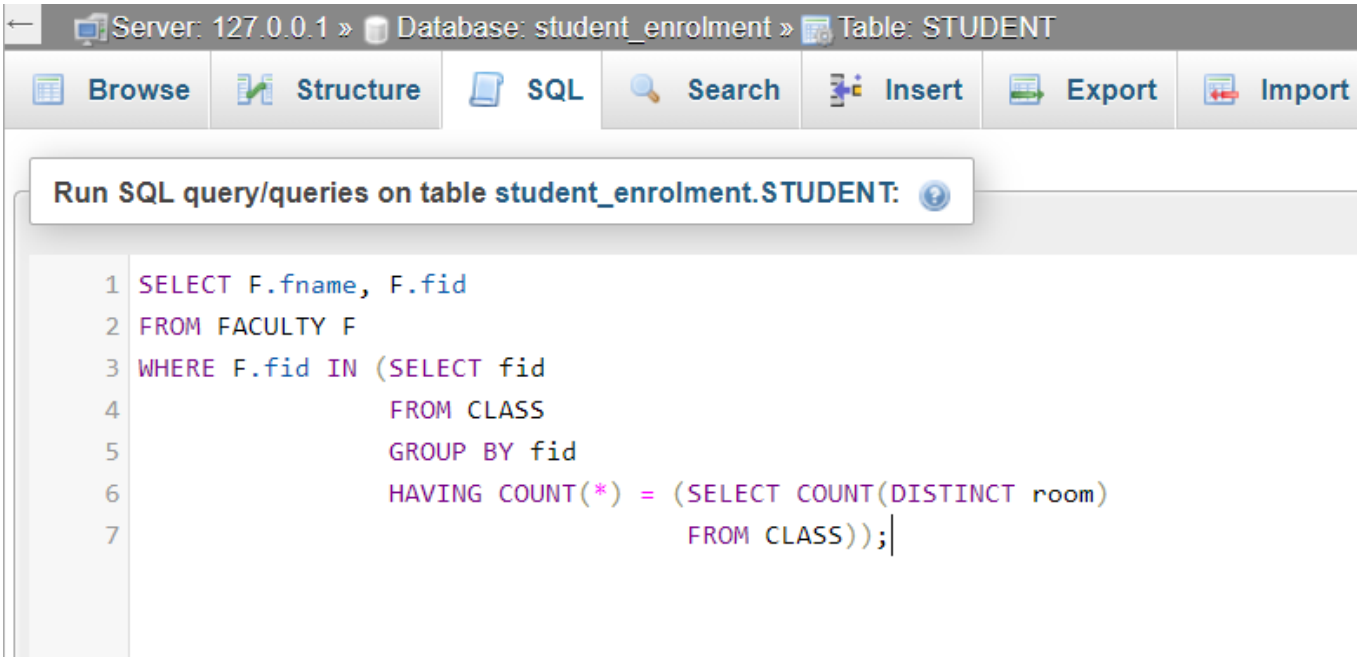


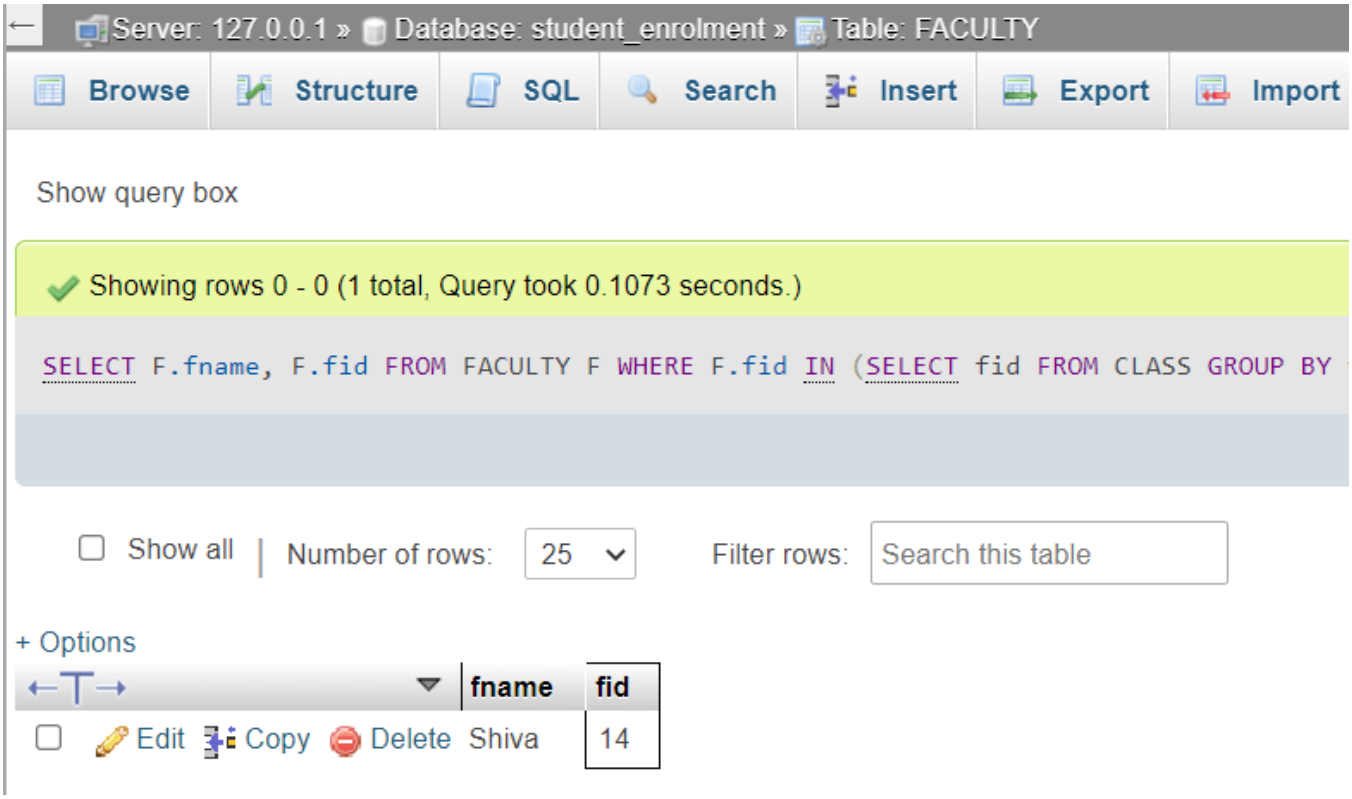
3)Find the names of all students who are enrolled in two classes that meet at the same time.



