**Assignment**

1. Lecture07\_ERModel\_Part2\_Summer2019-2020 is given as your reading assignment. After reading the lecture thoroughly write a summary within 100 words in the space given below to shortly describe what you have understood from that lecture.

ER model is a type of structural diagram of database design. An ER Diagram contains entities, attributes, and relationships. Every entity in the entity set participates in at least one relationship in the relationship set, this is called total participation. On the other hand, partial participation means some entities may not participate in any relationship in the relationship set. A super key is a set of one or more attributes (columns), which can uniquely identify a row in a table. Candidate keys are selected from the set of super keys. All the candidate keys are super keys. This is because the candidate keys are chosen out of the super keys. Every super key may or may not be a candidate key. A Primary key is selected from a set of candidate keys. A foreign key is a key used to link two tables together. A foreign key is a field (or collection of fields) in one table that refers to the primary key in another table. Having no primary key is known as weak entity set. Weak entity sets are represented by double rectangle. As the weak entities do not have any primary key, they cannot be identified on their own, so they depend on some other entity (known as owner entity). The weak entities have total participation constraint (existence dependency) in its identifying relationship with owner identity. Weak entity types have partial keys. Partial Keys are set of attributes with the help of which the tuples of the weak entities can be distinguished and identified. Generalization is the process of extracting common properties from a set of entities and create a generalized entity from it. It is a bottom-up approach in which two or more lower level entities can be generalized to a higher level entity if they have some attributes in common. In generalization, the higher level entity can also combine with other lower level entity to make further higher level entity. Specialization is opposite to Generalization. It is a top-down approach where higher level entity is specialized into two or more lower level entities. In specialization, some higher level entities may not have lower-level entity sets at all. An ER diagram is not capable of representing relationship between an entity and a relationship which may be required in some scenarios. In those cases, a relationship with its corresponding entities is aggregated into a higher level entity. In aggregation, the relation between two entities is treated as a single entity. In aggregation, relationship with its corresponding entities is aggregated into a higher level entity.

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1. Lecture06\_SingleRowFunctions\_Summer2019-2020 is given as your reading assignment. After reading the lecture thoroughly solve the questions given below in the spaces given.
2. Display the incremented salary of salesman by $2000, manager by $3000 and president by $4000. Salaries of other employee will not increase.

SELECT JOB, SAL, DECODE(job, 'SALESMAN', SAL+ 2000,'PRESIDENT', SAL+4000,'MANAGER', SAL+3000, SAL)INCREMENTED\_SALARY FROM EMP;

1. Display all the data of commission table in such a way that if there is any null value in this column it will be replaced by the string ‘No Commission Yet’.

SELECT COMM, NVL(TO\_CHAR(COMM),'NO COMMISSION YET') FROM EMP ;

1. Write a query to display the employee names in lowercase letter.

SELECT LOWER(ENAME) AS EMPLOYEE\_NAMES FROM EMP;

1. Lecture08\_AggregateFunctions\_Summer2019-2020 is given as your reading assignment. After reading the lecture thoroughly solve the questions given below in the spaces given.
2. Find the average, minimum and maximum salary of the employees. Label the columns AVG, MIN and MAX respectively.

SELECT AVG(SAL), MIN(SAL) and MAX(SAL) FROM EMP;

1. Display the sum of salaries grouped by the job of employees.

SELECT SUM (SAL) FROM EMP GROUP BY JOB;

1. Display the sum of salaries grouped by the department number and job but the sum of salary must be greater than 5000.

SELECT SUM (SAL) FROM EMP WHERE SUM(SAL)>5000 GROUP BY DEPTNO,JOB;

1. Lecture12\_Subquery\_Part02\_Summer2019-2020 is given as your reading assignment. After reading the lecture thoroughly solve the questions given below in the spaces given.
2. Display the employee names that earn a salary that is higher than the salary of all CLERKS.

SELECT ENAME FROM EMP WHERE SAL>ALL(SELECT SAL FROM EMP WHERE JOB='CLERK');

1. Display the employee names that earn a salary that is higher than the salary of any CLERKS.

SELECT ENAME FROM EMP WHERE SAL>ANY(SELECT (SAL) FROM EMP WHERE Job='CLERK');

1. Display the employee names who get the department wise highest amount of salary.

SELECT ENAME FROM EMP WHERE SAL IN(SELECT max(SAL) from EMP group by DEPTNO);

**\*\*After completing the assignment by filling up the blank boxes of this file upload it in the provided link in your VUES account.**