PROJECT 1

*TEAM NAME: PACERS*

TEAM MEMBERS:

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Overview

Structured Query Language, abbreviated as SQL, is a domain-specific language used in programming and designed for managing data held in a relational database management system, or for stream processing in a relational data stream management system. We have performed queries, joins, sub queries and aggregate functions.

**Problem Statement**

# **Student Management System:** Develop System application to manage student basic info records in to the Database and along with the library, performance and attendance record information to the database. Implement all the checks so that there are no errors and no duplicates are created.

Q1. Develop student management system and

maintain all data in the SQL.

create table student (

rno varchar(10),

fname varchar(20),

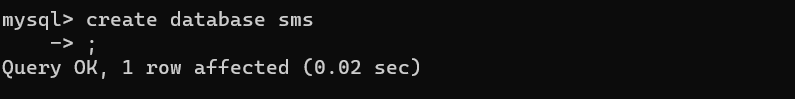
lname varchar(20),

dno int

);

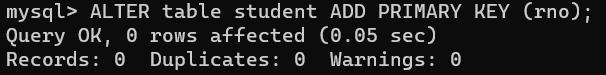
ALTER TABLE student ADD PRIMARY KEY

(rno);



Text

Description automatically generated



create table performance (

srno varchar(10),

tm\_sem1 int,

tm\_sem2 int,

tm\_sem3 int,

tm\_sem4 int,

tm\_sem5 int,

tm\_sem6 int,

tm\_sem7 int,

tm\_sem8 int,

FOREIGN KEY (srno) REFERENCES

student(rno)

);

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create table attendance(

srno varchar(10),

ta\_sem1 int,

ta\_sem2 int,

ta\_sem3 int,

ta\_sem4 int,

ta\_sem5 int,

ta\_sem6 int,

ta\_sem7 int,

ta\_sem8 int,

FOREIGN KEY (srno) REFERENCES

student(rno)

);

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Q2. Insert Student basic record into database

using Student “Roll No.” as unique Id.

insert into student values("SID1","Ajay","Jain",1);

insert into student values("SID2","Yash","Mehta",2);

insert into student values("SID3","Raj","Garg",2);

insert into student values("SID4","John","krasinski",1);

insert into student values("SID5","Rohit","Bajaj",3);

Graphical user interface, text

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Q2. Insert Student basic record into database

using Student “Roll No.” as unique Id.

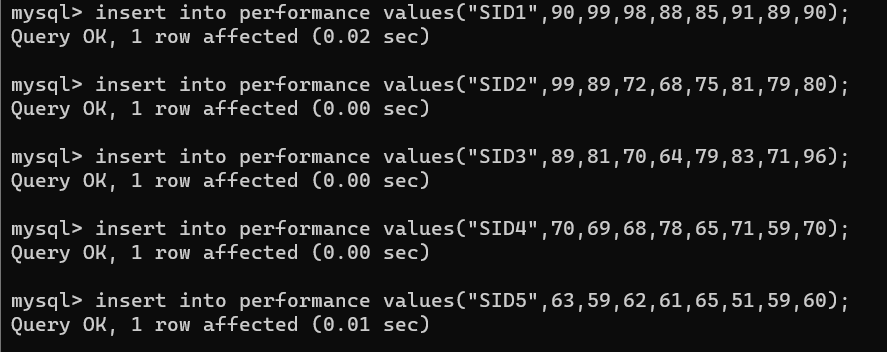
insert into performance values("SID1",90,99,98,88,85,91,89,90);

insert into performance values("SID2",99,89,72,68,75,81,79,80);

insert into performance values("SID3",89,81,70,64,79,83,71,96);

insert into performance values("SID4",70,69,68,78,65,71,59,70);

insert into performance values("SID5",63,59,62,61,65,51,59,60);



insert into attendance values("SID1",80,79,78,78,85,81,79,90);

insert into attendance values("SID2",91,83,77,76,75,83,89,90);

insert into attendance values("SID3",81,83,76,73,79,77,76,76);

insert into attendance values("SID4",76,89,88,79,85,76,75,70);

insert into attendance values("SID5",88,78,88,81,76,77,76,75);

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Q3. Database maintains different table for

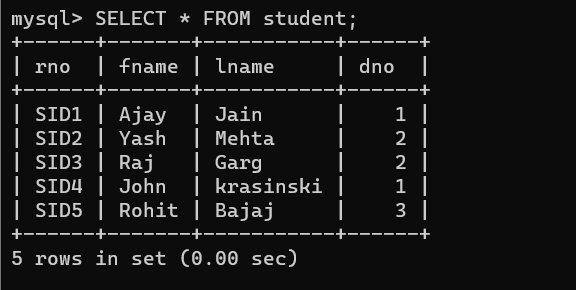
Student information for all admissions are

