Exercises

**Q1. Consider a database LOANS with the following tuples:**



* Create the table Loans and insert tuples in it.

**Query**

create table loans(accno integer,cust\_name varchar(20),loan\_amount number,instalments number,int\_rate float,start\_date date,interest number);



* Display the details of all the loans.

**Query**

Select \* from loans;

**Output**



* Display the AccNo, Cust\_Name, and Loan\_Amount of all the loans.

**Query**

select accno,cust\_name,loan\_amount from loans;

**Output**



Conditional Select using Where Clause

* Display the details of all the loans with less than 40 instalments.

**Query**

select \* from loans where instalments<40;

**Output**



* Display the AccNo and Loan\_Amount of all the loans started before 01-04-2009.

**Query**

select accno,loan\_amount from loans where start\_date<'01-April-2009';

**Output**



* Display the Int\_Rate of all the loans started after 01-04-2009.

**Query**

select int\_rate from loans where start\_date>'01-April-2009';

**Output**



Using NULL

* Display the details of all the loans whose rate of interest is NULL.

**Query**

select \* from loans where int\_rate is NULL;

**Output**



* Display the details of all the loans whose rate of interest is not NULL.

**Query**

select \* from loans where int\_rate is not NULL;

**Output**



Using DISTINCT Clause

* Display the amounts of various loans from the table LOANS. A loan amount should appear only once.

**Query**

select distinct loan\_amount from loans;

**Output**



* Display the number of installments of various loans from the table LOANS. An instalment should appear only once.

**Query**

select distinct instalments from loans;

**Output**



Using Logical Operators (NOT, AND, OR) and Between

* Display the details of all the loans started after 31-12-2008 for which the number of instalments are more than 36.

**Query**

select \* from loans where start\_date>'31-December-2008' and instalments>36;

**Output**



* Display the Cust\_Name and Loan\_Amount for all the loans which do not have number of instalments 36.

**Query**

select cust\_name,loan\_amount from loans where instalments!=36;

**Output**



* Display the Cust\_Name and Loan\_Amount for all the loans for which the loan amount is less than 500000 or int\_rate is more than 12.

**Query**

select cust\_name,loan\_amount from loans where loan\_amount<500000 or int\_rate>12;

**Output**



* Display the details of all the loans whose Loan\_Amount is in the range 400000 to 500000.

**Query**

select \* from loans where loan\_amount between 400000 and 500000;

**Output**



* Display the details of all the loans whose rate of interest is in the range 11% to 12%.

**Query**

select \* from loans where int\_rate between 11 and 12;

**Output**



Using IN Operator

* Display the Cust\_Name and Loan\_Amount for all the loans for which the number of installments are 24, 36, or 48. (Using IN operator)

**Query**

select cust\_name,loan\_amount from loans where instalments in(24,36,48);

**Output**



Using LIKE Operator

* Display the AccNo, Cust\_Name, and Loan\_Amount for all the loans for which the Cust\_Name ends with 'Sharma'.

**Query**

select accno,cust\_name,loan\_amount from loans where cust\_name like '%Sharma';

**Output**



* Display the AccNo, Cust\_Name, and Loan\_Amount for all the loans for which the Cust\_Name ends with 'a'.

**Query**

select accno,cust\_name,loan\_amount from loans where cust\_name like '%a';

**Output**



* Display the AccNo, Cust\_Name, and Loan\_Amount for all the loans for which the Cust\_Name contains 'a'.

**Query**

select accno,cust\_name,loan\_amount from loans where cust\_name like '%a%';

**Output**



* Display the AccNo, Cust\_Name, and Loan\_Amount for all the loans for which the Cust\_Name does not contain 'P'.

**Query**

select accno,cust\_name,loan\_amount from loans where cust\_name not like '%P%';

**Output**



* Display the AccNo, Cust\_Name, and Loan\_Amount for all the loans for which the Cust\_Name contains 'a' as the second last character.

**Query**

select accno,cust\_name,loan\_amount from loans where cust\_name like '%a\_';

**Output**



Using ORDER BY clause

Display the details of all the loans in the ascending order of their Loan\_Amount. **Query**

select \* from loan order by loan\_amount;

**Output**



* Display the details of all the loans in the descending order of their Start\_Date.

**Query**

select \* from loan order by start\_date desc;

**Output**



Using UPDATE, DELETE, ALTER TABLE

* Put the interest rate 11.50% for all the loans for which interest rate is NULL.

**Query**

update loan set int\_r\_rate=11.50 where int\_r\_rate is NULL;

select \* from loan;

**Output**



* Increase the interest rate by 0.5% for all the loans for which the loan amount is more than 400000.

**Query**

update loan set int\_r\_rate=int\_r\_rate+0.5 where loan\_amount>400000;

select \* from loan;

**Output**



* For each loan replace Interest with (Loan\_Amount\*Int\_Rate\*Instalments)/ 12\*100.

**Query**

update loan set interest=(loan\_amount\*int\_r\_rate\*instalment)/12\*100;

select \* from loan;

**Output**



* Delete the records of all the loans of 'K.P. Jain'.

**Query**

delete from loan where cust\_name='K.P.Jain';

select \* from loan;

**Output**



* Add another column Category of type CHAR(1) in the Loan table.

**Query**

ALTER TABLE loan ADD Category CHAR(1);

select \* from loan;

**Output**



Using Aggregate Functions

* Display the sum of all Loan Amount for whose Interest rate is greater than 10.

**Query**

select sum(loan\_amount) from loan where int\_r\_rate>10.00;

**Output**



* Display the Maximum Interest from Loans table.

**Query**

select max(interest) from loan;

**Output**



* Display the count of all loan holders whose name is ending with ‘Sharma’.

**Query**

select count(cust\_name) from loan where cust\_name like '%Sharma';

**Output**



* Display the count of all loan holders whose Interest is Null.

**Query**

select count(cust\_name) from loan where int\_r\_rate is NULL;

**Output**



Using Group By Clause

* Display the Interest wise details of Loan Account Holders.

**Query**

select interest from loan group by interest;

**Output**



* Display the Interest wise details of Loan Account Holders with at least 10 installments remaining.

**Query**

select interest,instalment from loan group by interest,instalment having instalment>10;

**Output**



* Display the Interest wise count of all loan holders whose Installment due is more than 5 in each group.

**Query**

select count(\*) from loan group by interest,instalment having instalment >5;

**Output**

