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| CGI |
| LAB REPORT |
| LAB-SQL |
|  |
| **SWET SHEERSH** |
| **8/1/2023** |

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| This report SQL Lab Command/Queries . |

**Table**

**Create table Emp**

CREATE TABLE Emp (

Empno INT(4) NOT NULL,

Ename VARCHAR(10),

Job VARCHAR(9),

Mgr INT(4),

Hiredate DATE,

Sal DECIMAL(7,2),

Comm DECIMAL(7,2),

Deptno INT(2)

);

**Create table Designation\_Master**

CREATE TABLE Designation\_Master (

Design\_code INT(3) NOT NULL,

Design\_name VARCHAR(50)

);

**Create table Department\_Master**

CREATE TABLE Department\_Master (

Dept\_Code INT(2) NOT NULL,

Dept\_name VARCHAR(50)

);

**Create table Student\_Master**

CREATE TABLE Student\_Master (

Student\_Code INT(6) NOT NULL,

Student\_name VARCHAR(50) NOT NULL,

Dept\_Code INT(2),

Student\_dob DATE,

Student\_Address VARCHAR(240)

);

**Create table Student\_Mark**

CREATE TABLE Student\_Mark (

Student\_Code INT(6),

Student\_Year INT NOT NULL,

subject1 INT(3),

subject2 INT(3),

subject3 INT(3)

);

**Create table Staff\_Master**

CREATE TABLE Staff\_Master (

Staff\_code INT(8) NOT NULL,

Staff\_Name VARCHAR(50) NOT NULL,

Design\_code INT,

Dept\_code INT,

HireDate DATE,

Staff\_dob DATE,

Staff\_address VARCHAR(240),

Mgr\_code INT(8),

Staff\_sal DECIMAL(10,2)

);

**Create table Book\_Master**

CREATE TABLE Book\_Master (

Book\_Code INT(10) NOT NULL,

Book\_Name VARCHAR(50) NOT NULL,

Book\_pub\_year INT,

Book\_pub\_author VARCHAR(50) NOT NULL

);

**Create table Book\_Transactions**

CREATE TABLE Book\_Transactions (

Book\_Code INT,

Student\_code INT,

Staff\_code INT,

Book\_Issue\_date DATE NOT NULL,

Book\_expected\_return\_date DATE NOT NULL,

Book\_actual\_return\_date DATE

);

**Insert Data**

**Insert data into Emp table**

INSERT INTO Emp (Empno, Ename, Job, Mgr, Hiredate, Sal, Comm, Deptno)

VALUES

(101, 'John Doe', 'Manager', NULL, '2022-01-15', 5000.50, 500.25, 20),

(102, 'Jane Smith', 'Analyst', 101, '2022-02-20', 4000.75, 300.50, 30),

(103, 'Michael Johnson', 'Clerk', 102, '2022-03-10', 2500.25, 100.75, 40),

(104, 'Emily Williams', 'Manager', NULL, '2022-04-05', 4800.00, 600.00, 20),

(105, 'Robert Brown', 'Developer', 104, '2022-05-01', 3500.50, 150.00, 30);

**Insert data into Designation\_Master table**

INSERT INTO Designation\_Master (Design\_code, Design\_name)

VALUES

(1, 'Manager'),

(2, 'Analyst'),

(3, 'Clerk'),

(4, 'Developer'),

(5, 'Tester');

**Insert data into Department\_Master table**

INSERT INTO Department\_Master (Dept\_Code, Dept\_name)

VALUES

(10, 'Finance'),

(20, 'Human Resources'),

(30, 'Information Technology'),

(40, 'Marketing'),

(50, 'Operations');

**Insert data into Student\_Master table**

INSERT INTO Student\_Master (Student\_Code, Student\_name, Dept\_Code, Student\_dob, Student\_Address)

VALUES

(1001, 'John Smith', 30, '2000-01-15', '123 Main St, City A'),

(1002, 'Emily Johnson', 20, '2001-02-20', '456 Park Ave, City B'),

(1003, 'Michael Brown', 40, '2002-03-10', '789 Oak Rd, City C'),

(1004, 'Jane Williams', 10, '2003-04-05', '101 Elm Dr, City D'),

(1005, 'Robert Davis', 30, '2004-05-01', '202 Maple Ln, City E');

**Insert data into Student\_Mark table**

INSERT INTO Student\_Mark (Student\_Code, Student\_Year, subject1, subject2, subject3)

