Normalization
Original Table

employee_id	first_name	last_name	email	phone	department_name	department_location	manager_name

1 NF

This table violates the First Normal Form (1NF) because the department_location and manager_name columns are multi-valued attributes (a department can have multiple locations, and a manager can manage multiple departments).

- Employees

employee_id	first_name	last_name	email	phone	department_id

- Department

department_id	department_name

- Locations

location_id	department_id	location

- Managers

manager_id	department_id	manager_name

2 NF

Now, the data is in the First Normal Form (1NF), but there is still a partial dependency in the locations and managers tables, violating the Second Normal Form (2NF).
To normalize the data to 2NF, we need to remove the partial dependencies by creating separate tables for manager.

- Employees

employee_id	first_name	last_name	email	phone	department_id	manager_id

- Manager

manager_id	manager_name

3 NF

Now, the data is in the Second Normal Form (2NF), but there is still a transitive dependency in the locations table, violating the Third Normal Form (3NF).
To normalize the data to 3NF, we need to remove the transitive dependency by creating a separate table for locations.4

- Location

location_id	location

- Department Location

department_id	location_id

Finally the Fully Normalized Table Will Be-

1. employees(employee_id, first_name, last_name, email, phone, department_id, manager_id)
2. departments (department_id, department_name)
3. managers (manager_id, manager_name)
4. locations (location_id, location)
5. department_locations (department_id, location_id)