

Result

Intro:

```
Output - JavaApplication5 (run)

run:
Enter Username:
zhenc
Enter password:
██████████
Enter:
    1(Scheduling a Road Test)
    2(Scheduling a Driving Lesson)
    3(Find the percentage of fail score of a specific school)
    4(Finds the list of student assoicated with a instructor)
    Exit(Exit the Program)
```

Query Number 1:

Since S690 Jose has already taken 5 driving lessons, we can insert a road test for her.

```
Enter:
    1(Scheduling a Road Test)
    2(Scheduling a Driving Lesson)
    3(Find the percentage of fail score of a specific school)
    4(Finds the list of student assoicated with a instructor)
    Exit(Exit the Program)

1
Enter RoadTest ID:
889
Enter Test Date(MM/DD/YYYY):
12/13/2019
Enter Score(Pass/Fail):
Fail
Enter State Examiner ID:
9821
Enter State Examiner Name:
Charlie
Enter Stein ID:
S690
Enter Vehicle Vin:
S543XD
Scheduled a Road Test!
```

	ROADTEST_ID	TEST_DATE	SCORE	STATEEXAMINER_ID	STATEEXAMINER_NAME	STEIN_ID	VIN
1	901	13-JUL-18	Fail	9821	Charlie	S711	S543XD
2	902	05-JUL-18	Fail	9821	Charlie	S711	S543XD
3	903	10-AUG-19	Pass	9821	Charlie	S711	S543XD
4	882	22-AUG-18	Fail	2902	Walter	S911	F94kIS
5	883	24-AUG-18	Fail	2905	Walter	S911	F94kIS
6	884	10-SEP-19	Pass	2906	Walter	S911	F94kIS
7	885	12-JUL-19	Pass	9821	Charlie	S140	S543XD
8	886	12-AUG-19	Fail	9821	Charlie	S555	S543XD
9	887	12-SEP-19	Fail	9821	Charlie	S678	S543XD
10	888	12-DEC-19	Fail	9821	Charlie	S690	S543XD
→ 11	889	13-DEC-19	Fail	9821	Charlie	S690	S543XD

Query Number 2:

Enter:

- 1(Scheduling a Road Test)
- 2(Scheduling a Driving Lesson)
- 3(Find the percentage of fail score of a specific school)
- 4(Finds the list of student assoicated with a instructor)
- Exit(Exit the Program)

2

Enter Lesson ID:

10034

Enter Date of Lesson(MM/DD/YYYY):

10/20/2019

Enter Stein ID of the Student:

S890

Enter Instructor's SSN:

911

Scheduled a Driving Lesson!

20	10020	20-DEC-19	\$555	711
21	10021	16-JUN-18	\$911	711
22	10022	16-AUG-18	\$911	711
23	10023	20-DEC-19	\$555	711
24	10024	20-DEC-19	\$555	711
25	10025	20-DEC-19	\$555	711
26	10026	20-DEC-19	\$678	911
27	10027	22-DEC-19	\$678	911
28	10028	24-DEC-19	\$678	911
29	10029	25-DEC-19	\$678	911
30	10030	17-OCT-19	\$690	711
31	10031	19-OCT-19	\$690	711
32	10032	20-OCT-19	\$690	711
33	10033	28-OCT-19	\$690	711
34	10034	20-OCT-19	\$890	911

Fail Percentage for the School is 7.272727272727272727272727272727E01%

Query Number 4:

For Instructor SSN 711

Enter:

- 1(Scheduling a Road Test)
- 2(Scheduling a Driving Lesson)
- 3(Find the percentage of fail score of a specific school)
- 4(Finds the list of student assoicated with a instructor)
- Exit(Exit the Program)

4

Enter Instructor SSN:

711

Students that have not yet passed are:

1.Ryan

2.Jose

For Instructor SSN 911

Enter:

- 1(Scheduling a Road Test)
- 2(Scheduling a Driving Lesson)
- 3(Find the percentage of fail score of a specific school)
- 4(Finds the list of student assoicated with a instructor)
- Exit(Exit the Program)

4

Enter Instructor SSN:

911

Students that have not yet passed are:

1.Heather

(Bonus)

Explain Plan for Query Number 3:

	PLAN_TABLE_OUTPUT
1	Plan hash value: 237953111
2	
3	-----
4	Id Operation Name
5	-----
6	0 SELECT STATEMENT
7	1 SORT AGGREGATE
8	2 NESTED LOOPS
9	3 NESTED LOOPS
10	4 HASH JOIN
11	5 INDEX FULL SCAN ROADTEST_FK_SCORE_INDEX
12	6 TABLE ACCESS FULL STUDENT
13	7 INDEX RANGE SCAN INSTRUCTOR_FK_INDEX
14	8 TABLE ACCESS BY INDEX ROWID INSTRUCTOR
15	9 SORT AGGREGATE
16	10 HASH JOIN
17	11 NESTED LOOPS
18	12 NESTED LOOPS
19	13 TABLE ACCESS FULL STUDENT
20	14 INDEX RANGE SCAN INSTRUCTOR_FK_INDEX
21	15 TABLE ACCESS BY INDEX ROWID INSTRUCTOR
22	16 INDEX FULL SCAN ROADTEST_FK_SCORE_INDEX
23	17 HASH UNIQUE
24	18 INDEX FULL SCAN ROADTEST_FK_SCORE_INDEX
25	-----

Explain Plan for Query Number 4

	PLAN_TABLE_OUTPUT	
1	Plan hash value: 613603769	
2		
3	-----	
4	Id Operation Name	
5	-----	
6	0 SELECT STATEMENT	
7	1 HASH GROUP BY	
8	2 NESTED LOOPS	
9	3 HASH JOIN ANTI	
10	4 TABLE ACCESS BY INDEX ROWID STUDENT	
11	5 INDEX RANGE SCAN STUDENT_FK_INDEX	
12	6 INDEX FULL SCAN ROADTEST_FK_SCORE_INDEX	
13	7 INDEX RANGE SCAN ROADTEST_FK_SCORE_INDEX	
14	-----	