

2 A relational database, WORKEXPRIENCE, stores data about students and the companies where they complete work experience.

Students can complete multiple work experience placements but can only complete one placement at a time.

Students can complete more than one placement at the same company.

Part of the database is shown:

STUDENT(StudentID, FirstName, TelephoneNumber, UniversityName)

PLACEMENT(PlacementID, StudentID, CompanyID, StartDate, EndDate, Complete)

COMPANY(CompanyID, CompanyName, MaxStudentsPerPlacement)

(b) Explain why the database WORKEXPRIENCE is in Third Normal Form (3NF).

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(c) Some example data from the PLACEMENT table is shown:

PlacementID	StudentID	CompanyID	StartDate	EndDate	Complete
PC001	LDEA01	MSCM	01/01/2023	12/07/2023	TRUE
PC002	LDEA01	MSCM	01/04/2024	08/05/2024	FALSE
PC003	ALAU02	NEAM	09/03/2020	10/03/2021	FALSE
PC004	LOLI75	GOUZ	07/06/2018	11/09/2018	TRUE

(i) Write a Structured Query Language (SQL) script to delete all placements that have been completed.

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(ii) Write an SQL script to return the total number of placements completed by the student with ID LDEA01 at the company with ID NEAM. The total should be given an appropriate name.

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(d) The database tables are repeated here:

STUDENT(StudentID, FirstName, TelephoneNumber, UniversityName)

PLACEMENT(PlacementID, StudentID, CompanyID, StartDate, EndDate, Complete)

COMPANY(CompanyID, CompanyName, MaxStudentsPerPlacement)

Explain what is meant by referential integrity, and how it applies to this database.

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