Exercises

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



**1.**Create the table Loans and insert tuples in it.

create table loans (Acc\_No integer, Cus\_Name varchar(20),Loan\_Amount numberselect \*from,Instalments number,int\_rate float,Start\_date date, Interest number);

2.Display the details of all the loans.

select \*from loans;

ACC\_NO CUS\_NAME LOAN\_AMT INSTALMENTS INT\_RATE START\_DAT INTEREST

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1 R.K Gupta 300000 36 12 19-SEP-09 1200

2 S.P Sharma 500000 48 10 22-MAR-00 1800

3 k.p jain 300000 36 NULL 08-MAR-07 1600

4 m.p yadav 800000 60 10 06-DEC-08 2250

5 s.p sinha 200000 36 13 03-JAN-10 4500

6 p.sharma 700000 60 13 05-JUN-08 3500

7 k.s dhall 500000 48 NULL 05-MAR-08 3800

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

select ACNO,CUST\_NAME, LOAN\_AMOUNT from loans;

**select acc\_no,cus\_name,loan\_amt from loans;**

ACC\_NO CUS\_NAME LOAN\_AMT

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1 R.K Gupta 300000

2 S.P Sharma 500000

3 k.p jain 300000

4 m.p yadav 800000

5 s.p sinha 200000

6 p.sharma 700000

7 k.s dhall 500000

7 rows selected.

Conditional Select using Where Clause

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

select \*from loans where instalments<40;

ACC\_NO CUS\_NAME LOAN\_AMT INSTALMENTS INT\_RATE START\_DAT INTEREST

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1 R.K Gupta 300000 36 12 19-SEP-09 1200

3 k.p jain 300000 36 08-MAR-07 1600

5 s.p sinha 200000 36 13 03-JAN-10 4500

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

select ACNO,LOAN\_AMOUNT from loans where start\_date<'01-APR-09';

**select acc\_no,loan\_amt from loans where start\_date<'1-apr-2009';**

ACC\_NO LOAN\_AMT

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2 500000

3 300000

4 800000

6 700000

7 500000

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

select int\_rate from loans where start\_date>'01-APR-09';

**select int\_rate from loans where start\_date>'1-apr-2009';**

INT\_RATE

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12

13

Using NULL

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

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

ACC\_NO CUS\_NAME LOAN\_AMT INSTALMENTS INT\_RATE START\_DAT INTEREST

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3 k.p jain 300000 36 08-MAR-07 1600

7 k.s dhall 500000 48 05-MAR-08 3800

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

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

ACC\_NO CUS\_NAME LOAN\_AMT INSTALMENTS INT\_RATE START\_DAT INTEREST

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1 R.K Gupta 300000 36 12 19-SEP-09 1200

2 S.P Sharma 500000 48 10 22-MAR-00 1800

4 m.p yadav 800000 60 10 06-DEC-08 2250

5 s.p sinha 200000 36 13 03-JAN-10 4500

6 p.sharma 700000 60 13 05-JUN-08 3500

Using DISTINCT Clause

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

select distinct loan\_amount from loans;

**select distinct loan\_amt from loans;**

LOAN\_AMT

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300000

200000

700000

800000

500000

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

select distinct instalments from loans;



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

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

select \*from loans where start\_date>'31dec08' and instalments>36;

**no rows selected**

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

**select cus\_name,loan\_amt from loans where not(instalments=36);**

**CUS\_NAME LOAN\_AMT**

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**S.P Sharma 500000**

**m.p yadav 800000**

**p.sharma 700000**

**k.s dhall 500000**

13.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.

**select cus\_name,loan\_amt from loans where (loan\_amt<500000 and int\_rate>12);**

CUS\_NAME LOAN\_AMT

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s.p sinha 200000

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

**select \*from loans where loan\_amount in(400000,500000);**

ACC\_NO CUS\_NAME LOAN\_AMT INSTALMENTS INT\_RATE START\_DAT INTEREST

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2 S.P Sharma 500000 48 10 22-MAR-00 1800

7 k.s dhall 500000 48 05-MAR-08 3800

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

**select \*from loans where INT\_RATE between 11 and 12;**

ACC\_NO CUS\_NAME LOAN\_AMT INSTALMENTS INT\_RATE START\_DAT INTEREST

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1 R.K Gupta 300000 36 12 19-SEP-09 1200

Using IN Operator

16.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)

**select cus\_name,loan\_amt from loans where instalments in (24,36,48);**

CUS\_NAME LOAN\_AMT

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R.K Gupta 300000

S.P Sharma 500000

k.p jain 300000

s.p sinha 200000

k.s dhall 500000

Using LIKE Operator

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

**select ACC\_NO,CUS\_NAME, LOAN\_AMT from loans where CUS\_NAME like '%Sharma';**

ACC\_NO CUS\_NAME LOAN\_AMT

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2 s.p sharma 500000

6 p.sharma 700000

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

**select ACC\_NO,CUS\_NAME, LOAN\_AMT from loans where CUS\_NAME like '%a';**



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

**select ACC\_NO,CUS\_NAME, LOAN\_AMT from loans where CUS\_NAME like '%a%';**

ACC\_NO CUS\_NAME LOAN\_AMT

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1 R.K Gupta 300000

2 S.P Sharma 500000

3 k.p jain 300000

4 m.p yadav 800000

5 s.p sinha 200000

6 p.sharma 700000

7 k.s dhall 500000

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

**select ACC\_NO,CUS\_NAME, LOAN\_AMT from loans where CUS\_NAME like '%P%';**

ACC\_NO CUS\_NAME LOAN\_AMT

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1 R.K Gupta 300000

3 k.p jain 300000

4 m.p yadav 800000

5 s.p sinha 200000

6 p.sharma 700000

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

**select ACC\_NO,CUS\_NAME, LOAN\_AMT from loans where CUS\_NAME like '%a\_';**

ACC\_NO CUS\_NAME LOAN\_AMT

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4 m.p yadav 800000

Using ORDER BY clause

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

**select \*from loans order by loan\_amt;**



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

**select \*from loans order by loan\_amt desc;**



Using UPDATE, DELETE, ALTER TABLE

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

**update loans set int\_rate=11.50 where int\_rate is NULL;**

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

**update loan set int\_rate=int\_rate+0.5 where loan\_amt>400000;**



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

**update loan set interest=(Loan\_Amt\*Int\_Rate\*Instalments) 12\*100;**



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

**delete from loans where cus\_name='jain';**



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

**Alter table loans ADD(category char(1));**



Using Aggregate Functions

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



30.Display the Maximum Interest from Loans table.



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



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



Using Group By Clause

33.Display the Interest wise details of Loan Account Holders.

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

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