



## Practical 08 – Foreign Keys

**Objectives of this practical**

- You will learn how to insert foreign keys into a relation

**Section A: Add foreign keys to existing tables in Royalpoly**

Use the **Alter Table** statement to add one foreign key (non self-referencing foreign key) to each of the following three tables:

- Course\_relation (add Foreign Key: Offered\_by)
- Department\_relation (add Foreign Key: HOD)
- Staff\_relation (add Foreign Key: Dept\_Cd)

**Section B: Create and populate additional tables in Royalpoly**

The SQL (Create Table and INSERT) statements for the following six relations are posted in BB.

1. Staff\_Dependent\_Relation  
Create and populate the Staff\_Dependent\_Relation, specifying all primary and foreign keys.
2. Module\_Relation  
Create and populate the Module\_Relation, specifying all primary and foreign keys.

**You should encounter some 'Insert Statement' errors.** It is not a syntax error. Explain the error.

3. Pre\_Requisite\_Relation  
Create and populate the Pre\_Requisite\_Relation, specifying all primary and foreign keys.
4. Country\_Relation  
Create and populate the Country\_Relation, specifying all primary and foreign keys.
5. Student\_Relation  
Create and populate the Student\_Relation, specifying all primary and foreign keys.

**You should encounter error in 'Create Table' statement.** Find out the error and edit the SQL statement such that the script runs successfully.

6. Stud\_Mod\_Performance\_Relation  
Create and populate the Stud\_Mod\_Performance\_Relation, specifying all primary and foreign keys.

**You should encounter some 'Insert Statement' errors.** It is not a syntax error. Explain the error.

Note:

- You may encounter more errors than expected as your database records may differ from what we expected. When writing the practical, we assume that you have followed and completed all practicals C1 to C7 successfully.
- It is alright to have more errors. Find them out, explain them and rectify each of them. It is a good learning experience.

**Section C: Create a database diagram for Royalpoly**

Draw a database Diagram for Royalpoly to show the interrelationships between relations. Your module tutor will guide you on the steps to generate the database diagram in SQL Server Management Studio.