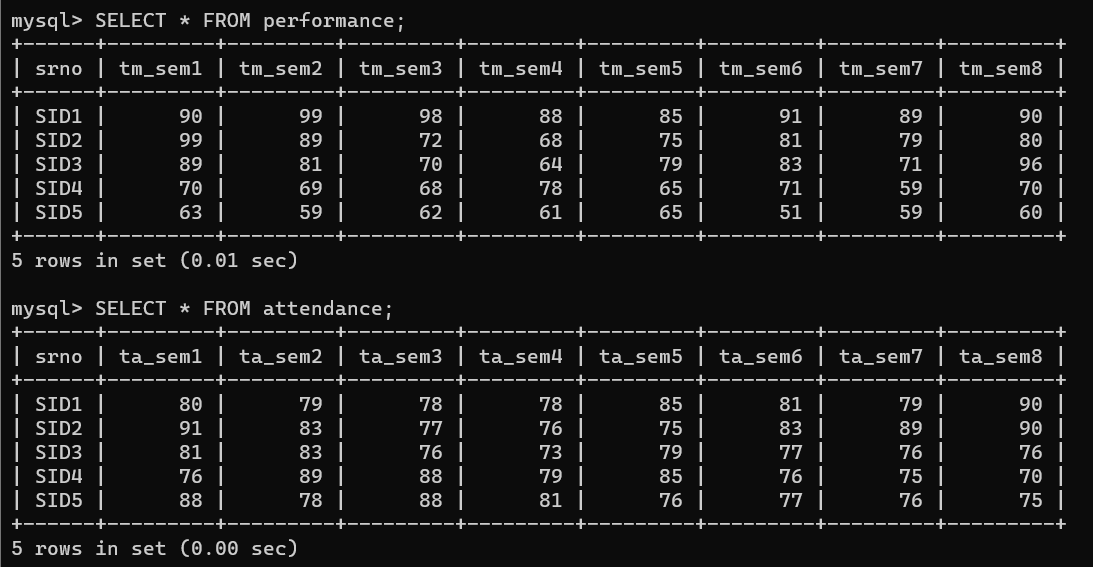
maintained in a table, Performance records in

all semesters maintained in a table and

Attendance record in a table.

select \* from student;





Q4. Create a combined table to provide a

consolidated report for the course.

CREATE TABLE consolidated\_report AS SELECT s.rno,

s.dno,

p.tm\_sem1,a.ta\_sem1,p.tm\_sem2,a.ta\_sem2,p.tm\_sem3,

a.ta\_sem3,p.tm\_sem4,a.ta\_sem4,p.tm\_sem5,a.ta\_sem5,p

.tm\_sem6,a.ta\_sem6,p.tm\_sem7,a.ta\_sem7,p.tm\_sem8,a.

ta\_sem8 FROM

student s JOIN performance p ON s.rno= p.srno JOIN

attendance a ON a.srno = p.srno;

Text

Description automatically generated

Q5. User defined function and store procedure is to be

developed for the accumulate the data required into a

single table named “Cumulative Grade

Sheet\_<Department name>” Department wise.

CREATE TABLE CGS\_1 AS select \* from consolidated\_report

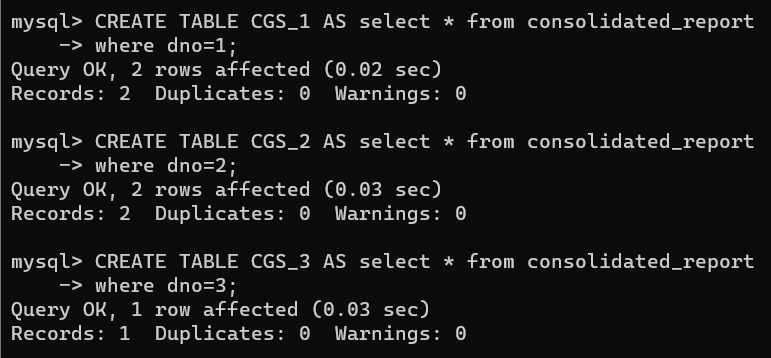
where dno=1;

CREATE TABLE CGS\_2 AS select \* from consolidated\_report

where dno=2;