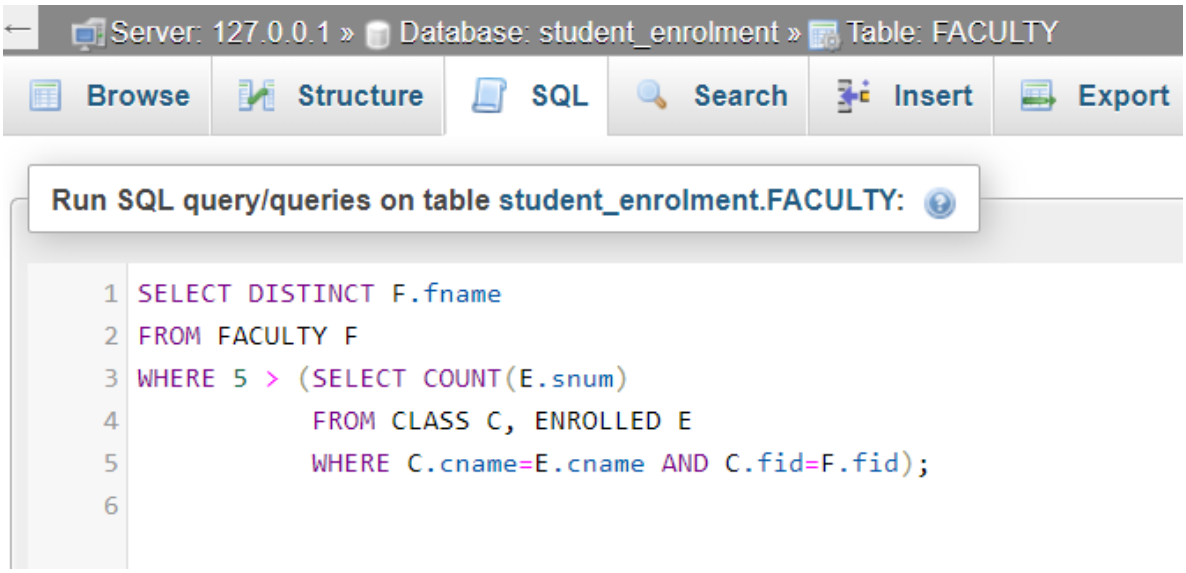


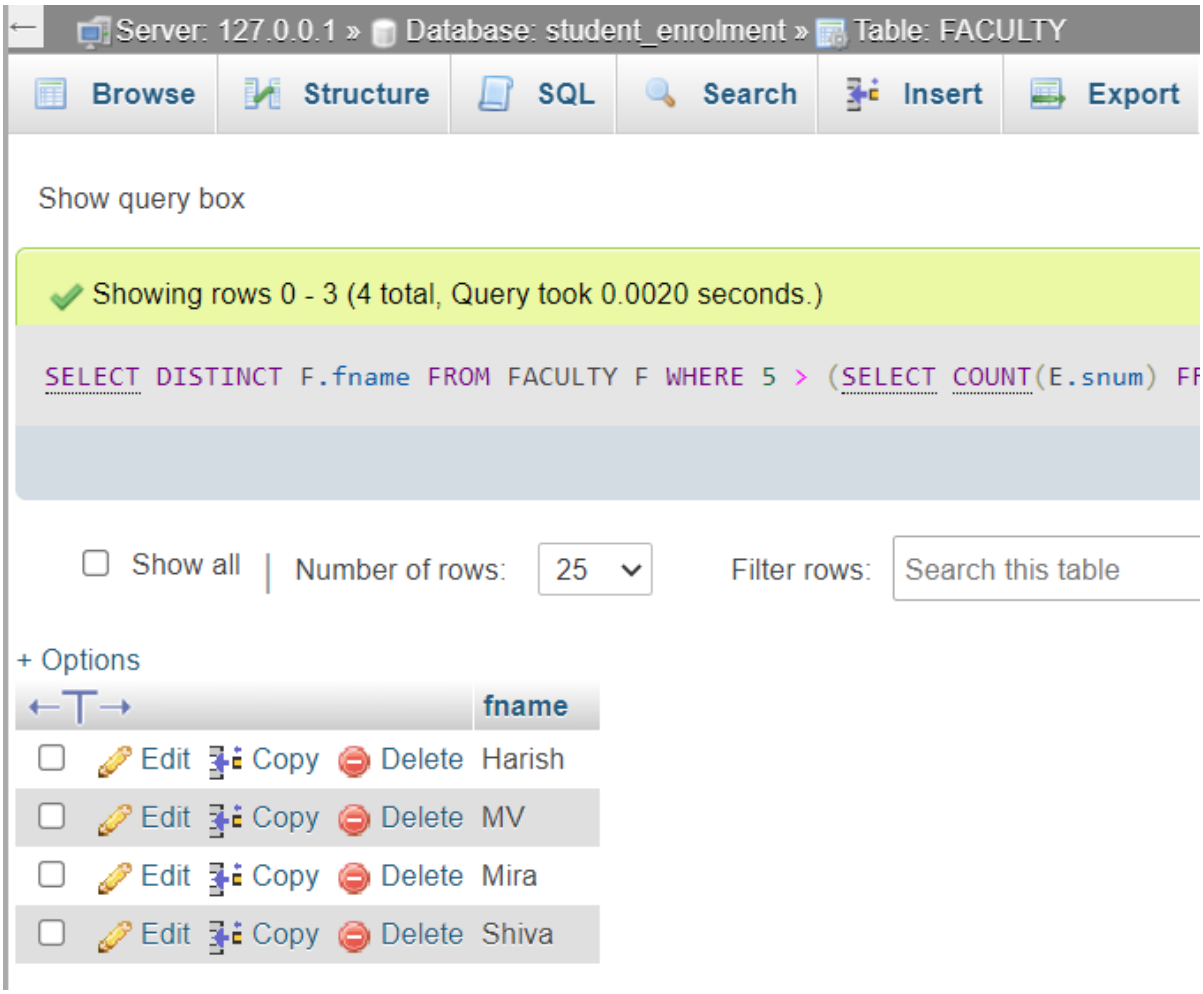
4)Find the names of faculty members who teach in every room in which some class is taught.



