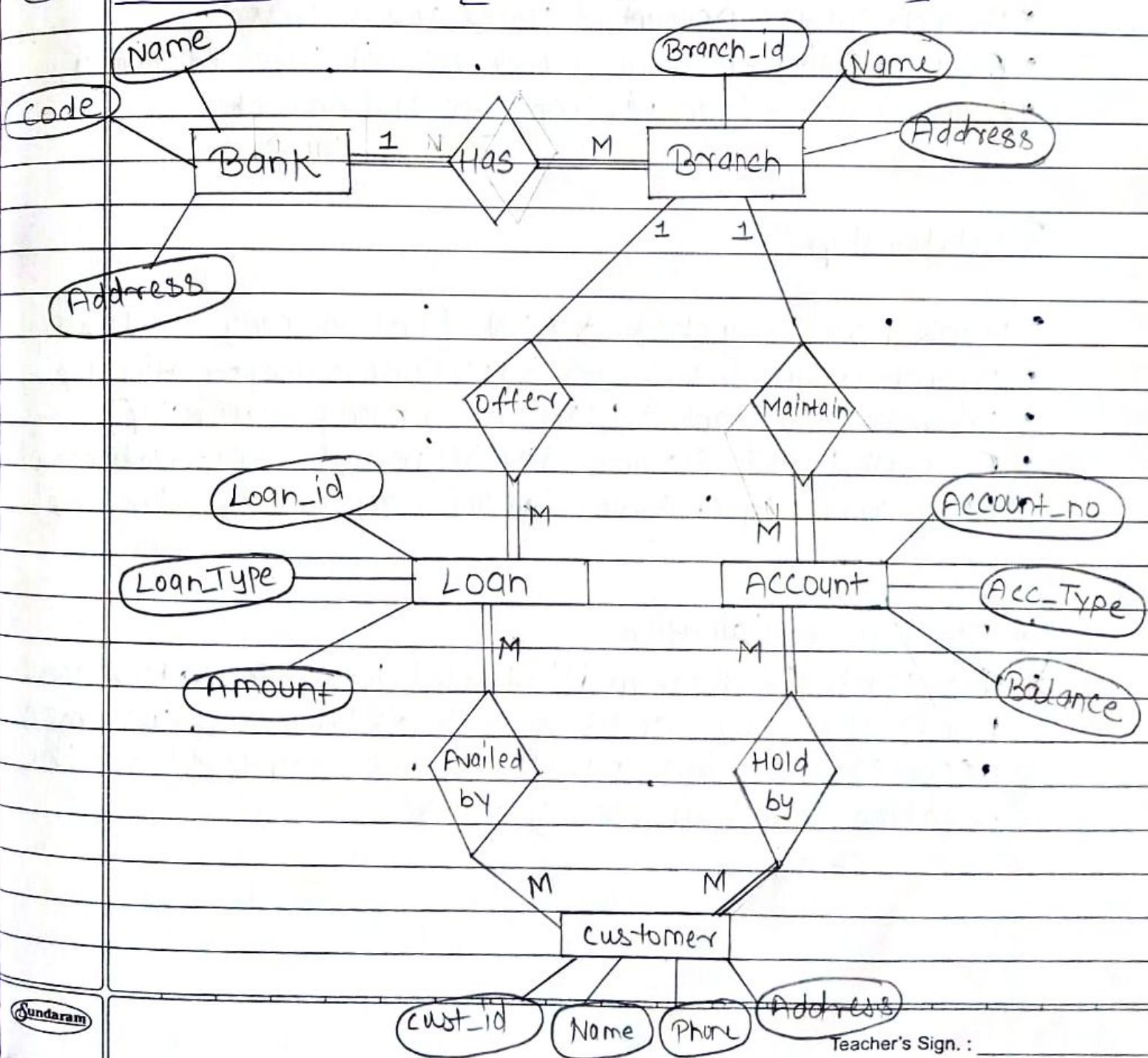


Title: Conceptual Designing using ER Diagrams (Identifying entities, attributes, keys and relationship between entities, Cardinalities, generalization, Specialization etc.)

