Exercises

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



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

create table LOANS(ACCNo int,Cust\_Name varchar(20),Loan\_Amount number,installments integer,Int\_Rate decimal(10,2),Start\_Date date,interest integer);

insert into LOANS values('1','R K Gipta',300000,36,12.00,'19-july-09',1200);

insert into LOANS values(2,'S P Shanna',500000,48,10.00,'22-Mar-09',1800);

insert into LOANS values(3,'K P Jain',300000,36,NULL,'08-Mar-07',1600);

insert into LOANS values(4,'M P Yadavu',800000,60,10.00,'06-Dec-08',2250);

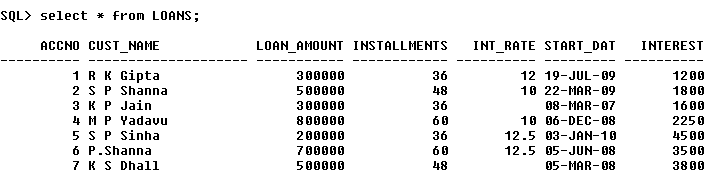
insert into LOANS values(5,'S P Sinha',200000,36,12.50,'03-Jan-10',4500);

insert into LOANS values(6,'P.Shanna',700000,60,12.50,'05-Jun-08',3500);

insert into LOANS values(7,'K S Dhall',500000,48,NULL,'05-Mar-08',3800);

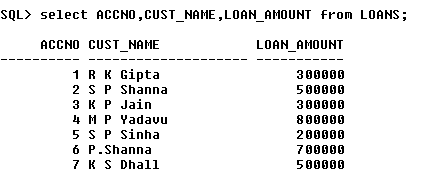
1. Display the details of all the loans.

select \* from LOANS;



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

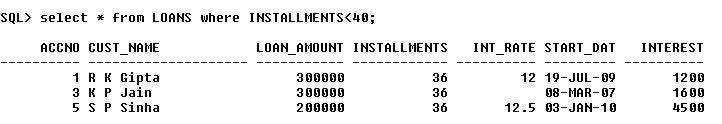
select ACCNO,CUST\_NAME,LOAN\_AMOUNT from LOANS;



Conditional Select using Where Clause

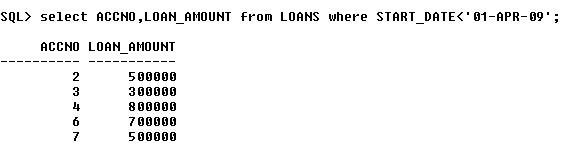
1. Display the details of all the loans with less than 40 instalments.

select \* from LOANS where INSTALLMENTS<40;



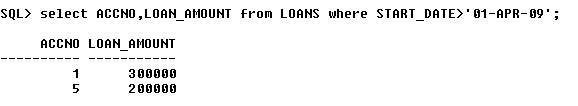
1. Display the AccNo and Loan\_Amount of all the loans started before 01-04-2009.

select ACCNO,LOAN\_AMOUNT from LOANS where START\_DATE<'01-APR-09';



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

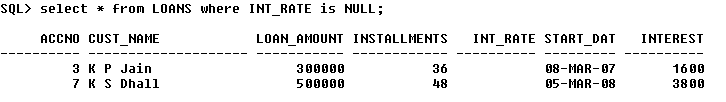
select ACCNO,LOAN\_AMOUNT from LOANS where START\_DATE>'01-APR-09';



Using NULL

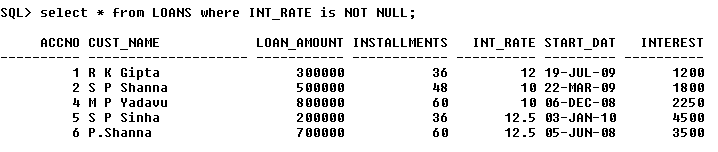
1. Display the details of all the loans whose rate of interest is NULL.

select \* from LOANS where INT\_RATE is NULL;



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

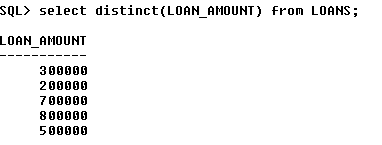
select \* from LOANS where INT\_RATE is NOT NULL;



Using DISTINCT Clause

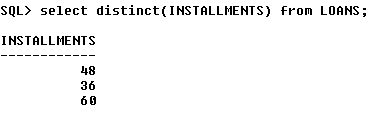
1. Display the amounts of various loans from the table LOANS. A loan amount should appear only once.

select distinct(LOAN\_AMOUNT) from LOANS;



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

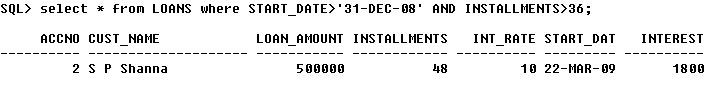
select distinct(INSTALLMENTS) from LOANS;



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

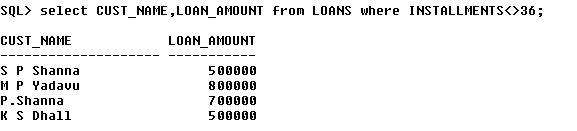
1. Display the details of all the loans started after 31-12-2008 for which the number of instalments are more than 36.