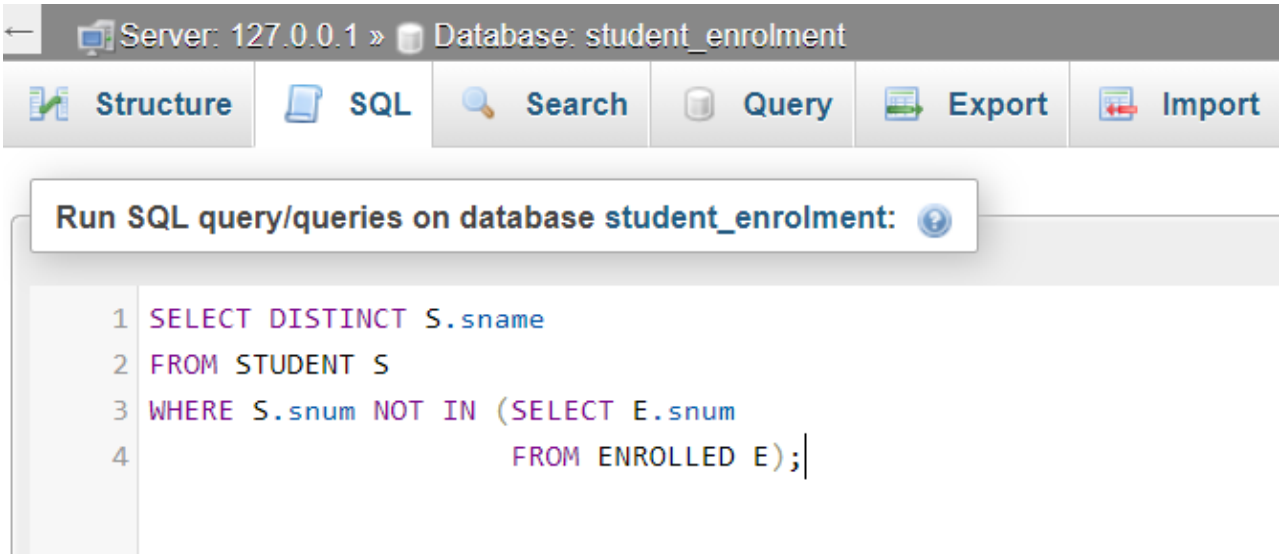


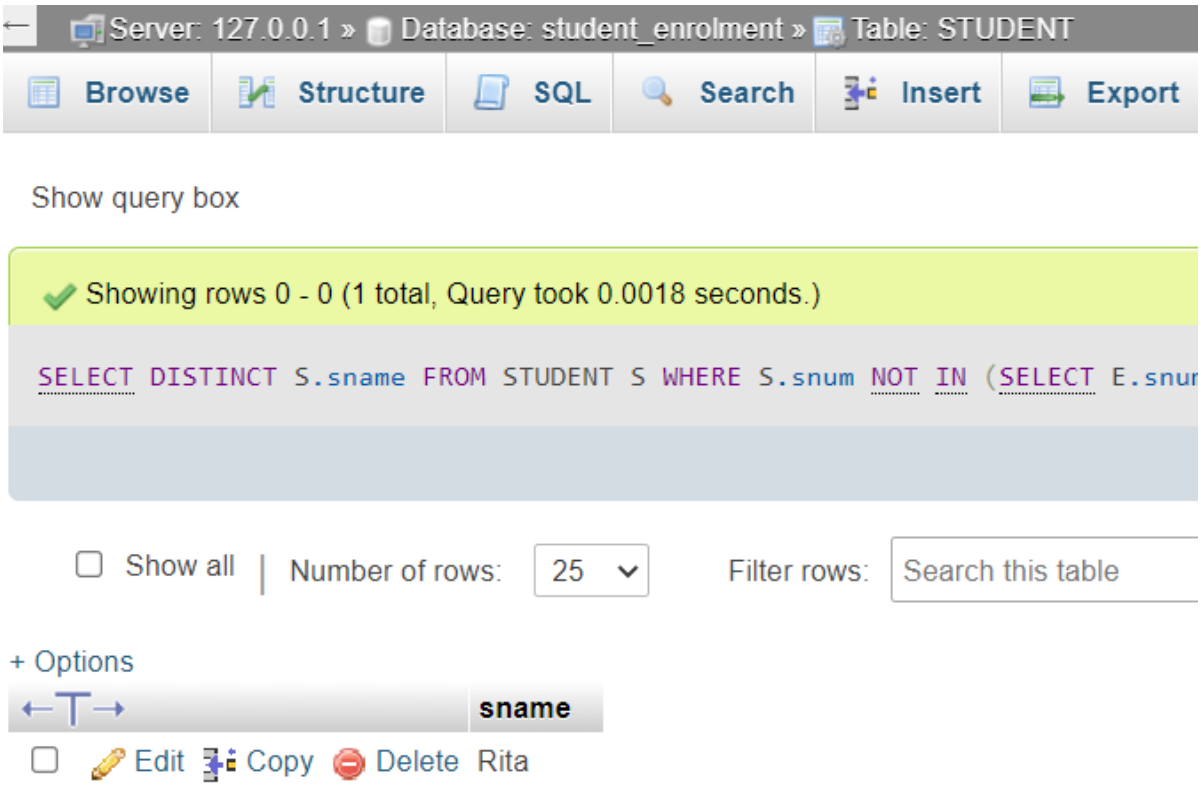
5)Find the names of faculty members for whom the combined enrolment of the courses that they teach is less than five.





6)Find the names of students who are not enrolled in any class.





7)For each age value that appears in Students, find the level value that appears most often. For ex, if there are more FR level students aged 18 than SR, JR, or SO students aged 18, you should print the pair (18, FR).