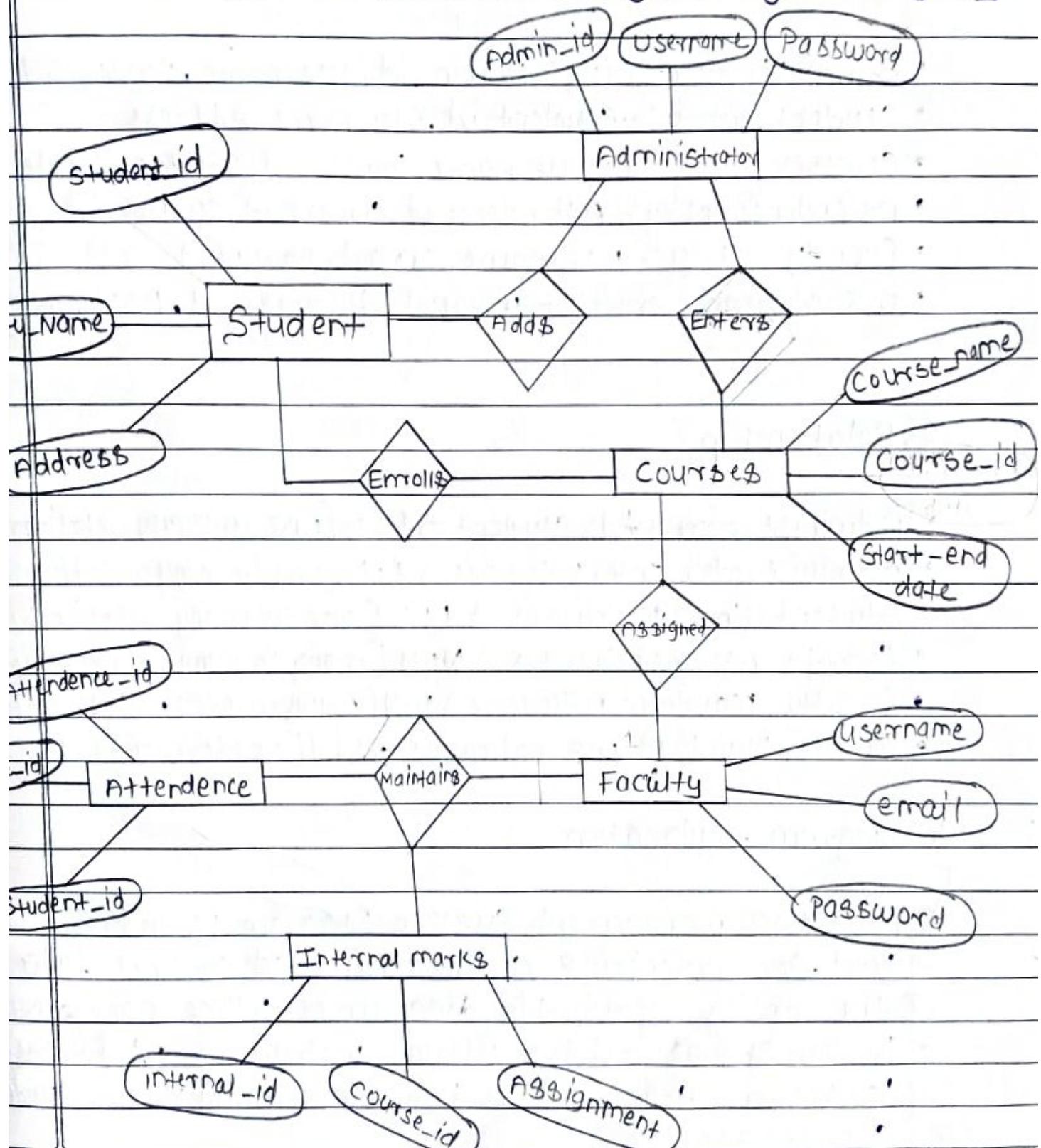
① \* Diagram

[ER diagram of a Bank]



diagram

[ER diagram for College Management System]



Title: Perform the following.