select \* from LOANS where START\_DATE>'31-DEC-08' AND INSTALLMENTS>36;



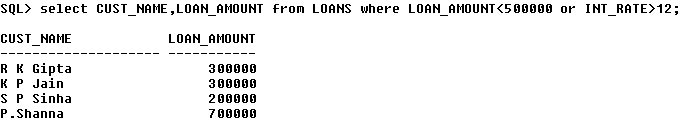
1. Display the Cust\_Name and Loan\_Amount for all the loans which do not have number of instalments 36.

select CUST\_NAME,LOAN\_AMOUNT from LOANS where INSTALLMENTS<>36;



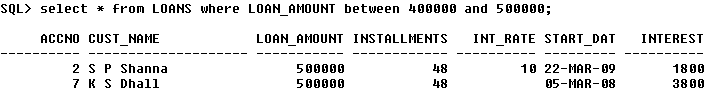
1. Display the Cust\_Name and Loan\_Amount for all the loans for which the loan amount is less than 500000 or int\_rate is more than 12.

select CUST\_NAME,LOAN\_AMOUNT from LOANS where LOAN\_AMOUNT<500000 or INT\_RATE>12;



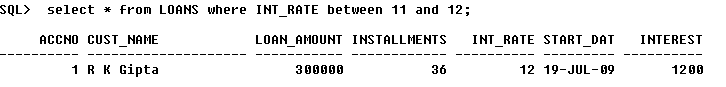
1. Display the details of all the loans whose Loan\_Amount is in the range 400000 to 500000.

select \* from LOANS where LOAN\_AMOUNT between 400000 and 500000;



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

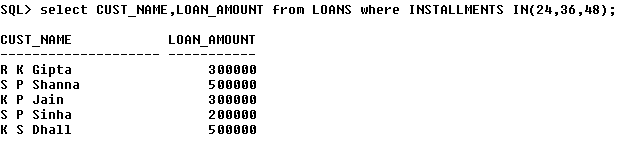
select \* from LOANS where INT\_RATE between 11 and 12;



Using IN Operator

1. 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 CUST\_NAME,LOAN\_AMOUNT from LOANS where INSTALLMENTS IN(24,36,48);



Using LIKE Operator

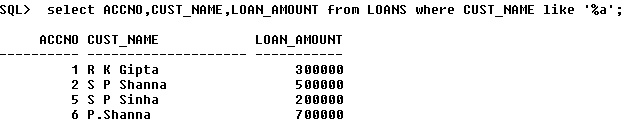
1. Display the AccNo, Cust\_Name, and Loan\_Amount for all the loans for which the Cust\_Name ends with 'Sharma'.

select ACCNO,CUST\_NAME,LOAN\_AMOUNT from LOANS where CUST\_NAME like '%Sharma';



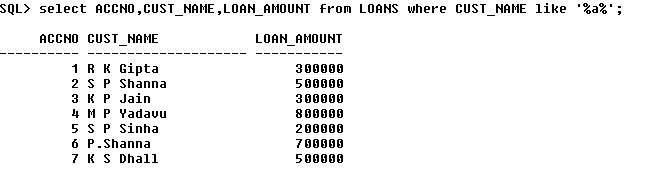
1. Display the AccNo, Cust\_Name, and Loan\_Amount for all the loans for which the Cust\_Name ends with 'a'.

select ACCNO,CUST\_NAME,LOAN\_AMOUNT from LOANS where CUST\_NAME like '%a';



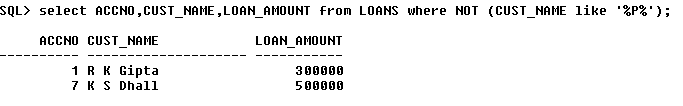
1. Display the AccNo, Cust\_Name, and Loan\_Amount for all the loans for which the Cust\_Name contains 'a'.

select ACCNO,CUST\_NAME,LOAN\_AMOUNT from LOANS where CUST\_NAME like '%a%';



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

select ACCNO,CUST\_NAME,LOAN\_AMOUNT from LOANS where NOT (CUST\_NAME like '%P%');



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

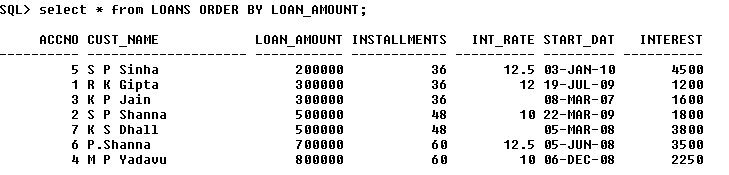
select ACCNO,CUST\_NAME,LOAN\_AMOUNT from LOANS where CUST\_NAME like '%a\_';



