## **Part A – Table Creation**

1. Create a table **Department** with the following fields:  
   * dept\_id (Primary Key)
   * dept\_name
2. Create a table **Employee** with the following fields:  
   * emp\_id (Primary Key)
   * emp\_name
   * salary
   * dept\_id (Foreign Key referencing Department)

A screenshot of a computer program

AI-generated content may be incorrect.

## **Part B – Data Insertion**

1. Insert at least 3 departments and 5 employees into the respective tables.

A screenshot of a computer code

AI-generated content may be incorrect.

## **Part C – Queries to Solve**

1. Display all employees with their department names.
2. Find employees who work in the IT department.

A white background with black text

AI-generated content may be incorrect.

1. List department names along with the number of employees in each department.

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

1. Add a new employee 'Meena' in department 'Finance'.

A screenshot of a computer

AI-generated content may be incorrect.

1. Try inserting an employee with a non-existing department id (say dept\_id = 10). What happens? Why?

A close-up of a computer code

AI-generated content may be incorrect.

1. Delete the Finance department. What happens to employees in that department?

A person holding a sign

AI-generated content may be incorrect.

## **Part D – Advanced Tasks**

1. Modify the **Employee** table so that if a department is deleted, all its employees are also deleted (ON DELETE CASCADE).

A computer code with blue text

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1. Verify the above by deleting the Finance department again.

A screenshot of a computer

AI-generated content may be incorrect.  
A screenshot of a computer

AI-generated content may be incorrect.

1. Modify the **Employee** table so that if the department\_id in **Department** is updated, it should also update automatically in the **Employee** table (ON UPDATE CASCADE).

A close-up of a computer code

AI-generated content may be incorrect.

1. Verify by updating the dept\_id of the IT department to a new value. What happens to the employees in that department?

A close up of a number

AI-generated content may be incorrect.

1. Change the Foreign Key constraint so that if a department is deleted, employees should have their dept\_id set to NULL (ON DELETE SET NULL).

A computer screen shot of a code

AI-generated content may be incorrect.

1. Test the above by deleting the HR department. What happens to the employees under HR?

A computer screen shot of a code

AI-generated content may be incorrect.