

## Introduction to Triggers

Sr. No.	Assignment Question																																																
1.	<p>Euro Airlines is a newly launched airline service that operates flights to and from various cities all over Europe. The company maintains the data pertaining to day-to-day transactions regarding flight services in SQL Server 2005 databases. To enable efficient and faster performance, Euro Airlines has decided to incorporate use of triggers in their database applications. The detailed list of operations to be performed are listed below:</p> <p>1. Start with the creation of the tables in a database named <b>EuroAirlines</b>. The structure of each of the tables is given herewith:</p> <p>➤ <b>Flight:</b></p> <table><tr><th>Field Name</th><th>Data Type</th><th>Key Field</th><th>Description</th></tr><tr><td>Aircraft_code</td><td>varchar(10)</td><td>Primary key</td><td>Stores aircraft code</td></tr><tr><td>Type</td><td>varchar(6)</td><td></td><td>Describes the type of aircraft</td></tr><tr><td>Source</td><td>varchar(20)</td><td></td><td>Stores the name of the city from where the aircraft will depart</td></tr><tr><td>Destination</td><td>varchar(20)</td><td></td><td>Stores the name of the city where the aircraft will arrive</td></tr><tr><td>Dep_time</td><td>varchar(10)</td><td></td><td>Stores departure time</td></tr><tr><td>Journey_hrs</td><td>int</td><td></td><td>Stores journey hours</td></tr></table> <p style="text-align: center;"><b>Table 9.1: Flight Table</b></p> <p>➤ <b>Flight_Details</b></p> <table><tr><th>Field Name</th><th>Data Type</th><th>Key Field</th><th>Description</th></tr><tr><td>Aircraft_code</td><td>varchar(10)</td><td>Primary Key</td><td>Stores aircraft code</td></tr><tr><td>Class_code</td><td>varchar(10)</td><td></td><td>Stores the class, whether first, business or economy</td></tr><tr><td>Fare</td><td>money</td><td></td><td>Stores the fare amount</td></tr><tr><td>Seats</td><td>int</td><td></td><td>Stores total number of seats on the flight</td></tr></table> <p style="text-align: center;"><b>Table 9.2: Flight Details Table</b></p>	Field Name	Data Type	Key Field	Description	Aircraft_code	varchar(10)	Primary key	Stores aircraft code	Type	varchar(6)		Describes the type of aircraft	Source	varchar(20)		Stores the name of the city from where the aircraft will depart	Destination	varchar(20)		Stores the name of the city where the aircraft will arrive	Dep_time	varchar(10)		Stores departure time	Journey_hrs	int		Stores journey hours	Field Name	Data Type	Key Field	Description	Aircraft_code	varchar(10)	Primary Key	Stores aircraft code	Class_code	varchar(10)		Stores the class, whether first, business or economy	Fare	money		Stores the fare amount	Seats	int		Stores total number of seats on the flight
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2. Write statements to create a trigger **CheckSeats** that will activate whenever a new row is being inserted into the **Flight\_Details** table. The maximum limit of seats that a flight can contain is 150. The trigger should check for the value of seats being inserted. If it is more than 150, the INSERT operation is not allowed to succeed.
3. Insert at least five records in each table.
4. Write statements to create a trigger **UpdateValid** that will activate whenever a row is being updated in the **Flight\_Details** table. The trigger should determine if the Seats column is present in the list of columns being updated. If yes, the UPDATE operation should not succeed because the Seats column is defined as a constant and cannot be changed.
5. Implement a cascade delete by using a trigger **Casc\_Delete** such that if a particular Aircraft\_code is deleted from the Flight table, the corresponding row from **Flight\_details** table is also deleted.
6. Write statements to display the list of triggers created in the **EuroAirlines** database.
7. Write statements to view the definitions of triggers defined in the **EuroAirlines** database.
8. Write statements to create a DDL trigger **ProhibitDelete** that will activate whenever a user is trying to delete a table from the **EuroAirlines** database. The trigger must not allow a user to perform deletes and must display a message "You are not allowed to delete tables in this database".