# PRACTICAL: 1

AIM: Explore core concepts of DBMS and SQL, and perform operations using various SQL command categories such as DDL, DML, DCL, and TCL.

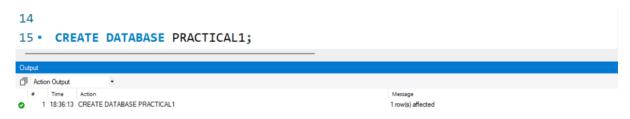
# TASK 0 : Understand the Scenario: College Student Record System

NOTE : REPLACE THIS LINE WITH ALL MENTIONED BEFORE TASK 1 & Perform ALL possible Queries & attach Screenshots

# TASK 1

#### **Prerequisite Steps before Task 1**

#### **Step 1**: Create a new Database



#### **Step 2** : Select a Database



#### Create a table ACCOUNT\_24012011161

Column name	Data Type	Size
acc_no	varchar2	5
Name	varchar2	30
City	varchar2	20
Balance	Number	10,2
loan_taken	varchar2	5

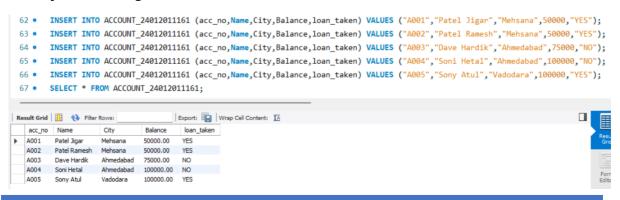
#### **Query with Output:**



### Insert the following records in ACCOUNT\_24012011161 table

acc_no	Name	City	Balance	loan_taken
A001	Patel Jigar	Mehsana	50000	YES
A002	Patel Ramesh	Mehsana	50000	YES
A003	Dave Hardik	Ahmedabad	75000	NO
A004	Soni Hetal	Ahmedabad	100000	NO
A005	Sony Atul	Vadodara	100000	YES

#### **Query with Output:**

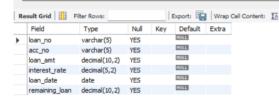


#### Create a table LOAN\_24012011161

Column Name	Data Type	Size
loan_no	varchar2	5
acc_no	varchar2	5
loan_amt	Number	10,2
interest_rate	Number	5,2
loan_date	Date	
remaining_loan	Number	10,2

## **Query with Output:**

```
38 • ○ CREATE TABLE LOAN_24012011161 (
39
         loan_no VARCHAR(5),
40
         acc_no VARCHAR(5),
41
         loan_amt DECIMAL(10,2),
42
         interest_rate DECIMAL(5,2),
43
         loan_date DATE,
         remaining_loan DECIMAL(10,2)
44
   );
45
46 • DESCRIBE LOAN_24012011161;
```



## Insert the following records in LOAN\_24012011161 table

Loan_no	Acc_no	Loan_amt	Interest_rate	Loan_date	Remaining_loan
L001	A001	100000	7	1-jan-04	75000
L002	A002	300000	9	18-may-04	150000
L003	A005	500000	11	15-june-04	300000

#### **Query with Output:**

#### Create a table INSTALLMENT 24012011161

Column Name	Data Type	Size
loan_no	varchar2	5
inst_no	varchar2	5
inst_Date	Date	
Amount	Number	10,2

#### **Query with Output:**



### Insert the following records in INSTALLMENT\_24012011161 table

Loan_no	Inst_no	Inst_Date	Amount
L001	I001	2-Feb-04	15000
L002	1002	18-June-04	20000
L003	I003	15-July-04	20000