CREATE TABLE CGS\_3 AS select \* from consolidated\_report

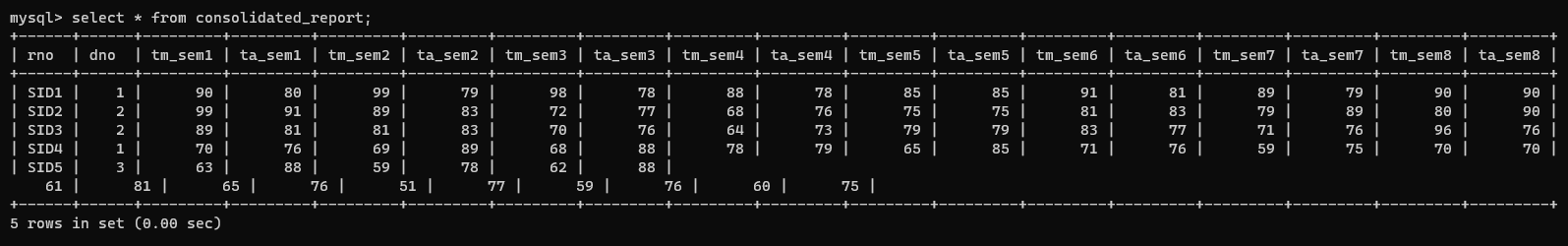
where dno=3;



Q6. The New tables should contain Student Id, Department id, Total Marks scored by each student during each semester (Add each paper marks semester wise)., Attendance for each semester. i.e., the fields in the new table are Student id, Department id, Sem\_1 Total marks,

Sem\_1 Attendance, Sem\_2 Total marks, Sem\_2 Attendance, Sem\_3 Total marks, Sem\_3 Attendance, Sem\_4 Total marks, Sem\_4 Attendance, Sem\_5 Total marks, Sem\_5 Attendance, Sem\_6 Total marks, Sem\_6 Attendance, Sem\_7 Total marks, Sem\_7 Attendance, Sem\_8 Total marks, Sem\_8 Attendance.

select \* from consolidated\_report;

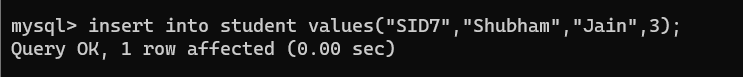


Q7. The User has option to include new

students’ detail in the student information table

using Student Enrolment option

insert into student values("SID7","Shubham","Jain",3);



Q8. Similarly, The Attendance records and

performance records can also be updated into

the table using student course update option

which will prompt the user to select between

performance and Attendance records.

UPDATE performance SET tm\_sem5=90 WHERE srno='SID5';

UPDATE attendance SET ta\_sem5=88 WHERE srno='SID5';

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Q9. When User selects Cumulative Grade sheets, List all departments for user selection. Single department or all departments can be selected.

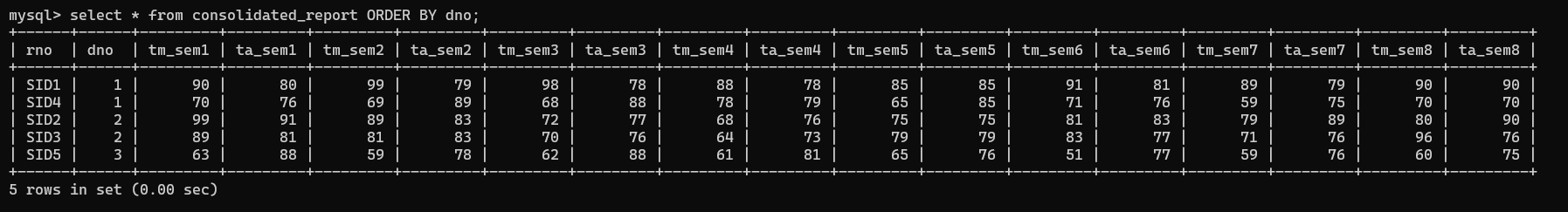
select DISTINCT(dno) from consolidated\_report;

Graphical user interface, text, application

Description automatically generated

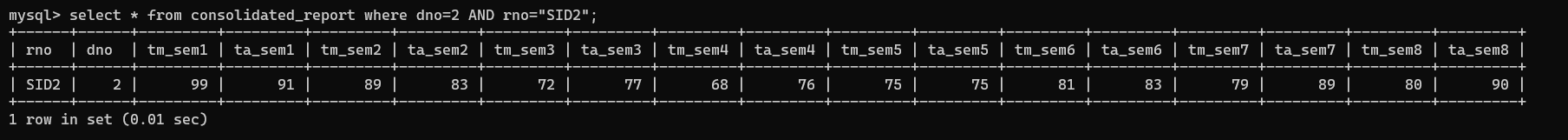
Q10.If user selects all, all department table are to be displayed.

select \* from consolidated\_report ORDER BY dno;



Q11.If Single records is selected, Prompt the user for Student id. Else if all records are selected display all in a particular department.

select \* from consolidated\_report where dno=2 AND rno="SID2";



Q12.If Single records is selected, Prompt the user for Student id. Else if all records are selected display all in a particular department.

select \* from consolidated\_report where dno=1;

select \* from consolidated\_report where dno=2;

select \* from consolidated\_report where dno=3;