- viewing all databases
- Creating a Database
- viewing all Tables in a Database
- creating Tables (with and without constraints)
- Inserting/updating/Deleting Records in a Table

- ①  viewing all databases

→ Command

mysql> Show databases;

Database
information schema
employee
fy
fycs
mySql
name
Sampdb
test

8 row in set (0.05 sec)

## ⑤ Inserting/updating/Deleting Records in a table

### ① ★ Inserting

→ Command

```
mysql> insert into student values(1,"Anurag","vasai",35
      →(2,"Shubham","virar",3534343992),
      →(3,"Sanket","mira road",3534343993),
      →(4,"Shani","bhayander",3534343994),
      →(5,"ravi","malad",3534343995);
```

O/P Query OK, 5 rows affected (0.01 sec)  
 Records: 5 Duplicates: 0 Warnings: 0

→ # viewing tables/records of Student

→ Command

```
mysql> Select * from Student;
```

roll_no	stu-name	stu-address	Contact_no
1	Anurag	Vasai	3534343991
2	Shubham	Virar	3534343992
3	Sanket	mira road	3534343993
4	Shani	bhayander	3534343994
5	Ravi	malad	3534343995

Title: Perform the following

- Altering a Table
- Dropping/ Truncating/ Renaming Tables
- Backing up/ Restoring a Database

### ① Altering a Table

→ Command

```
mysql> alter table Student add(Stu_marks int(5));
```

O/P Query OK, 4 rows affected (0.03 sec)

Records: 4 , Duplicates: 0 Warning: 0

# display table

```
mysql> Select * from Student;
```

O/P	roll_no	Stu_name	Stu_address	Contact_no	Stu_marks
	1	Anumag	vasai	3534343991	NULL
	3	Sanket	mira road	3534343993	NULL
	4	Sachin	bhayander	3534343994	NULL
	5	ravi	mouad	3534343995	NULL
4 rows in set (0.01 sec)					

# inserting marks in Stu\_marks table

```
mysql> update Student Set Stu_marks = 45 where roll_no = 1;
```

→ Show tables;

O/P Tables\_in\_fucs\_b1  
Practical  
1 row in set (0.00 sec)

## ② \* Truncating Tables

→ Command

mysql> truncate table practical;

O/P Query OK, 0 rows affected (0.01 sec)

# display table practical

mysql> Select \* from practical;

O/P Empty set (0.00 sec)

# table value was deleted but not a table.

## ③ \* Dropping Tables

→ Command

mysql> drop table practical;

O/P Query OK, 0 rows affected (0.01 sec)

Title: Perform the following.

- Simple Queries
- Simple Queries with Aggregate functions

①  Simple Queries

# Creating table student & inserting 10 values

→ Command

```
mysql> Create table Student(roll_no int primary key,
→ name varchar(20) not null,
→ city varchar(20) not null,
→ D_O_B date,
→ contact_no Bigint);
```

O/P Query OK, 0 rows affected (0.01 sec)

# display table

```
mysql> desc Student;
```

O/P	Field	Type	Null	Key	Default	Extra
	roll_no	int(11)	No	PRT	NULL	
	name	varchar(20)	No		NULL	
	city	varchar(20)	No		NULL	
	D_O_B	date	YES		NULL	
	Contact_no	bigint(20)	YES		NULL	

5 rows in set (0.00 sec)

\* Query → ⑥

mysql> select \* from student where City in ("mumbai", "nagpur").

O/P	rollno	name	city	D-O-B	contact_no
—	1	Anurag	mumbai	2004-02-25	1234567890
	2	Abhimanyu	nagpur	2004-02-25	1234567891
	4	Shani	mumbai	2007-03-25	1234567893
	6	Shubhıt	mumbai	2007-04-25	1234567895
	7	Ankit	nagpur	2007-05-24	1234567896
	8	Anil	mumbai	2007-06-24	1234567897

6 rows in set(0.00 sec)

\* Query → ⑦

mysql> Select \* from student where roll no between 1 and 5;

O/P	rollno	name	city	D-O-B	contact_no
—	1	Anurag	mumbai	2004-02-25	1234567890
	2	Abhimanyu	nagpur	2004-02-25	1234567891
	3	Shashank	nashik	2006-03-25	1234567892
	4	Shani	mumbai	2007-03-25	1234567893
	5	Sanket	banglore	2007-04-25	1234567893

5 rows in set(0.00 sec)

## ② Simple Queries with Aggregate functions

# Create table employee & inserting 10 values

→ Command

```
mysql> Create table employee(emp_id int Primary key,
→ emp_name varchar(20) not null,
→ dept_name varchar(20) not null,
→ emp_salary int);
```

O/P Query ok, 0 rows affected (0.01 sec)

# describe table

```
mysql> desc employee;
```

O/P	Field	Type	Null	Key	Default	Extra
	emp_id	int(11)	NO	PRT	NULL	
	emp_name	varchar(20)	NO		NULL	
	dept_name	varchar(20)	NO		NULL	
	emp_salary	int(11)	YES		NULL	

