

PES University, Bengaluru

(Established under Karnataka Act No. 16 of 2013)

UE20CS903

October 2021: END SEMESTER ASSESSMENT (ESA) M TECH DATA SCIENCE AND MACHINE LEARNING_ SEMESTER I

UE20CS903 – DataBases & SQL

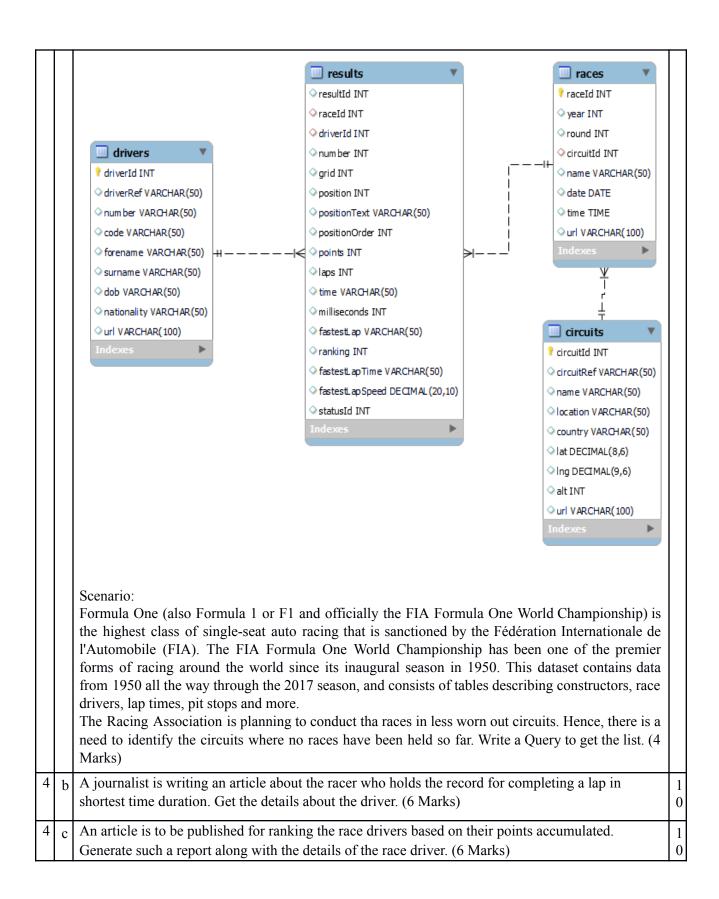
Time: 3 Hrs Answer All Questions Max Marks: 100

INSTRUCTIONS

- All questions are compulsory.
- Section B and C are coding questions which have to be answered in the system and uploaded in Olympus Login.

		Olympus Login.									
	•	Section A should be handwritten in the answer script provided and signed at the end of the same.									
	SECTION A – 20 MARKS										
1	a	Mention the differences between UNION and UNION ALL	2								
1	b	Can we use aggregate functions in where clause? Justify your answer.	2								
1	c	Mention the difference between TRUNCATE and ROUND functions	2								
1	d	Mention the difference between ISNULL() and IFNULL().	2								
1	e	What is referential integrity?	2								
2	a	Explain about EXISTS operator	2								
2	b	Mention the difference between WHERE and HAVING	2								
2	c	Count total number of 'a' appearing in the mentioned phrase 'Great Learning'	2								
2	d	After creating a table, how a unique constraint can be added to a column and how will you delete the same?	2								
2	e	How correlated sub-query can be applied in Having clause? Explain with an example	2								
		SECTION B – 40 MARKS									
3	a	Write a Query to display average rainfall and average Evaporation for each Location except records with Evaporation as NULL. (3 Marks) (Executable) (Use Tables: AustraliaWeather).	4								