#### **Query with Output:**

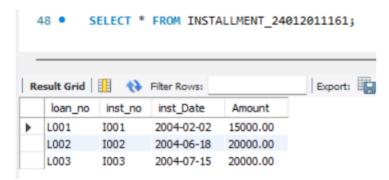
```
79 • INSERT INTO INSTALLMENT_24012011161 (loan_no,inst_no,inst_Date,Amount)
80 VALUES ("L001","I001",'2004-02-02',15000);
81 • INSERT INTO INSTALLMENT_24012011161 (loan_no,inst_no,inst_Date,Amount)
82 VALUES ("L002","I002",'2004-06-18',20000);
83 • INSERT INTO INSTALLMENT_24012011161 (loan_no,inst_no,inst_Date,Amount)
84 VALUES ("L003","I003",'2004-07-15',20000);
85 • SELECT * FROM INSTALLMENT_24012011161;

Result Grid Filter Rows:

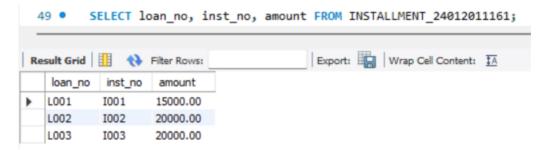
| Field | Type | Null | Key | Default | Extra |
| Ioan_no | varchar(5) | YES | IOSSI |
| Inst_Date | date | YES | IOSSI |
| Inst_Date | date | YES | IOSSI |
| Inst_Date | date | YES | IOSSI |
| Inst_Date | date | YES | IOSSI |
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| Inst_Date | date | YES | IOSSI |
| Inst_Date | date | YES | IOSSI |
| Inst_Date | date | Text_Date | date | Text_D
```

Answer following Queries based on above 3 tables.

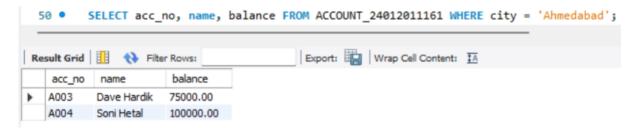
1. Display all rows and all columns of table Installment.



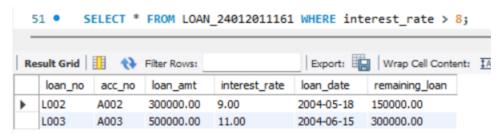
2. Display all rows and selected columns of table Installment.



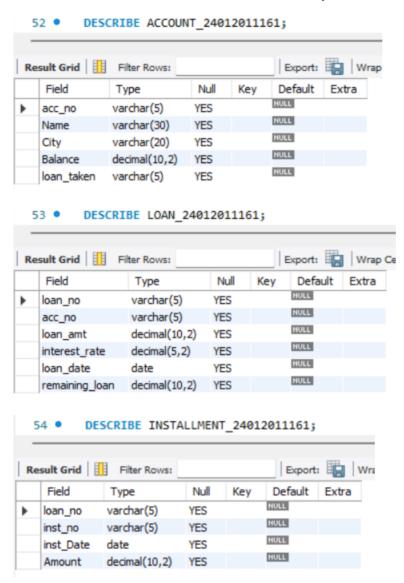
3. Display selected rows and selected columns of table Account.



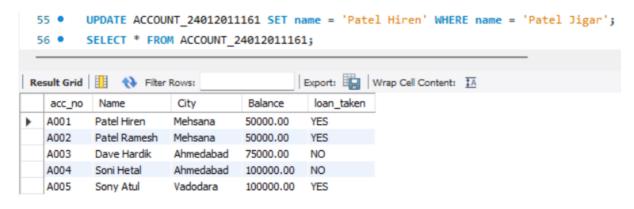
4. Display selected rows and all columns of table loan.



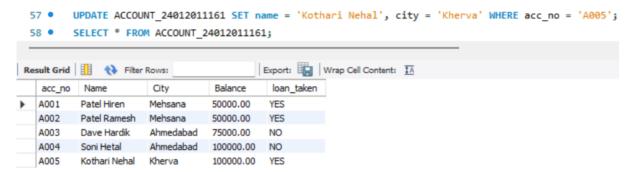
#### 5. Show the structure of the table loan, account and installment.



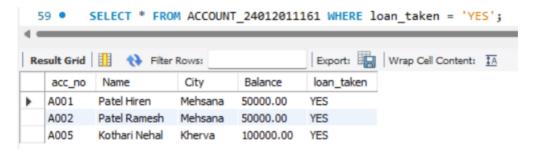
#### 6. Change the name 'Patel Jigar' to 'Patel Hiren' in Account Table.



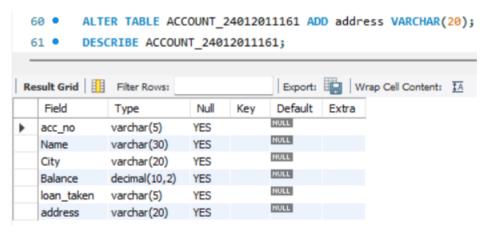
7. Change the name and city where account number is A005. (new name = 'Kothari Nehal' and new city = 'Kherva').



