Kenneth Bentley

Data Analytics-2

-- Sample questions:

-- 1. students with the highest marks in Unit 4

SELECT * FROM student_marks ORDER BY unit4 DESC;

Data Output | Explain | Messages | Notifications

	id [PK] integer	student_reg_id integer	student_id integer	unit2 integer	unit3 integer	unit4 integer	unit5 integer
1	704	1556	704	90	100	100	96
2	970	1822	970	90	98	100	89
3	109	961	109	96	97	100	100
4	428	1280	428	89	96	100	98
5	48	900	48	87	97	100	88

-- 2. students scored between 89 and 100 unit4

SELECT * FROM student_marks WHERE unit4 BETWEEN 89 AND 100 ORDER BY unit4;

Data Output | Explain | Messages

	student_id integer	unit4 integer
1	3	99
2	4	89
3	6	93
4	7	97
5	8	92

-- Open ended questions:

-- Take a closer look at the tables that you created and come up with 10 different scenarios/ questions and from SQL

-- 1. How many males are in the class:

SELECT COUNT(*) FROM student WHERE gender='Male';

	count bigint
1	525

-- 2. How many females are in the class:

SELECT COUNT(*) FROM student WHERE gender='Female';

Data Output

	count bigint
1	475

-- 3. Which students and how many prefer hardcopy books?

SELECT first_name, last_name FROM student WHERE book_preference_hardcopy=true;

SELECT COUNT(book_preference_hardcopy) FROM student WHERE book_preference_hardcopy=true;

Data Output Explain Messages Notifications

	first_name character varying	last_name character varying
1	Tiebold	Steers
2	Pippo	Mougeot
3	Ree	Cornish
4	Shina	Freund
5	Nero	Vigours

Data Output Explain

	count bigint
1	513

-- 4. How many students made less than 90 on Unit 2?

SELECT COUNT(unit2) FROM student_marks WHERE unit2<90;

Data Output Explain

	count bigint
1	283

-- 5. Which students scored 100 on Unit 5:

```
SELECT student.first_name, student.last_name, student_marks.unit5 FROM student_marks
INNER JOIN student ON student_marks.student_id=student.id WHERE unit5=100;
```

	first_name character varying	last_name character varying	unit5 integer
1	Shina	Freund	100
2	Gian	Jaskowicz	100
3	Ki	Kavanagh	100
4	Rori	Bridger	100
5	Ely	Spurrier	100

-- 6. Which students have last names that begin with Be

```
SELECT first_name, last_name FROM student WHERE last_name LIKE 'Be%';
```

Data Output | Explain | Messages | Notifications

	first_name character varying	last_name character varying
1	Abel	Beeching
2	Amy	Belhomme
3	Shelia	Beardsley
4	Travis	Benallack
5	Louisa	Beteriss

-- 7. Which students scored greater than 95 on all units?

```
SELECT
        student.first_name,
        student.last_name,
        student_marks.unit2,
        student_marks.unit3,
        student_marks.unit4,
        student_marks.unit5
FROM student_marks
INNER JOIN student ON student_marks.student_id=student.id
WHERE unit2>95 AND unit3>95 AND unit4>95 AND unit5>95;
```

Data Output | Explain | Messages | Notifications

	first_name character varying	last_name character varying	unit2 integer	unit3 integer	unit4 integer	unit5 integer
1	Ki	Kavanagh	99	96	98	100
2	Kacie	Kiddle	96	97	100	100
3	Mikaela	Ekins	99	97	97	98
4	Marcia	Yeomans	96	100	100	98
5	Jim	Romand	98	98	96	100

--8. How many students scored perfect on Unit 3?

SELECT COUNT(student_marks.unit3) FROM student_marks INNER JOIN student ON student_marks.student_id=student.id

WHERE student_marks.unit3=100;

Data Output | Explain

	count bigint
1	97

-- Females?

SELECT COUNT(student_marks.unit3) FROM student_marks INNER JOIN student ON student_marks.student_id=student.id

WHERE student_marks.unit3=100 and student.gender='Female';

Data Output

	count bigint
1	46

-- Males?

SELECT COUNT(student_marks.unit3) FROM student_marks INNER JOIN student ON student_marks.student_id=student.id

WHERE student_marks.unit3=100 and student.gender='Male';

	count bigint
1	51

--9. What was the average score of each Unit?

```
SELECT
        ROUND(AVG(unit2),2) AS "UNIT 2 AVERAGE",
        ROUND(AVG(unit3),2)  AS "UNIT 3 AVERAGE",
        ROUND(AVG(unit4) ,2)  AS "UNIT 4 AVERAGE",
        ROUND(AVG(unit5) ,2)  AS "UNIT 5 AVERAGE"
FROM student_marks;
```

Data Output | Explain | Messages | Notifications

	UNIT 2 AVERAGE numeric	UNIT 3 AVERAGE numeric	UNIT 4 AVERAGE numeric	UNIT 5 AVERAGE numeric
1	92.85	95.22	90.82	94.06

--10. What are the names and email addresses of the students that scored lowest on unit 4?

```
SELECT MIN(unit4) FROM student_marks;

SELECT student.first_name, student.last_name, student.email, student_marks.unit4 FROM
student_marks

INNER JOIN student ON student_marks.student_id=student.id WHERE unit4=82;
```

Data Output | Explain | Messages | Notifications

	first_name character varying	last_name character varying	email character varying	unit4 integer
1	Pippo	Mougeot	pmougeot1@apache.org	82
2	Susy	Widdison	swiddison8@mac.com	82
3	Montague	Dunkley	mdunkleyj@sohu.com	82
4	Cointon	Brownell	cbrownell15@google.nl	82
5	Catina	Rysdale	crysdale1j@guardian.c...	82