INFO341 Assignment 1

Note: Every solution should include the T-SQL scripts with clear and precise comments and screenshots.

1. Create a UDF that will check if a message contains the set of characters "LHL" (case insensitive). The UDF takes in one variable @MESSAGE and return a "1" if the characters set can be found and a "0" if it does not exist. Test your function thoroughly. Using a CTE apply the UDF to the POST table provided (you need to import data to sql server) such that it will display the total number of "1" and "0" in the POST table. Do not use cursor method. Show script and screenshots. (15 marks)

2. A matchmaker agency requires each member to supply the following 7 attributes during registration:
   i. Gender
   ii. Name
   iii. Date of Birth
   iv. Weight (kg)
   v. Height (m)
   vi. Smoking Habit
   vii. Salary earned

   (a) Create a user defined function Cupid_Score (using case when method only) to calculate the Cupid score. The "Cupid" score is the sum of each individual score given below.

Parameters	Range/Type	Score
Age	20-30	4
	31-40	3
	41-50	2
	>50	1
Weight(kg)/Height(m)	20-25	1
	25-30	3
	30-35	4
	35-40	2
Smoker	Yes	0
	NO	2
Salary	<$50k	1
	50k-60K	2
	60k-70k	3
	>70k	4

   (b) Write the DDL script to create a Member_Profile table with the above 7 attributes, a unique "MemberID" and a "Cupid" score. Apply the Cupid_Score function within the create table DDL such that it will automatically generate the cupid score when all other attributes values are inserted. Provide the DDL script.

   (c) Insert 5 rows of data to show that the table and the UDF are working correctly. Provide all the scripts and a screenshot of the completed table.

   (20 marks)

3. The following table keeps track of users insert to an answer table.

UserName	Question_ID	Answer
Tom	Q001	D
Wendy	Q009	A
Eddy	Q089	C
David	Q001	C
Eve	Q001	D
Paul	Q001	A
Sam	Q001	B

An insert SQL consists of USERNAME, QUESTIONID and ANSWER. Write an instead of trigger to prevent the user "John" from inserting the table but other users are allowed to insert. A response "You have not paid up your fee" using RAISERROR should be provided if John attempts to submit. In addition, the trigger will update to the latest answer should anyone submit the same questionID more than once. Test your trigger thoroughly for all possible cases. Provide tests and screenshots to show that the trigger is working correctly. (15 marks)

4. Write an after trigger to track all inserts and deletes on the table in Q3 (duplicate the table with a new name). You will need to create an audit table to hold the inserted or deleted row, the date and time of the event and the type of modification (insert or delete). Test your trigger thoroughly for both insert and delete operation and display the audit table. Provide a few screenshots to show the trigger is working correctly. (15 marks)

5. Write a stored procedure that will extract the CREATED_DATE column of the POST table (from Q1) into a YEAR column, a MONTH column, a DAYOFWEEK column and a TIME column (to the nearest hour) and subsequently display the query results of total post group by YEAR, total post group by MONTH, total post group by DAYOFWEEK and total post group by TIME (to the nearest hour). All the scripts are within the stored procedure. (15 marks)

Assignment Submission Form

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