**Chapter 8: MySQL Revision Tour**

**Lab Exercise(Solutions)**

**Consider a database LOANS with the following table:**

Write SQL commands for the tasks 1 to 35 and write the output for the SQL commands 36 to 40:

**Create Database and use it**

1. Create the database LOANS.

Ans: create database LOANS;

2. Use the database LOANS.

Ans: use LOANS;

**Create Table / Insert Into**

3. Create the table Loan\_Accounts and insert tuples in it.

Create table Loan\_Account(AccNo int, Cust\_Name varchar(30), Loan\_Amount int, Instalments int, Int\_Rate float, Start\_Date Date, Interest);

**Simple Select**

4. Display the details of all the loans.

Ans: select \* from Loan\_Accounts;

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

Ans: select AccNo, Cust\_Name, Loan\_Amount from Loan\_Accounts;
Conditional Select using Where Clause

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

Ans: select \* from Loan\_Accounts where Instalments < 40;

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

Ans: select AccNo, Loan\_Amount from Loan\_Accounts where Start\_Date < ‘2009-04-01’;

(MySQL uses date format as YYYY-MM-DD)

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

Ans: select Int\_Rate from Loan\_Account where Start\_Date > ‘2009-04-01’;

**Using NULL**

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

Ans: select \* from Loan\_Accounts where Int\_Rate = NULL;

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

Ans: Select \* from Loan\_Accounts where Int\_Rate <> NULL;

**Using DISTINCT Clause**

11. Display the amounts of various loans from the table Loan\_Accounts. A loan amount should appear only once.

Ans: Select Disting Loan\_Amount from Loan\_Accounts;

12. Display the number of instalments of various loans from the table Loan\_Accounts. An instalment should appear only once.

Ans: Select Distinct Instalments from Loan\_Accounts;

**Using Logical Operators (NOT, AND, OR)**

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

Ans: Select \* from Loan\_Accounts where Start\_Date > ‘2008-12-31’ and Instalments > 36;

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

Ans: Select Cust\_Name, Loan\_Amount from Loan\_Accounts where Instalments <> 36;

15. 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.

Ans: Select Cust\_Name, Loan\_Amount from Loan\_Accounts where Loan\_Amount < 500000 or Int\_Rate > 12;

16. Display the details of all the loans which started in the year 2009.

Ans: Select \* from Loan\_Accounts where Start\_Date =’2009-01-01’;

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

Ans: Select \* from Loan\_Accounts where Loan\_Amount >= 400000 and Loan\_Amount <= 500000;

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

Ans: Select \* from Loan\_Accounts where Int\_Rate >= 11 and Int\_Rate <= 12;

**Using IN Operator**

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

Ans: Select Cust\_Name, Loan\_Amount from Loan\_Accounts where Instalments in (24, 36, 48);

**Using BETWEEN Operator**

20. Display the details of all the loans whose Loan\_Amount is in the range 400000 to 500000. (Using BETWEEN operator)

Ans: Select \* from Loan\_Accounts where Loan\_Amount Between 400000 and 500000;

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

(Using BETWEEN operator)

Ans: Select \* from Loan\_Accounts where Int\_Rate Between 11 and 12;

**Using LIKE Operator**

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

Ans: Select AccNo, Cust\_Name, Loan\_Amount from Loan\_Accounts where Cust\_Name Like ‘%Sharma’;

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

Ans: Select AccNo, Cust\_Name, Loan\_Amount from Loan\_Accounts where Cust\_Name LIKE ‘%a’;

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

Ans: Select AccNo, Cust\_Name, Loan\_Amount from Loan\_Accounts where Cust\_Name LIKE ‘%a%’;

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

Ans: Select AccNo, Cust\_Name, Loan\_Amount from Loan\_Accounts where Cust\_Name NOT LIKE ‘%P%’;

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

Ans: Select AccNo, Cust\_Name, Loan\_Amount from Loan\_Accounts where Cust\_Name LIKE ‘%a\_’;

**(Using ORDER BY clause)**

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

Ans: Select \* from Loan\_Accounts order by Loan\_Amount;

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

Ans: Select \* from Loan\_Accounts order by Start\_Date Desc;

29. Display the details of all the loans in the ascending order of their Loan\_Amount and within Loan\_Amount in the descending order of their Start\_Date.

