Assignment Day 5–SQL: Comprehensive practice

# Answer following questions

1. What is an object in SQL?
2. What is Index? What are the advantages and disadvantages of using Indexes?
3. What are the types of Indexes?
4. Does SQL Server automatically create indexes when a table is created? If yes, under which constraints?
5. Can a table have multiple clustered index? Why?
6. Can an index be created on multiple columns? Is yes, is the order of columns matter?
7. Can indexes be created on views?
8. What is normalization? What are the steps (normal forms) to achieve normalization?
9. What is denormalization and under which scenarios can it be preferable?
10. How do you achieve Data Integrity in SQL Server?
11. What are the different kinds of constraint do SQL Server have?
12. What is the difference between Primary Key and Unique Key?
13. What is foreign key?
14. Can a table have multiple foreign keys?
15. Does a foreign key have to be unique? Can it be null?
16. Can we create indexes on Table Variables or Temporary Tables?
17. What is Transaction? What types of transaction levels are there in SQL Server?

# Write queries for following scenarios

1. Write an sql statement that will display the name of each customer and the sum of order totals placed by that customer during the year 2002

Create table customer(cust\_id int, iname varchar (50)) create table order(order\_id int,cust\_id int,amount money,order\_date smalldatetime)

2. The following table is used to store information about company’s personnel:

Create table person (id int, firstname varchar(100), lastname varchar(100)) write a query that returns all employees whose last names start with “A”.

3. The information about company’s personnel is stored in the following table:

Create table person(person\_id int primary key, manager\_id int null, name varchar(100)not null) The filed managed\_id contains the person\_id of the employee’s manager.

Please write a query that would return the names of all top managers(an employee who does not have a manger, and the number of people that report directly to this manager.

4. List all events that can cause a trigger to be executed.

5. Generate a destination schema in 3rd Normal Form. Include all necessary fact, join, and dictionary tables, and all Primary and Foreign Key relationships. The following assumptions can be made:

a. Each Company can have one or more Divisions.

b. Each record in the Company table represents a unique combination

c. Physical locations are associated with Divisions.

d. Some Company Divisions are collocated at the same physical of Company Name and Division Name.

e. Contacts can be associated with one or more divisions and the address, but are differentiated by suite/mail drop records.status of each association should be separately maintained and audited.

GOOD LUCK.