

**Shri Ramdeobaba College of Engineering & Management Nagpur-13**

**Department of Computer Application**

**Session: 2023-2024**



**Submission for**

**Course Name:** Database Management Systems Lab

**Course Code:** MCP545

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**Shift:** 2

**Batch:** 2

Under the Guidance of

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## **List of Experiments**

1. Implementation of DDL commands of SQL with suitable examples
  - a) Create table    b) Alter table    c) Truncate table    d) Drop table

Implementation of DML commands of SQL with suitable examples

- a) Select    b) Insert    c) Update    d) Delete
2. Study and implementation of different types of constraints.
3. Implementation of different types of operators in SQL
  - a) Arithmetic Operators    b) Logical Operators
  - c) Comparison Operators    d) Set Operators
4. Study and Implementation of
  - a) Aggregate functions
  - b) Group By & Having clause
  - c) Order by clause
5. Study and Implementation of different types of joins like cross join, natural join, inner join, and outer joins.
6. Study and Implementation of Sub queries
7. Study and Implementation of views, and synonyms.
8. Study and Implementation of PL/SQL.

## Practical 2

**Aim:** Study and implementation of different types of constraints.

Create the tables described below

### PRODUCT\_MASTER

Column Name	Datatype	Size	Constraints
Product_No	Char	6	Primary Key
Description	Varchar2	15	Not Null
ProfitPercent	Number	4,2	Not Null
UnitMeasure	Varchar2	10	Not Null
SellPrice	Number	8,2	Not Null
CostPrice	Number	8,2	Not Null

SELLPRICE	Between 10000 to 80000
COSTPRICE	>1000

### SALESMAN\_MASTER

Column Name	Datatype	Size	Constraints
Salesman_No	Char	6	Primary Key
SalesmanName	Varchar2	20	Not Null
Address	Varchar2	30	Not Null
City	Varchar2	20	
PinCode	Number	6	
State	Varchar2	20	
SalAmt	Number	8,2	Not Null

CITY	CAN'T BE NAGPUR
PINCODE	UNIQUE

## Client\_Master

Column Name	Datatype	Size	Constraints
Client_No	Char	6	Primary Key
Name	Varchar2	20	Not Null
Address	Varchar2	100	
City	Varchar2	15	
Pincode	Number	6	
State	Varchar2	20	
Bal_Due	Number	8,2	

## Sales\_Order

Column Name	Datatype	Size	Default	Constraints
Order_No	Char	6		Primary Key
Client_No	Char	6		Foreign Key References Client_No of Client_Master Table
OrderDate	Date			Not Null
Salesman_No	Char	6		Foreign Key References Salesman_No of Salesman_Master Table

## **Solution Query:**

### **A. For PRODUCT\_MASTER Table:**

```
CREATE TABLE PRODUCT_MASTER (  
    Product_No CHAR(6) PRIMARY KEY,  
    Description VARCHAR2(15) NOT NULL,  
    ProfitPercent NUMBER(4,2) NOT NULL,  
    UnitMeasure VARCHAR2(10) NOT NULL,  
    SellPrice NUMBER(8,2) NOT NULL CHECK (SellPrice BETWEEN 10000 AND  
        80000),  
    CostPrice NUMBER(8,2) NOT NULL CHECK (CostPrice > 1000)  
);
```

### **B. For SALESMAN\_MASTER Table:**

```
CREATE TABLE SALESMAN_MASTER (  
    Salesman_No CHAR(6) PRIMARY KEY,  
    SalesmanName VARCHAR2(20) NOT NULL,  
    Address VARCHAR2(30) NOT NULL,  
    City VARCHAR2(20),  
    PinCode NUMBER(6),  
    State VARCHAR2(20),  
    SalAmt NUMBER(8,2) NOT NULL,  
    CONSTRAINT pincode_unique UNIQUE (PinCode),  
    CONSTRAINT city_not_nagpur CHECK (City <> 'NAGPUR')  
);
```

### **C. For CLIENT\_MASTER Table:**

```
CREATE TABLE CLIENT_MASTER (  
    Client_No CHAR(6) PRIMARY KEY,  
    Name VARCHAR2(20) NOT NULL,  
    Address VARCHAR2(100),  
    City VARCHAR2(15),  
    Pincode NUMBER(6),  
    State VARCHAR2(20),  
    Bal_Due NUMBER(8,2)  
);
```

**D. For SALES\_ORDER Table:**

```
CREATE TABLE SALES_ORDER (  
    Order_No CHAR(6) PRIMARY KEY,  
    Client_No CHAR(6),  
    OrderDate DATE NOT NULL,  
    Salesman_No CHAR(6),  
    FOREIGN KEY (Client_No) REFERENCES CLIENT_MASTER(Client_No),  
    FOREIGN KEY (Salesman_No) REFERENCES  
        SALESMAN_MASTER(Salesman_No)  
);
```