SQL Capstone Project 1

by

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SQL Capstone Project-1

What is SQL?

SQL stands for Structured Query Language. SQL is use to manage the relational Database and it perform various operation with the data. All the Relational Database Management Systems are MySQL, MS Access, Oracle, Sybase, Informix, Postgres and SQL Server use SQL as their standard database language

Types of SQL Command:

a. DDL or Data Definition Language(Create, Drop, Alter, Truncate).
b. DML or Data Manipulation Language(Insert, Update, Delete).
c. DCL or Data Control Language(Grant, Revoke).
d. TCL or Transaction Control Language(Commit, Rollback, Save Point).
e. DQL or Data Query Language(Select).

Q1.Extract PID, PDESE, Category, SNAME, SCITY from respective table.

- Before everything, we have to create a database and we have to use the database.
- To create a table we basically use DDL command Create and to extract data we use DQL command Select.

```
CREATE DATABASEINVENTORY;     --
USE INVENTORY;


-- The ';' work as a saperator
```

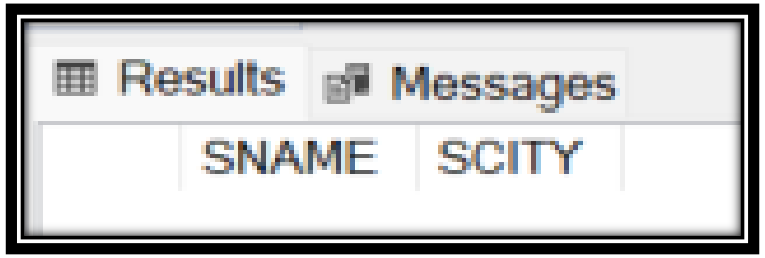
```
CREATE TABLE PRODUCT (

PID CHAR(10) PRIMARY KEY,
PDESC VARCHAR(20) NOT NULL,
PRICE INT,
CATEGORY VARCHAR (20),
SID CHAR(10)FOREIGN KEY (SID) REFERENCES SUPPLIER (SID)
);
```

OUTPUT


```
SELECT PID,PDESC,CATEGORY FROM PRODUCT
```

```
CREATE TABLE SUPPLIER (

SID CHAR(10) PRIMARY KEY,
SNAME VARCHAR (10) NOT NULL,
SADDR VARCHAR (30) NOT NULL,
SCITY VARCHAR (20) DEFAULT 'DELHI',
SPHONE BIGINT UNIQUE,
SMAIL CHAR (30) UNIQUE
);

SELECT SNAME,SCITY FROM SUPPLIER;
```

OUTPUT



Q2. Extract OID, ODATE, CNAME, CADDR, CPHONE, PDESC, PRICE, OQTY from respective table

```
CREATE TABLE ORDERS (

OID CHAR(10) PRIMARY KEY,
ODATE DATE,
CID CHAR(10) FOREIGN KEY(CID) REFERENCES CUSTOMER(CID),
PID CHAR (10) FOREIGN KEY (PID) REFERENCES PRODUCT(PID),
OQTY CHAR(10)
);


SELECT OID,ODATE,OQTY FROM ORDERS;
```

OUTPUT

```
CREATE TABLE CUSTOMER (

CID CHAR(10) PRIMARY KEY,
CNAME VARCHAR(30) NOT NULL,
CADDR VARCHAR (30) NOT NULL,
CCTIY VARCHAR (30) NOT NULL,
CPHONE BIGINT NOT NULL,
CEMAIL VARCHAR(30) NOT NULL,
DOB DATE CHECK(DOB<'01-01-2020')
);

SELECT CNAME,CADDR,CPHONE FROM CUSTOMER;
```

