Lab Manual- Agile Planning and Portfolio Management with Azure Boards

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Contents

1. Introduction

In 1970's the product called 'SEQUEL', structured English query language, developed by IBM and later SEQUEL was renamed to 'SQL' which stands for Structured Query Language.

In 1986, SQL was approved by ANSI (American national Standards Institute) and in 1987, it was approved by ISO (International Standards Organization).

SQL is a structure query language which is a common database language for all RDBMS products. Different RDBMS product vendors have developed their own database language by extending SQL for their own RDBMS products.

T-SQL stands for Transact Structure Query Language which is a Microsoft product and is an extension of SQL Language

2. DDL, DQL, DML, DCL and TCL Commands

Structured Query Language(SQL) as we all know is the database language by the use of which we can perform certain operations on the existing database and also we can use this language to create a database. SQL uses certain commands like Create, Drop, Insert, etc. to carry out the required tasks.

These SQL commands are mainly categorized into four categories as:

- **DDL –** Data Definition Language
- **DQl – Data Query Language**
- **DML –** Data Manipulation Language
- **DCL –** Data Control Language

Types of SQL Commands			
DDL	**DML**	**DCL**	**TCL**
CREATE	SELECT		
ALTER	INSERT	GRANT	COMMIT
DROP	UPDATE	REVOKE	ROLLBACK
TRUNCATE	DELETE		SAVEPOINT
RENAME	MERGE		

3. Exercise 1 – Create Table, Insert Data and View Data

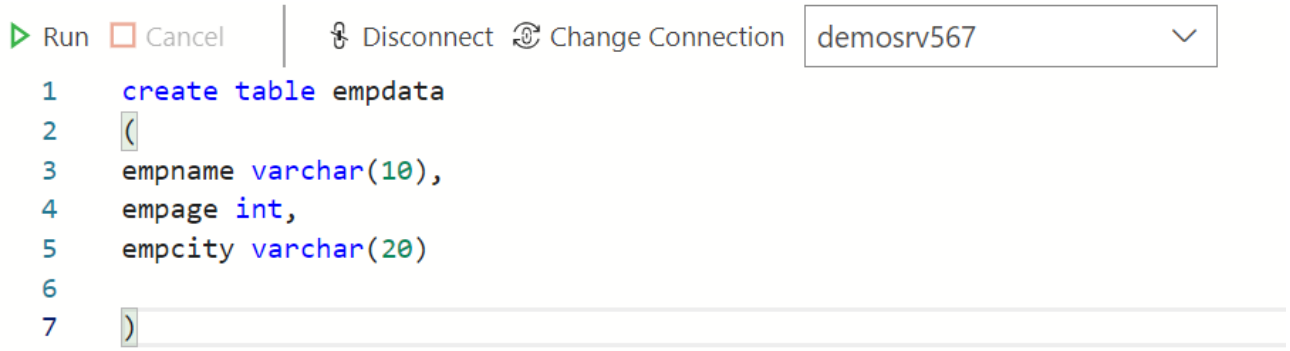
1. *CREATE TABLE*

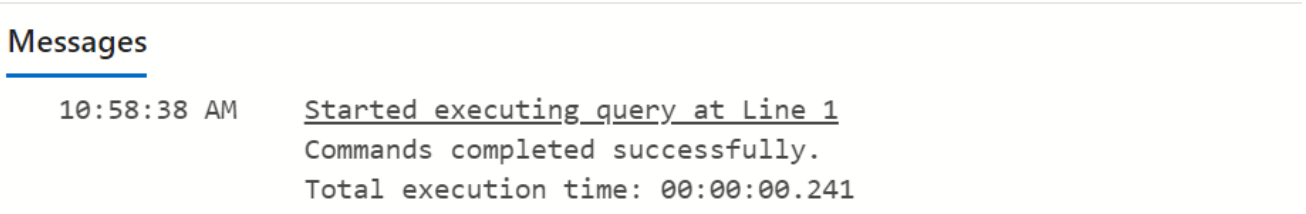
The CREATE TABLE statement is used to create a table in SQL.

This query will create a table named **empdata** with three columns **empname,empage** and **empcity**

```
create table empdata
(
empname varchar(10),
empage int,
empcity varchar(20)

)
```





2. *INSERT STATEMENT*

```
insert into empdata (empname,empage,empcity) values ('Robert',28,'TX')
insert into empdata (empname,empage,empcity) values ('John',30,'LA')
insert into empdata (empname,empage,empcity) values ('Savio',22,'FL')
insert into empdata (empname,empage,empcity) values ('Juliya',42,'WA')
```

```
9   insert into empdata (empname,empage,empcity) values ('Robert',28,'TX')
10  insert into empdata (empname,empage,empcity) values ('John',30,'LA')
11  insert into empdata (empname,empage,empcity) values ('Savio',22,'FL')
12  insert into empdata (empname,empage,empcity) values ('Juliya',42,'WA')
13
```

