Institute of Software Engineering

Graduate Diploma in Software Engineering

Final Examination, Semester 1, 2021

ITS1012 Database Management Systems - Practical

Time Duration: 2 Hours
This paper has 3 pages including this page and Any appendices.

Authorized Materials

Materials you can use during this open-book exam are usually unrestricted. Materials and resources that you might use on can include:

- Your own notes from lectures, given lecture notes, online learning resources
- Readings, reference to materials or textbooks

Instruction to students

The main restriction for an open-book assessment is that the work must be Students' own work to avoid plagiarism and collusion. See following guidance on plagiarism for further information.

- During the assessment you must not be helped by any other person to answer any questions. Collusion will be treated as an academic offence.
- DON'T use another student's work, or submit someone else's work as your own.
- DON'T pay other students or someone outside to do your work.
- DON'T use copy and paste to take text from another source. Instead, you should do paraphrasing and summarizing.

If someone violates any of the terms above, all the parties who are involved in plagiarism will be given zero marks.

How can submit answers?

Students can type their answers in a word editor (ex: Google DOC, MS DOC) and convert to a single PDF file and submit to the Google Classroom.

File Name format: **<Your Full Name> - <Your Student ID>**

Submitting outside of the set time will constitute a failure.

Question

Consider the below two tables for reference while trying to solve the following Questions.

Table - employee_detail

EmpId	Full_Name	ManagerId	JoiningDate	City
E-004	Samantha	M-001	01-05-2021	Colombo
E-054	Kamal	M-033	05-06-2021	Panadura
E-067	Jayantha	M-060	22-10-2021	Galle

Table – employee_salary

EmpId	Project	Salary	Variable
E-004	P-13	50000	8000
E-054	P-13	45000	4500
E-067	P-65	75000	2500

1. Create above mentioned table structure in your computer using appropriate SQL queries.

2. Implements all the following questions with SQL.

   A. Write an SQL query to fetch the EmpId and Full_Name of all the employees working under Manager with id – '**M-001'**

   B. Write an SQL query to fetch the different projects available from the employee_salary table **(using distinct)**

   C. Write an SQL query to fetch the count of employees working in project **'P13'**.

   D. Write an SQL query to find the maximum, minimum, and average salary of the employees. **(Implement in one query).**

   E. Write an SQL query to find the employee id whose salary lies in the range of 40000 and 60000.

   F. Write an SQL query to fetch those employees who live in Colombo and work under manager with ManagerId – **M-001**

   G. Write an SQL query to fetch all those employees who work on Project other than **P-13**.

   H. Write an SQL query to display the total salary of each employee adding the Salary with Variable value.

   I. Write an SQL query to fetch the employees whose name begins with any two characters, followed by a text **"Sa"** and ending with any sequence of characters.

J. Write an SQL query to fetch all the EmpIds which are present in either of the tables – **'employee_details'** and **'employee_salary'. (Using union operator)**

K. Write an SQL query to fetch common records between two tables**. (Using INTERSECT)**

L. Write an SQL query to fetch records that are present in one table but not in another table**. (Using MINUS)**

M. Write an SQL query to fetch the EmpIds that are present in both the tables – 'employee_details' and 'employee_salary. **(Using Sub query)**

N. Write an SQL query to fetch the employee full names and replace the space with **'-'**.

O. Write an SQL query to display both the EmpId and ManagerId together. (**Using CONCAT)**

P. Write an SQL query to fetch all the Employees details from **employee_details** table who joined in the Year 2020.

Q. Write an SQL query to join 3 tables. **(Tables- Account_holder, Account, Transaction)**

R. Write an SQL query to fetch all the Employees who are also managers from the **employee-details** table.

S. Write an SQL query to find the nth highest salary from table.

T. Write an SQL query to fetch duplicate records from **employee_details. (Without considering the primary key – EmpId)**

End of Exam-