OUTPUT

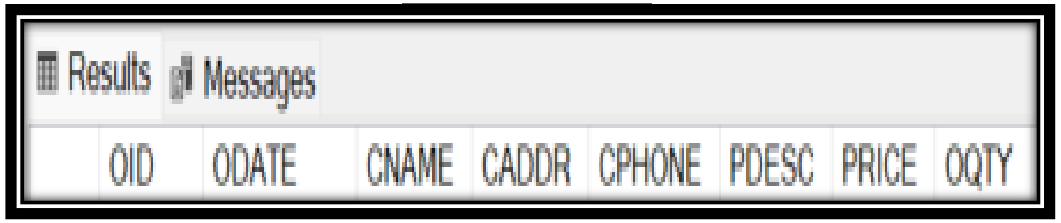
```
CREATE TABLE PRODUCT (

PID CHAR(10) PRIMARY KEY,
PDESC VARCHAR(20) NOT NULL,
PRICE INT,
CATEGORY VARCHAR (20),
SID CHAR(10) FOREIGN KEY (SID) REFERENCES SUPPLIER (SID)
);
SELECT PRICE,PDESC FROM PRODUCT
```

OUTPUT

Q3. Generate a View BILL that display OID, ODATE, CNAME, CADDR, PHONE, PDESC, PRICE, OQTY, AMOUNT

```
CREATE VIEW BILL AS

SELECT O.OID,O.ODATE, C.CNAME, C.CADDR,C.CPHONE, P.PDESC, P.PRICE, O.OQTY

FROM ORDERS O, CUSTOMER C,PRODUCT P

WHERE O.CID=C.CID AND O.PID=P.PID

SELECT* FROM BILL
```

OUTPUT



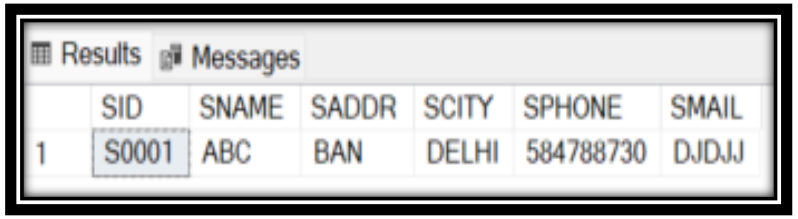
Q4. Create Simple procedure ADDSUPPLIER, ADDPRO, ADDCUST, ADDORDER to indest details into SUPPLIER, PRODUCT, CUSTOMER, ORDERS accordingly.

Procedure is a statement where we can store group of statements to perform multiple operations in the database. A procedure is reusable and easy to access.

ADDSUPPLIER:

```
CREATE PROCEDURE ADDSUPPLIER  @I AS CHAR(10), @N AS VARCHAR (20), @A AS
VARCHAR(30), @C AS VARCHAR(20), @P AS BIGINT, @M AS VARCHAR(30)

AS BEGIN

INSERT INTO SUPPLIER VALUES (@I, @N, @A, @C, @P,@M);

END;


ADDSUPPLIER 'S0001', 'ABC', 'BAN', 'DELHI', 584788730, 'DJDJJ'


SELECT * FROM SUPPLIER
```

OUTPUT



Results | Messages

	SID	SNAME	SADDR	SCITY	SPHONE	SMAIL
1	S0001	ABC	BAN	DELHI	584788730	DJDJJ

ADDPRO:

```
CREATE PROCEDURE ADDPRO @I CHAR(10), @D VARCHAR(20), @P AS INT, @C VARCHAR(20),
@SI CHAR(10)
AS BEGIN
INSERT INTO PRODUCT VALUES (@I, @D, @P, @C, @SI)
END;

ADDPRO 'P0001', 'DJSKD', 20000,'GOOD','S0001'

SELECT * FROM PRODUCT
```

OUTPUT

Results | Messages

	PID	PDESC	PRICE	CATEGORY	SID
1	P0001	DJSKD	20000	GOOD	S0001

ADDCUST:

```
CREATE PROCEDURE ADDCUST @I CHAR(10), @N VARCHAR (30), @A VARCHAR(30), @C VARCHAR(10),
@P BIGINT, @E VARCHAR(30), @D DATE
AS BEGIN
INSERT INTO CUSTOMER VALUES(@I, @N, @A, @C, @P, @E,@D)
END

ADDCUST  'C0001','AK','BAN','CHE', 789876, 'HJKL', '02-04-1992'
ADDCUST  'C0002','AK','BAN','CHE', 789876, 'HJKL', '02-24-1992'

SELECT * FROM CUSTOMER
```

OUTPUT

Results | Messages

	CID	CNAME	CADDR	CCTIY	CPHONE	CEMAIL	DOB
1	C0001	AK	BAN	CHE	789876	HJKL	1992-02-04
2	C0002	AK	BAN	CHE	789876	HJKL	1992-02-24