VALUES

(1001, 2022, 80, 75, 90),

(1002, 2022, 85, 90, 80),

(1003, 2021, 70, 65, 80),

(1004, 2023, 95, 85, 90),

(1005, 2023, 88, 78, 82);

**Insert data into Staff\_Master table**

INSERT INTO Staff\_Master (Staff\_code, Staff\_Name, Design\_code, Dept\_code, HireDate, Staff\_dob, Staff\_address, Mgr\_code, Staff\_sal)

VALUES

(201, 'Mary Adams', 2, 30, '2015-01-15', '1985-03-20', '111 Elm St, City X', 101, 6000.00),

(202, 'James Wilson', 4, 20, '2018-02-20', '1990-05-25', '222 Oak Ave, City Y', NULL, 4500.50),

(203, 'Sophia Lee', 3, 40, '2019-03-10', '1988-09-10', '333 Maple Rd, City Z', 201, 2800.25),

(204, 'Oliver Taylor', 4, 30, '2020-04-05', '1992-12-01', '444 Park Pl, City W', 202, 3800.00),

(205, 'Emma Martin', 5, 10, '2021-05-01', '1995-08-05', '555 Main Blvd, City V', NULL, 3200.50);

**Insert data into Book\_Master table**

INSERT INTO Book\_Master (Book\_Code, Book\_Name, Book\_pub\_year, Book\_pub\_author)

VALUES

(10001, 'Introduction to SQL', 2010, 'John Smith'),

(10002, 'Data Science for Beginners', 2019, 'Jane Doe'),

(10003, 'Java Programming Basics', 2015, 'Michael Johnson'),

(10004, 'Python Crash Course', 2018, 'Emily Williams'),

(10005, 'Database Design Fundamentals', 2012, 'Robert Brown');

**Insert data into Book\_Transactions table**

INSERT INTO Book\_Transactions (Book\_Code, Student\_code, Staff\_code, Book\_Issue\_date, Book\_expected\_return\_date, Book\_actual\_return\_date)

VALUES

(10001, 1001, 201, '2023-01-10', '2023-01-25', NULL),

(10002, 1002, 202, '2023-02-15', '2023-03-01', NULL),

(10003, 1003, 203, '2023-03-20', '2023-04-05', '2023-04-02'),

(10004, 1004, 204, '2023-04-25', '2023-05-10', NULL),

(10005, 1005, 205, '2023-05-30', '2023-06-15', NULL);

**Query**

1.1

SELECT Ename, Sal, Deptno

FROM Emp

WHERE Deptno IN (20, 30, 40);

1.2

SELECT Student\_Code AS Code, (subject1 + subject2 + subject3) AS Total\_Marks

FROM Student\_Mark;

1.3

SELECT Staff\_Name, Design\_Code

FROM Staff\_Master

WHERE HireDate < '2003-01-01' AND Staff\_sal BETWEEN 12000 AND 25000;

1.4

SELECT Staff\_Code AS Code, Staff\_Name, Dept\_Code

FROM Staff\_Master

WHERE DATEDIFF(CURDATE(), HireDate) >= 6570 -- 6570 days = 18 years

ORDER BY HireDate;

1.5

SELECT Staff\_Name, Design\_code, Staff\_sal

FROM Staff\_Master

WHERE Dept\_code IN (10, 30) AND DATEDIFF(CURDATE(), HireDate) >= 3650 -- 3650 days = 10 years;

1.6

SELECT CONCAT(Student\_Name, ', ', Dept\_Code) AS 'Student Info'

FROM Student\_Master;

1.7

SELECT \*

FROM Staff\_Master

WHERE Mgr\_code IS NULL;

1.8

SELECT Student\_Name, Dept\_Code, Student\_dob

FROM Student\_Master

WHERE Student\_dob BETWEEN '1981-01-01' AND '1983-03-31'

ORDER BY Student\_dob ASC;

1.9

SELECT \*

FROM Book\_Master

WHERE (Book\_pub\_year BETWEEN 2001 AND 2004) OR (Book\_Name LIKE '%&%');

1.10

SELECT \*

FROM Book\_Master

WHERE Book\_Name LIKE '%COMP%';

1.11

SELECT \*

FROM Staff\_Master

WHERE (Staff\_Name LIKE 'A%S' OR Staff\_Name LIKE '\_N%S');

1.12

SELECT Staff\_Name

FROM Staff\_Master

WHERE Staff\_Name LIKE '%\\_%' COLLATE utf8mb4\_bin;

Thank You…