

School Ranking Analysis

SQL project2 - PC BA DEC 2022 Cohort 1

3/27/2023

Manohari Wijesooriya

Contents

1.	Introduction	2
2.	Objective	2
3.	Sequence of Tasks.....	2

1. Introduction

An institution wants to store the students' details and their marks records to track their progress. The database would contain the students' information, marks of the students with the rank that can be viewed, updated, and evaluated for the performance evaluation.

2. Objective

The design of the database helps to easily retrieve thousands of student records.

3. Sequence of Tasks

- 3.1. Write a query to create a students table with appropriate data types for student id, student first name, student last name, class, and age where the student last name, student first name, and student id should be a NOT NULL constraint and the student id should be in a primary key.

SQL code
<pre>CREATE DATABASE ABC_School; USE ABC_School; CREATE TABLE students(student_id INT primary key NOT NULL, student_first_name varchar(15) NOT NULL, student_last_name varchar(15) NOT NULL, class INT, age INT, INDEX(student_id));</pre>

- 3.2. Write a query to create a mark sheet table that includes score, year, ranking, class, and student id.

SQL code
<pre>CREATE TABLE marksheet(score int, year int, ranking int, class int, student_id int);</pre>

3.3. Write a query to insert values in students and marksheet tables.

SQL code
<pre>INSERT INTO ABC_School.students(student_id, student_first_name, student_last_name, class, age) VALUES ("1", "krishna", "gee", "10", "18"), ("2", "Stephen", "Christ", "10", "17"), ("3", "Kailash", "kumar", "10", "18"), ("4", "ashish", "jain", "10", "16"), ("5", "khusbu", "jain", "10", "17"), ("6", "madhan", "lal", "10", "16"), ("7", "saurab", "kothari", "10", "15"), ("8", "vinesh", "roy", "10", "14"), ("9", "rishika", "r", "10", "15"), ("10", "sara", "rayan", "10", "16"), ("11", "rosy", "kumar", "10", "16") ;</pre>
<pre>INSERT INTO ABC_School.marksheet(score, year, class, ranking, student_id) VALUES ("989", "2014", "10", "1", "1"), ("454", "2014", "10", "10", "2"), ("880", "2014", "10", "4", "3"), ("870", "2014", "10", "5", "4"), ("720", "2014", "10", "7", "5"), ("670", "2014", "10", "8", "6"), ("900", "2014", "10", "3", "7"), ("540", "2014", "10", "9", "8"), ("801", "2014", "10", "6", "9"), ("420", "2014", "10", "11", "10"), ("970", "2014", "10", "2", "11"), ("720", "2014", "10", "12", "12") ;</pre>

3.4. Write a query to display student id and student first name from the student table if the age is greater than or equal to 16 and the student's last name is Kumar.

SQL code
<pre>SELECT student_id, student_first_name from students WHERE age >= 16 AND student_last_name = "kumar";</pre>

Results

student_id	student_first_name
3	Kailash
11	rosy

- 3.5. Write a query to display all the details from the mark sheet table if the score is between 800 and 1000.

SQL code

```
SELECT *
FROM marksheets
WHERE score BETWEEN 800 AND 1000;
```

Results

score	year	ranking	class	student_id
989	2014	1	10	1
880	2014	4	10	3
870	2014	5	10	4
900	2014	3	10	7
801	2014	6	10	9
970	2014	2	10	11

- 3.6. Write a query to display the mark sheet details from the mark sheet table by adding 5 to the score and by naming the column as new score.

SQL code

```
SELECT year,class,ranking,student_id, score + 5 as new_score
FROM marksheets;
```

year	class	ranking	student_id	new_score
2014	10	1	1	994
2014	10	10	2	459
2014	10	4	3	885
2014	10	5	4	875
2014	10	7	5	725
2014	10	8	6	675
2014	10	3	7	905
2014	10	9	8	545
2014	10	6	9	806
2014	10	11	10	425
2014	10	2	11	975
2014	10	12	12	725

3.7. Write a query to display the mark sheet table in descending order of the score.

SQL code

```
SELECT *
FROM marksheets
ORDER BY score DESC;
```

score	year	ranking	class	student_ic
989	2014	1	10	1
970	2014	2	10	11
900	2014	3	10	7
880	2014	4	10	3
870	2014	5	10	4
801	2014	6	10	9
720	2014	7	10	5
720	2014	12	10	12
670	2014	8	10	6
540	2014	9	10	8
454	2014	10	10	2
420	2014	11	10	10

3.8. Write a query to display details of the students whose first name starts with a.

SQL code

```
SELECT *
FROM students
WHERE student_first_name like "a%";
```

student_id	student_first_name	student_last_name	class	age
4	ashish	jain	10	16