ADDORDER:

```
CREATE PROCEDURE ADDORDER @I CHAR(10), @D DATE, @CI CHAR(10), @PI CHAR (10), @Q INT
AS BEGIN
INSERT INTO ORDERS VALUES (@I, @D, @CI, @PI, @Q)
END

ADDORDER 'O0001', '02-07-2022', 'C0001', 'P0001',100

SELECT * FROM ORDERS
```

OUTPUT

Results | Messages

	OID	ODATE	CID	PID	OQTY
1	O0001	2022-02-07	C0001	P0001	100

Q5.Create a function to autogenerate 5-character ID that accepts 2 parameter which holds character and the number.

```
CREATE SEQUENCE AID
START WITH 1
INCREMENT BY 1
GO
CREATE TABLE AUTOID (
SID CHAR(10) PRIMARY KEY DEFAULT 'S'+ FORMAT((NEXT VALUE FOR AID), '0000'),
SNAME VARCHAR (10) NOT NULL)

INSERT INTO AUTOID(SNAME) VALUES('ARIJIT')
INSERT INTO AUTOID(SNAME) VALUES('ARKA')
INSERT INTO AUTOID(SNAME) VALUES('GAURAV SIR')
SELECT* FROM AUTOID
```

OUTPUT

Results | Messages

	SID	SNAME
1	S0001	ARIJIT
2	S0002	ARKA
3	S0003	GAURAV SIR

Q6. Drop and recreate the procedures in which the ID should be automatically created using above function and new sequence

ADDSUPPLIER:

```
DROP PROCEDURE ADDSUPPLIER;
CREATE SEQUENCE ADDSUPPLIER
START WITH 1
INCREMENT BY 1
GO
CREATE TABLE SUPPLIER (

SID CHAR(10) PRIMARY KEY DEFAULT 'S'+ FORMAT((NEXT VALUE FOR ADDSUPPLIER), '0000'),
SNAME VARCHAR (10) NOT NULL,
SADDR VARCHAR (30) NOT NULL,
SCITY VARCHAR (20) DEFAULT 'DELHI',
SPHONE BIGINT UNIQUE,
SMAIL CHAR (30) UNIQUE
);
```

ADDPRO:

```
DROP PROCEDURE ADDDPRO;
CREATE SEQUENCE ADDPRO
START WITH 1
INCREMENT BY 1
GO
CREATE TABLE PRODUCT (

PID CHAR(10) PRIMARY KEY DEFAULT 'P'+ FORMAT((NEXT VALUE FOR ADDPRO), '0000'),
PDESC VARCHAR(20) NOT NULL,
PRICE INT,
CATEGORY VARCHAR (20),
SID CHAR(10) FOREIGN KEY (SID) REFERENCES SUPPLIER (SID)
);
```

ADDCUST:

```
DROP PROCEDURE ADDCUST;
CREATE SEQUENCE ADDCUST
START WITH 1
INCREMENT BY 1
GO
CREATE TABLE CUSTOMER (
CID CHAR(10) PRIMARY KEY DEFAULT 'C'+ FORMAT((NEXT VALUE FOR ADDCUST), '0000'),
CNAME VARCHAR(30) NOT NULL,
CADDR VARCHAR (30) NOT NULL,
CCTIY VARCHAR (30) NOT NULL,
CPHONE BIGINT NOT NULL,
CEMAIL VARCHAR(30) NOT NULL,
DOB DATE CHECK(DOB<'01-01-2020'));
```

ADDORDER:

```
DROP PROCEDURE ADDORDER;
CREATE SEQUENCE ADDORDER
START WITH 1
INCREMENT BY 1
GO
CREATE TABLE ORDERS (
OID CHAR(10) PRIMARY KEY DEFAULT 'O'+ FORMAT((NEXT VALUE FOR ADDORDER), '0000'),
ODATE DATE,
CID CHAR(10) FOREIGN KEY(CID) REFERENCES CUSTOMER(CID),
PID CHAR (10) FOREIGN KEY (PID) REFERENCES PRODUCT(PID),
OQTY CHAR(10)
);
```

THANK YOU

HAVE A GOOD DAY

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