**Week 7 - Graded Mini Project**

**Learning Outcome Addressed**

* Apply SQL aggregation functions
* Use GROUP BY to summarise data

**Objective**

Create a hospital database with three tables (Patients, Doctors, and Appointments) to manage patient records, doctor details, and appointment schedules. The project includes designing relationships, inserting sample data with null values, and writing SQL queries using subqueries, aggregation functions, and window functions.

**Submission Instructions**

Please document your response on the following pages.

Once you have completed the activity, save the file as a PDF and upload it. Be sure to name the file as **Module 7:** **Graded Mini Project\_[Your last name].**

Your submission will be considered complete when it meets these criteria:

* Includes all the key elements outlined in the activity instructions and the rubric.
* Adheres to the submission guidelines.
* Is submitted on time.

***This is a required activity and counts towards programme completion.***

Reflect on the task and respond to the following questions.

***Note: Kindly provide the solution in the form of an SQL query.***

**Question :Create Table: Doctors**

Columns:

doctor\_id (Primary Key, INT, Auto Increment)

doctor\_name (VARCHAR)

specialisation (VARCHAR)

experience\_years (INT)

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| [Type your response here...] |

Question : Import the sample\_doctors tables and copy the data of it in doctors table

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| [Type your response here...] |

Question :Insert Data in doctors table

('Dr. Jessica', 'Pathology', 5),

('Dr. Karen', 'Gastroenterology', 8),

('Dr. Brian', 'Endocrinology', 4),

('Dr. George', 'Nephrology', 6),

('Dr. Amanda', 'Psychiatry', 9);

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| [Type your response here...] |

Question :Create Table: Patients

Columns:

patient\_id (Primary Key, INT, Auto Increment)

patient\_name (VARCHAR)

age (INT)

gender (VARCHAR)

doctor\_id (Foreign Key from Doctors, INT)

contact\_number (VARCHAR)

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| [Type your response here...] |

Question : Import the sample\_patients tables and copy the data of it in Patients table

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| [Type your response here...] |

Question :Insert Data in Patients table

('Jada Pinkett Smith', 53, 'Female',16, '9601234567'),

('Rita Ora', 33, 'Female', 17, '9612345678'),

('Ryan Gosling', 42, 'Male', 18, '9623456789'),

('Emma Stone', 36, 'Female', 19, '9634567890'),

('Rachel McAdams', 47, 'Female', 20, '9645678901');

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| [Type your response here...] |

Question :Create Table: Appointments

Columns:

appointment\_id (Primary Key, INT, Auto Increment)

patient\_id (Foreign Key from Patients, INT)

doctor\_id (Foreign Key from Doctors, INT)

appointment\_date (DATE)

status (VARCHAR, e.g., 'Completed', 'Pending')

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| [Type your response here...] |

Question : Import the sample\_Appointments tables and copy the data of it in Appointments table

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| [Type your response here...] |

Question :Insert Data in Appointments table

(37, 15, '2025-03-07', 'Pending'),

(38, 16, '2025-03-08', 'Completed'),

(39, 17, '2025-03-09', 'Pending'),

(40, 18, '2025-03-10', 'Completed'),

(41, 19, '2025-03-11', 'Pending');

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| [Type your response here...] |

Question : List all patients who are assigned to doctors with more than 5 years of experience.

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| [Type your response here...] |

Question : Write a Query to fetch doctor\_id, doctor\_name, specialisation, experience\_years if doctor have experience more than 10 years of experience .

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| [Type your response here...] |

Question : Find the doctors who have never been assigned a patient.

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| [Type your response here...] |

Question : Count the number of appointments for each doctor.

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| [Type your response here...] |

Question : Count the unique number of Patients who took appointment.

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| [Type your response here...] |

Question : Find the average age of patients assigned to each doctor.

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| [Type your response here...] |

Question : Rank the doctors based on their experience years.

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| [Type your response here...] |

Question : For each appointment, find the total number of appointments on the same day.

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| [Type your response here...] |

Question : Write a query to get every doctor’s detail and their patient’s details if any.

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| [Type your response here...] |