4 rows in set (0.02 sec)

# inserting values in employee table

```
mysql> insert into employee values(101,"Sadhvi","HR",100000),
→(102,"Shruti","Manager",90000),
→(103,"Shikha","Accountant",80000),
→(104,"Shivanshi","Sales",70000),
→(105,"Sonali","IT",60000),
```

# function

① Sum

mysql> Select sum(emp\_salary) from employee;

O/P      sum(emp\_salary)  
          550000  
1 row in set(0.00 sec)

② Count

mysql> Select count(emp\_id) from employee;

O/P      count(emp\_id)  
          10  
1 row in set(0.00 sec)

③ Avg

mysql> Select avg(emp\_salary) from employee;

O/P      avg(emp\_salary)  
          55000.0000  
1 row in set(0.00 sec)

(4) min

mysql> Select min(emp\_salary) from employee;

O/P      min(emp\_salary)  
          10000  
1 row in set(0.00 sec)

(5) max

mysql> Select max(emp\_salary) from employee;

O/P      max(emp\_salary)  
          100000  
1 row in set(0.00 sec)

(6) group by

mysql> Select dept\_name , count(emp\_id) from employee group by dept\_name;

O/P      dept\_name | count(emp\_id) |  
Accountant | 1 |  
Analyst | 1 |  
HR | 3 |  
IT | 1 |  
Manager | 2 |  
Marketing | 1 |  
Sales | 1 |

\* Query → ③

mysql> Select adddate('2023-12-28', interval 3 month) as updated\_date;

O/P      updated\_date  
2024-03-28  
1 row in set(0.00 sec)

\* Query → ④

mysql> Select adddate('2023-12-28', interval 2 year) as updated\_date;

O/P      updated\_date  
2025-12-28  
1 row in set(0.00 sec)

\* Query → ⑤

mysql> Select adddate('2023-12-28 21:59:59', interval '5-10-15-20' day\_second) as updated\_datetime;

O/P      updated\_datetime  
2024-01-03 08:15:19  
1 row in set(0.00 sec)

O/P year("2023-02-04")  
— 2023  
1 row in set (0.01 sec)

#### ⑥ Hour() function

mysql> Select hour("2023-06-25 10:34:20");

O/P hour("2023-06-25 10:34:20")  
— 10  
1 row in set (0.00 sec)

#### ⑦ Minute() function

mysql> Select minute("2023-06-25 10:34:20");

O/P minute("2023-06-25 10:34:20")  
— 34  
1 row in set (0.00 sec)

#### ⑧ Second() function

mysql> Select second("2023-06-25 10:34:20");

O/P second("2023-06-25 10:34:20")  
— 20  
1 row in set (0.00 sec)

O/P trim(:'reiling 'base' from 'database')

— data —

1 row in set (0.00 sec)

### (13) ltrim() function

mysql> Select ltrim(" database");

O/P ltrim(" database")

— database —

1 row in set 0.00 sec

### (14) rtrim() function

mysql> Select rtrim(" database ");

O/P rtrim(" database ")

— database —

1 row in set 0.00 sec

(4) left( ) function

mysql> Select left('college', 2);

O/P left('college', 2)

C0

1 row in set (0.01 sec)

(5) right( ) function

mysql> Select right('college', 3);

O/P right('college', 3)  
ege

1 row in set (0.00 sec)

(6) mid( ) function

mysql> Select mid('college', 2, 3);

O/P mid('college', 2, 3)

011

1 row in set (0.00 sec)

## (4) mod() function

mysql&gt; Select mod(24,5);

O/P	mod(24,5)
-	4

1. row in set (0.00sec)

## (5) Power() function

mysql&gt; Select Power(5,3);

O/P	Power(5,3)
-	125

1. row in set (0.00sec)

## (6) Sqrt() function

mysql&gt; Select Sqrt(81);

O/P	Sqrt(81)
-	9

1. row in set (0.00sec)

## (7) round() function

mysql> Select round(147.21);

O/P round(147.21)

147

1 row in set (0.00 sec)

## (8) truncate() function

mysql> Select truncate(41.1254,3);

O/P truncate(41.1254,3)

41.125

1 row in set (0.00 sec)

③  Math functions

① Abs() function

mysql> Select abs(-3);

O/P    abs(-3)  
-----  
      3

1 row in set (0.00 sec)

② Ceil() function

mysql> Select ceil(33.9);