Using ORDER BY clause

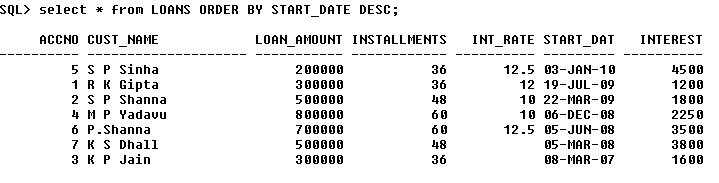
1. Display the details of all the loans in the ascending order of their Loan\_Amount.

select \* from LOANS ORDER BY LOAN\_AMOUNT;



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

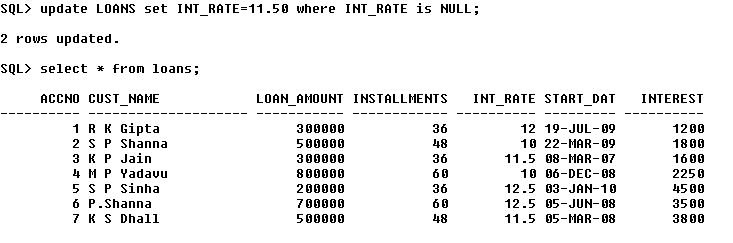
select \* from LOANS ORDER BY START\_DATE DESC;



Using UPDATE, DELETE, ALTER TABLE

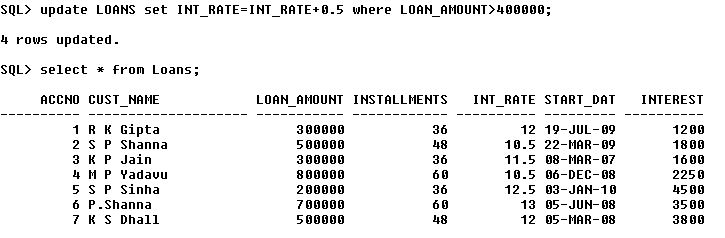
1. Put the interest rate 11.50% for all the loans for which interest rate is NULL.

update LOANS set INT\_RATE=11.50 where INT\_RATE is NULL;



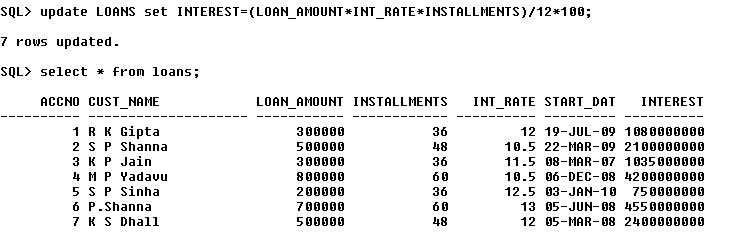
1. Increase the interest rate by 0.5% for all the loans for which the loan amount is more than 400000.

update LOANS set INT\_RATE=INT\_RATE+0.5 where LOAN\_AMOUNT>400000;



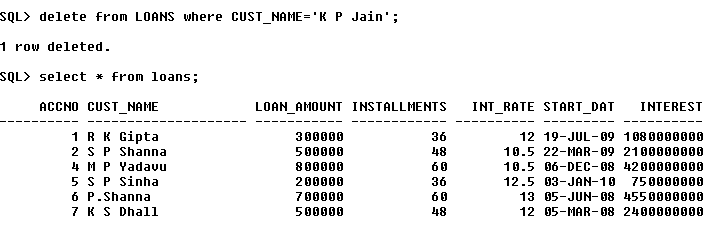
1. For each loan replace Interest with (Loan\_Amount\*Int\_Rate\*Instalments) 12\*100.

update LOANS set INTEREST=(LOAN\_AMOUNT\*INT\_RATE\*INSTALLMENTS)/12\*100;



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

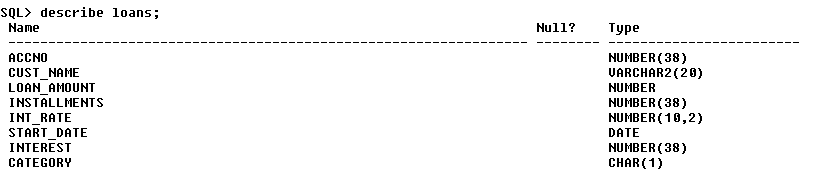
delete from LOANS where CUST\_NAME='K P Jain';



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

alter table LOANS add category char(1);

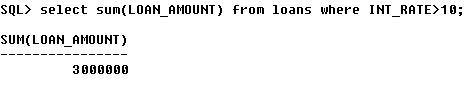




Using Aggregate Functions

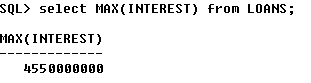
1. Display the sum of all Loan Amount for whose Interest rate is greater than 10.

select sum(LOAN\_AMOUNT) from loans where INT\_RATE>10;



1. Display the Maximum Interest from Loans table.

select MAX(INTEREST) from LOANS;



1. Display the count of all loan holders whose name is ending with ‘Sharma’.
2. Display the count of all loan holders whose Interest is Null.

Using Group By Clause

1. Display the Interest wise details of Loan Account Holders.
2. Display the Interest wise details of Loan Account Holders with at least 10 installments remaining.
3. Display the Interest wise count of all loan holders whose Installment due is more than 5 in each group.