Ans: Select \* from Loan\_Accounts order by Loan\_Amount;

**Using UPDATE, DELETE, ALTER TABLE**

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

Ans: Update Loan\_Accounts set Int\_Rate=11.50 where Int\_Rate=NULL;

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

Ans: Update Loan\_Accounts set IntRate=Int\_Rate + 0.5 where Loan\_Amount > 400000;

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

Ans: Update Loan\_Accounts set Interest=(Loan\_Amount\*Int\_Rate\*Installments)/(12\*100);

33. Delete the records of all the loans whose start date is before 2007.

Ans: Delete from Loan\_Accounts where Start\_Date < ‘2007-01-01’;

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

Ans: Delete from Loan\_Accounts where Cust\_Name LIKE ‘K.P.Jain’;

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

Ans: Alter table Loan\_Accounts add column Category Char(1);

Find the Output of the following queries

36. SELECT cust\_name, LENGTH(Cust\_Name), LCASE(Cust\_Name), UCASE(Cust\_Name) FROM Loan\_Accounts WHERE Int\_Rate < 11.00;

Ans:

|  |  |  |  |
| --- | --- | --- | --- |
| Cust\_Name | Length(Cust\_Name) | LCASE(Cust\_Name) | UCASE(Cust\_Name) |
| S.P. Sharma | 11 | s.p. sharma | S.P. SHARMA |
| M.P. Yadav | 10 | m.p. Yadav | M.P. YADAV |

37. SELECT LEFT(Cust\_Name, 3), Right(Cust\_Name, 3), SUBSTR(Cust\_Name, 1, 3) FROM Loan\_Accounts WHERE Int\_Rate > 10.00;

Ans:

|  |  |  |
| --- | --- | --- |
| LEFT(Cust\_Name, 3)  | Right(Cust\_Name, 3) | SUBSTR(Cust\_Name, 1, 3) |
| R.K | pta | .K. |
| S.P | nha | .P. |
| K.S | all | .S. |

38. SELECT RIGHT(Cust\_Name, 3), SUBSTR(Cust\_Name, 5) FROM Loan\_Accounts;

Ans:

pta Gupta

rma Sharma

ain Jain

dav Yadav

nha Sinha

rma harma

all Dhall

39. SELECT DAYNAME(Start\_Date) FROM Loan\_Accounts;

Ans:

Sunday

Saturday

Thursday

Saturday

Sunday

Thursday

Wednesday

40. SELECT ROUND(Int\_Rate\*110/100, 2) FROM Loan\_Account WHERE Int\_Rate > 10;

Ans: 13.20

13.75

13.75

**Write the output produced by the following SQL commands:**

41. SELECT POW(4,3), POW(3,4);

Ans: 64, 81

42. SELECT ROUND(543.5694,2), ROUND(543.5694), ROUND(543.5694,-1);

Ans: 543.57, 544, 540

43. SELECT TRUNCATE(543.5694,2), TRUNCATE(543.5694,-1);

Ans: 543.56, 540

44. SELECT LENGTH("Prof. M. L. Sharma");

Ans: 18

45. SELECT CONCAT("SHEIKH", " HAROON") "FULL NAME";

Ans: SHEIKH HAROON

46. SELECT YEAR(CURDATE()), MONTH(CURDATE()), DAY(CURDATE());

Ans: 2019, 08, 26

47. SELECT DAYOFYEAR(CURDATE()), DAYOFMONTH(CURDATE()), DAYNAME(CURDATE());

Ans: 2019, 2, Monday

48. SELECT LEFT("Unicode",3), RIGHT("Unicode",4);

Ans: Uni, code

49. SELECT INSTR("UNICODE","CO"), INSTR("UNICODE","CD");

Ans: 4, 0

50. SELECT MID("Informatics",3,4), SUBSTR("Practices",3);

Ans: form, actices