Messages

```
Total execution time: 00:00:00
```

3. *SELECT STATEMENT*

```
SELECT * FROM EMPDATA
```

```
14  SELECT * FROM EMPDATA
```

Results Messages

	empname	empage	empcity
	Robert	28	TX
	John	30	LA
	Savio	22	FL
	Juliya	42	WA

4. Exercise 2 – Various Insert Statement

1. *Without Columns Name*

```
insert into empdata  values (' Brian ',28,'TX')
insert into empdata  values (' Derek ',30,'LA')
insert into empdata  values ('Alan',22,'FL')
```

```
insert into empdata values ('Philip',28,'TX')
insert into empdata values ('Borris',30,'LA')
insert into empdata values ('Alan',22,'FL')
```

jes

Total execution time: 00:00:00

2. *Multiple Data in same Statement*

```
Insert into empdata  values ('Philip',28,'TX'), ('Borris',30,'LA'),('Eric
k ',22,'FL')
SELECT * FROM EMPDATA
```

```
9   insert into empdata values ('Philip',28,'TX'), ('Borris',30,'LA'),('Erick ',22,'FL')
10
11
12  SELECT * FROM EMPDATA
13
```

Results | Messages

	empname	empage	empcity
1	Robert	28	TX
2	John	30	LA
3	Savio	22	FL
4	Juliya	42	WA
5	Philip	28	TX
6	Borris	30	LA
7	Erick	22	FL

3. *Multiple Data in selected Columns*

```
insert into empdata (empname,empage) values ('Benjamin',28), ('Lucas',30)

SELECT * FROM EMPDATA
```

```
9   insert into empdata (empname,empage) values ('Benjamin',28), ('Lucas',30)
10
11
12  SELECT * FROM EMPDATA
13
```

Results Messages

	empname	empage	empcity
1	Robert	28	TX
2	John	30	LA
3	Savio	22	FL
4	Juliya	42	WA
5	Philip	28	TX
6	Borris	30	LA
7	Erick	22	FL
8	Benjamin	28	*NULL*
9	Lucas	30	*NULL*

5. Exercise 3 – Various Select Statement

1. *Where Clouse (Integer)*

```
SELECT * FROM EMPDATA where empage > 28
```

```
12  SELECT * FROM EMPDATA where empage > 28
13
```

Results Messages

	empname	empage	empcity
1	John	30	LA
2	Juliya	42	WA
3	Borris	30	LA
4	Lucas	30	*NULL*

2. *Where Clouse (Character)*

```
SELECT * FROM EMPDATA where empcity = 'LA'
```

```
12    SELECT * FROM EMPDATA where empcity = 'LA'
13
14
```

Results Messages

	empname	empage	empcity
1	John	30	LA
2	Borris	30	LA

3. *Where Clouse (And)*

```
SELECT * FROM EMPDATA where empcity = 'TX' and empage >=28
```

```
12    SELECT * FROM EMPDATA where empcity = 'TX' and empage >=28
13
```

Results Messages

	empname	empage	empcity
1	Robert	28	TX
2	Philip	28	TX

4. *Where Clouse (OR)*

```
SELECT * FROM EMPDATA where empcity = 'TX' or empage >=28
```

```
12    SELECT * FROM EMPDATA where empcity = 'TX' or empage >=28
13
```

Results Messages

	empname	empage	empcity
1	Robert	28	TX
2	John	30	LA
3	Juliya	42	WA
4	Philip	28	TX
5	Borris	30	LA
6	Benjamin	28	*NULL*
7	Lucas	30	*NULL*

5. *Where Clouse (Like %)*

```
SELECT * FROM EMPDATA where empname like 'b%'
```

```
12    SELECT * FROM EMPDATA where empname like 'b%'
13
14
```

Results Messages

	empname	empage	empcity
1	Borris	30	LA
2	Benjamin	28	*NULL*

6. *Where Clouse (IN)*

```
SELECT * FROM EMPDATA where empcity in ('TX','FL')
```

```
12  SELECT * FROM EMPDATA where empcity in ('TX','FL')
13
14
```

Results Messages

	empname	empage	empcity
1	Robert	28	TX
2	Savio	22	FL
3	Philip	28	TX
4	Erick	22	FL

7. *Where Clouse (Between)*

```
SELECT * FROM EMPDATA where empage between 22 and 28
```

```
12  SELECT * FROM EMPDATA where empage between 22 and 28
13
14
```

Results Messages

	empname	empage	empcity
1	Robert	28	TX
2	Savio	22	FL
3	Philip	28	TX
4	Erick	22	FL
5	Benjamin	28	*NULL*

6. Exercise 4 – Nested Select Statement

```
select empname from EMPdata where  exists (select Empna
me from empdata where empname='Philip' )
```

```
14  select empname from EMPdata where  exists (select Empname from empdata where empname='Philip' )
15
```

Results Messages

	empname
1	Robert
2	John
3	Savio
4	Juliya
5	Philip
6	Borris
7	Erick
8	Benjamin
9	Lucas