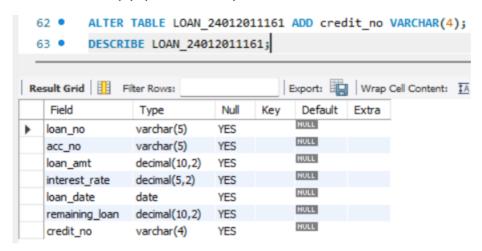
8. Display only those records where loan taken status is 'YES'.



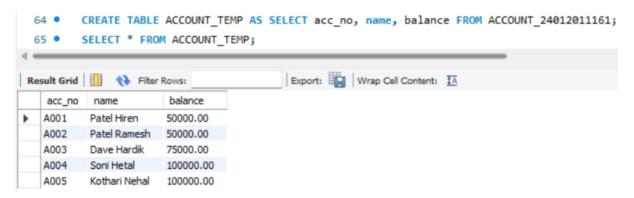
9. Add the new column (address varchar2 (20)) into table ACCOUNT.



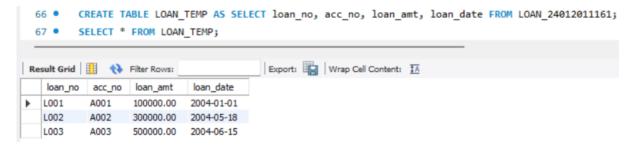
10.Modify the structure of table LOAN by adding one column credit\_no varchar2 (4) (Loan table).



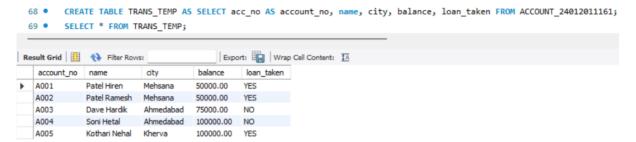
11.Create another table ACCOUNT\_TEMP having columns (acc\_no, name, balance) from table ACCOUNT.



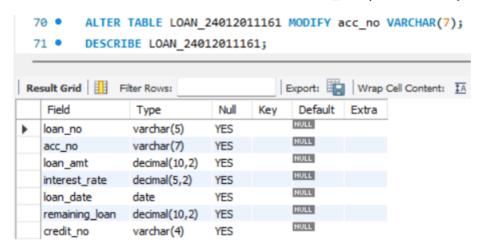
12.Create another table LOAN\_TEMP (loan\_no, Acc\_no, loan\_amt, loan\_date) from The table LOAN.



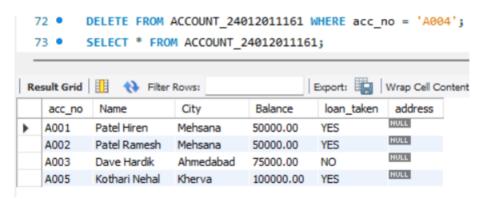
# 13.Create another table TRANS\_TEMP by change the column name acc\_no to account\_no from LOAN\_TEMP.



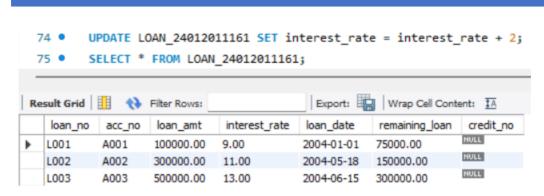
#### 14.Increase the size 5 to 7 of column acc\_no (Loan table).



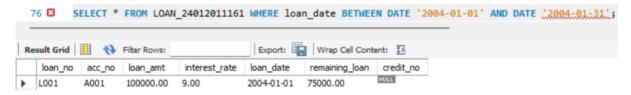
#### 15.Delete the records whose account no is A004.



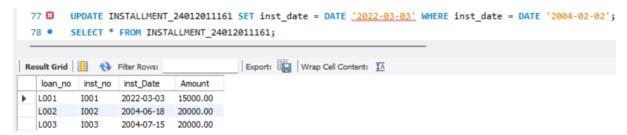
16. For each loan holders Increase the interest rate by 2% (Loan table).



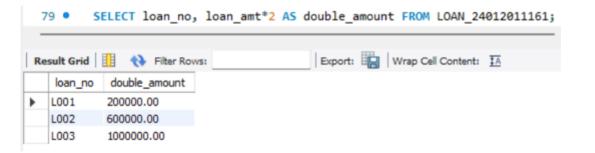
# 17.Display only those records where loan holder taken a loan in month of January (Loan table).