2008-07-09 2008-07-10 2008-07-11	Brisbane	6	MaxTemp		Evaporation	Humidity9am	Humidity3pm		Pressure3pm	Temp9am	Temp3pm
2008-07-10			16.7	4	1	48	34	1022.6	1020.2	12.4	16.2
2008-07-11	Brisbane	10.3	19.7	0	4	47	34	1021.8	1017	13.2	18.8
	Brisbane	6.6	19.6	0	4	48	38	1021.7	1019.4	14.2	18.7
2008-07-12	Brisbane	7.9	21.1	0	2.2	60	48	1025.9	1023.4	12.8	19.3
2008-07-13	Brisbane	12	22.8	0	3	72	69	1026.6	1023.3	15.3	21.2
2008-07-14	Brisbane	13.6	25.7	0	1	86	65	1025.3	1021	18.3	23.3
2008-07-15	Brisbane	16.7	24.8	0	1.2	80	65	1022.2	1018.7	19.1	23.4
2008-07-16	Brisbane	16.5		5	2.6		71				18.7
											21.2
											25
											22.4
											21.3
											18.7
											18.7
											15.2
							NULL		NULL		NULL
							67		1014.1		17.9
2000 07 23	Disbuile	12.5	10.5		0.0	00	07	101110	101111	15.0	17.5
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3 d An observation on Rainfall has to be made on a bi-yearly basis for forec									ng purpos	se, henc	e
Tables: AustraliaWeather). A study requires the total humidity recorded per day, combine the columns into a single column by adding the Humidity recorded in the morning and noon. Compare the average Humidity in the											
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The Meteorogical Department wants an analysis of the morning weather. Write a Query to display the highest recorded Pressure in each location in every month, when the evaporation record is available and temperature range in the morning should range between 14 and 30 degrees. Filter the records where Maximum Humidity (Executable) in the morning should not exceed 70. (Make appropriate date conversions if necessary). (Use Tables: AustraliaWeather).											
SECTION C AN MADES											
				31	ECTION	- 40 N	IANNS				
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Also make sure the column An observation on Rainfall has to be made on a bi-yearl write a query to compare Average Rainfall for month of Tables: Australia Weather). A study requires the total humidity recorded per day, corby adding the Humudity recorded in the morning and no month of January 2009 and February 2009. (Use Tables: The Meteorogical Department wants an analysis of the ray available and temperature range in the morning should records where Maximum Humidity (Executable) in the rappropriate date conversions if necessary). 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Write a Query to add a new column to the existing table "australia weather" with the repressure 9pm'. The column should be of type Int and hold a default value of 1001 in its supplied during insertion. Also make sure the column does not have accept null value of 1001 in the supplied during insertion. Also make sure the column does not have accept null value and observation on Rainfall has to be made on a bi-yearly basis for forecasting purpor write a query to compare Average Rainfall for month of January, 2008 and July, 2008 Tables: Australia Weather). A study requires the total humidity recorded per day, combine the columns into a sing by adding the Humudity recorded in the morning and noon. Compare the average Humonth of January 2009 and February 2009. (Use Tables: Australia Weather). The Meteorogical Department wants an analysis of the morning weather. 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Also make sure the column does not have accept null values An observation on Rainfall has to be made on a bi-yearly basis for forecasting purpose, hence write a query to compare Average Rainfall for month of January, 2008 and July, 2008. (Use Tables: AustraliaWeather). A study requires the total humidity recorded per day, combine the columns into a single column on the foliance of the surface of the surface of the morning and noon. Compare the average Humidity is month of January 2009 and February 2009. (Use Tables: AustraliaWeather). The Meteorogical Department wants an analysis of the morning weather. Write a Query to dithe highest recorded Pressure in each location in every month, when the evaporation record is available and temperature range in the morning should range between 14 and 30 degrees. Filt records where Maximum Humidity (Executable) in the morning should not exceed 70. (Makappropriate date conversions if necessary). (Use Tables: AustraliaWeather).



4	d	Create a virtual table which consits of the the details of all the race drivers , along with the count of total number of races played so far. Sort the result in the order of highest races played to the lowest. (7 Marks)	7
4	e	Generate a report for displaying the Id and names of the races conducted. Also display the driver	7
		who participated, points scored, no of laps in race and the duration taken to complete the race in	
		milliseconds. Display the report in a sorted manner. (7 Marks)	

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