

Hands-On Assignment: SQL Basics

INSERT CONSTRAINTS:

- **Insert a new employee into the Employees table with the following details:**

```
CREATE TABLE EMPLOYEES(  
  employeeID int identity(1000,1) primary key,  
  firstName varchar(30) not null,  
  lastName varchar(30) not null ,  
  age int check(age>=18) ,  
  department varchar(50) not null  
)
```

```
INSERT INTO EMPLOYEES( firstName,lastName,age,department)  
VALUES ('John', 'Doe', 30, 'Sales'),  
('Jane', 'Smith', 25, 'Marketing'),  
('Alice', 'Johnson', 35, 'HR'),  
('Bob', 'Williams', 28, 'IT');
```

	employeeID	firstName	lastName	age	department
1	1000	John	Doe	30	Sales
2	1001	Jane	Smith	25	Marketing
3	1002	Alice	Johnson	35	HR
4	1003	Bob	Williams	28	IT
5	1004	Michael	Brown	32	Finance

AUTO INCREMENT:

- **Insert a new employee into the Employees table with the following details:**

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```
INSERT INTO EMPLOYEES VALUES('Michael','Brown',32,'Finance')  
INSERT INTO EMPLOYEES VALUES('Emily','Clark',29,'Operations')
```

```
SELECT * FROM EMPLOYEES
```

	employeeID	firstName	lastName	age	department
1	1000	John	Doe	30	Sales
2	1001	Jane	Smith	25	Marketing
3	1002	Alice	Johnson	35	HR
4	1003	Bob	Williams	28	IT
5	1004	Michael	Brown	32	Finance
6	1005	Emily	Clark	29	Operations

DELETE, DROP, TRUNCATE:

- **Delete the employee with the FirstName 'John' from the Employees table.**

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```
DELETE FROM EMPLOYEES
WHERE firstName='john'
```

	employeeID	firstName	lastName	age	department
1	1001	Jane	Smith	25	Marketing
2	1002	Alice	Johnson	35	HR
3	1003	Bob	Williams	28	IT
4	1004	Michael	Brown	32	Finance

- **Drop the Employees table from the database.**

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```
DROP TABLE EMPLOYEES
```

- **Truncate the Employees table to remove all records**

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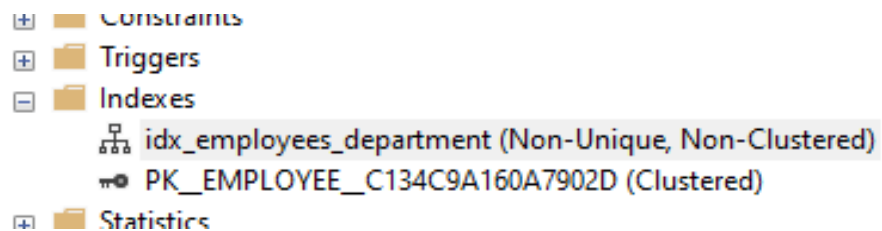
```
TRUNCATE TABLE EMPLOYEES
```

INDEXES

- Create an index on the Department column of the Employees table.
- Write a query to retrieve all employees from the Employees table where the Department is 'IT'.

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```
CREATE INDEX idx_employees_department  
ON EMPLOYEES (department)
```



```
SELECT * FROM EMPLOYEES  
WHERE department='IT'
```

	employeeID	firstName	lastName	age	department
1	1003	Bob	Williams	28	IT