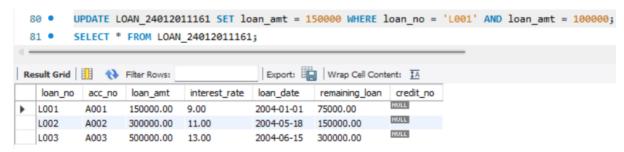
#### 18. Change the Inst\_Date '2-Feb-21' to '3-Mar-22'.



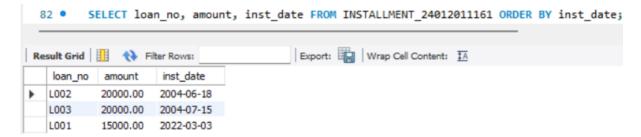
#### 19.Display the Loan amount\*2 of table LOAN.



# 20.Change the loan\_amt 100000 to 150000 where loan number is L001. (Loan table).



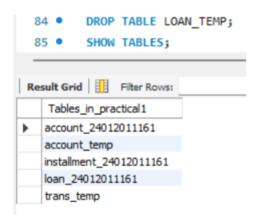
21.Display loan no, amount of Installment table by date wise.



22. Select all the records of account table in descending order (account number wise).



23.Delete a table LOAN\_TEMP.



#### **DIY Task:**

Create a Relational Database for a Car Manufacturing Company. Think
of at least 3 schemas of the same. Write Queries to perform CRUD
Operation.

Create three related tables:

1. Cars\_yourENno (store car ID, model name, year, and price)

```
29 CREATE TABLE Cars_24012011161 (

30 CarID INT,

31 ModelName VARCHAR(50),

32 Year INT,

33 Price DECIMAL(10,2)

34 );

Output

The Action Output

# Time Action

1 19:32:50 USE PRACTICAL1

Orow(s) affected

2 19:32:50 CREATE TABLE Cars_24012011161 ( CarlD INT, ModelName VARCHAR(50), Year INT, Price DECIM... Orow(s) affected
```

2. Manufacturers\_yourENno (store manufacturer ID, name, and country)

```
CREATE TABLE Manufacturers_24012011161 (

ManufacturerID INT,

Name VARCHAR(50),

Country VARCHAR(50)

);

Output

Time Action

1 19:34:00 USE PRACTICAL1

Orow(s) affected

2 19:34:00 CREATE TABLE Manufacturers_24012011161 ( ManufacturerID INT, Name VARCHAR(50), Country VA... Orow(s) affected
```

3. Production\_yourENno (store production ID, car ID, manufacturer ID, quantity, and production date)

```
40 • ○ CREATE TABLE Production_24012011161 (
             ProductionID INT,
41
42
             CarID INT,
             ManufacturerID INT,
43
44
             Quantity INT,
45
             ProductionDate DATE
46
       );
Output :
Action Output
   1 19:35:09 USE PRACTICAL1
                                                                       0 row(s) affected
   2 19:35:09 CREATE TABLE Production_24012011161 ( ProductionID INT, CarlD INT, ManufacturerID INT, Quant... 0 row(s) affected
```

Write Queries to perform CRUD Operation.

1. Insert a new car with model name 'EcoDrive', year 2023, and price 18,000 into the Cars table.

2. Insert a new manufacturer named 'GreenMotors' from 'USA' into the Manufacturers table.



3. Insert a production record for 200 units of car ID 2 made by manufacturer ID 2 on '2023-07-15'.



4. Select all cars that were manufactured after the year 2020.

5. Select the names and countries of all manufacturers.

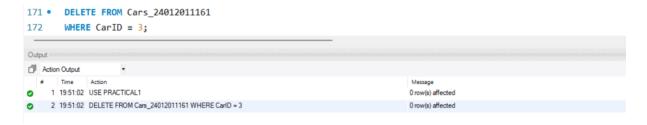


6. Update the price of the car with ID 2 to 19,500.

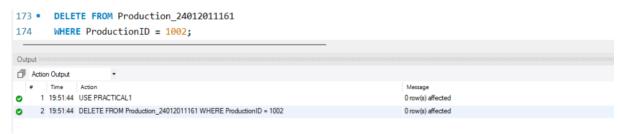
7. Update the name of the manufacturer with ID 2 to 'EcoMotors'.



8. Delete the car with ID 3 from the Cars table.



9. Delete the production record with ID 1002 from the Production table.



10. Select all production records and show the car ID, manufacturer ID, and

# quantity produced.