O/P    ceil(33.9)  
-----  
      34

1 row in set (0.00 sec)

③ floor() function

mysql> Select floor(11.20);

O/P    floor(11.20)  
-----  
      11

1 row in set (0.00 sec)

## (10) Replace() function

mysql> Select replace('cancel','ncel','mel');

O/P replace('cancel','ncel','mel');

Camel

1 row in set (0.00 sec)

## (11) Strrepmp() function

mysql> Select strrepmp('hello','fycs');

O/P strrepmp('hello','fycs')

1

1 row in set (0.00 sec)

## (12) Trim() function

mysql> Select trim(.leading 'data' from 'database');

O/P trim(.leading 'data' from 'database')  
base

1 row in set (0.00 sec)

mysql> Select trim(.trailing 'base' from 'database');

### ⑦ length() function

mysql> Select length('college');

O/P | length('college') |  
---+-----+  
| 7 |  
1 row in set(0.00 sec)

### ⑧ lcase() / lower() function

mysql> Select lcase('COLLEGE');

O/P | lcase('COLLEGE') |  
---+-----+  
| College |  
1 row in set(0.00 sec)

### ⑨ ucasel() / upper() function

mysql> Select ucasel('college');

O/P | ucasel('college') |  
---+-----+  
| COLLEGE |  
1 row in set(0.00 sec)

## ② String functions

### ① Concat() function

mysql> Select Concat('hello', 'fy', 'cs');

O/P      Concat('hello', 'fy', 'cs')  
          +  
        hellofycs  
        +  
1 row in set(0.00 sec)

### ② insert() function

mysql> Select insert('weme', 3, 3, 'lco');

O/P      insert('weme', 3, 3, 'lco')  
          +  
        welco  
        +  
1 row in set(0.00 sec)

### ③ instr() function

mysql> Select instr('database', 'ta');

O/P      instr('database', 'ta')  
          +  
          3  
          +  
1 row in set(0.00 sec)

## (9) Now() function

```
mysql> Select now();
```

O/P now()

2024-02-04 18:44:52

1 row in set (0.00 sec)

```
mysql> Select now() + 1;
```

O/P now() + 1

2024-02-04 18:44:52.000000

1 row in set (0.00 sec)

## (10) Reverse() function

```
mysql> Select reverse("College");
```

O/P reverse("College")

egelloc

1 row in set (0.00 sec)

## ② Datediff() function

mysql> Select datediff('2024-12-21', '2023-12-01') as difference;

O/P      difference  
          +  
          386  
          +  
1 row in set(0.01 sec)

## ③ Day() function

mysql> Select day('2001-06-15 9:34:21');

O/P      day('2001-06-15 9:34:21')  
          +  
          15  
          +  
1 row in set(0.01 sec)

## ④ Month() function

mysql> Select month("2024-01-01");

O/P      month("2024-01-01")  
          +  
          1  
          +  
1 row in set(0.00 sec)

## ⑤ Year() function

mysql> Select year("2023-02-04");

Title : Queries involving

- Date functions
- String functions
- Math functions

- ①  Date functions
- ① adddate() function
- \* Query → ①

mysql> Select adddate('2023-12-28', interval 20 day) as updat

O/P

updated_date
2024-01-17

1 row in set (0.00 sec)

\* Query → ②

mysql> Select adddate('2023-12-28 21:59:59', interval 20 minute)  
as updated\_datetime;

O/P

updated_datetime
2023-12-28 22:19:59

1 row in set (0.00 sec)

mysql> Select dept\_name, count(emp\_id) from employee group by dept\_name having count(emp\_id)>1;

O/P	dept_name	Count(emp_id)
	HR	3
	manager	2

2rows in set(0.00sec)

→ (106, "Sheetal", "HR", 50000),  
 → (107, "Shweta", "manager", 40000),  
 → (108, "Supriya", "marketing", 30000),  
 → (109, "Shreya", "HR", 20000),  
 → (110, "Shivani", "Analyst", 10000);

O/P Query OK, 10 rows affected (0.01 sec)

Records: 10 Duplicates: 0 Warnings: 0

# display employee table

mysql> Select \* from employee;

Q/P	emp_id	emp_name	dept_name	emp_Salary
	101	Sadhvi	HR	100000
	102	Shruti	Manager	90000
	103	Shikha	Accountant	80000
	104	Shivanshi	Sales	70000
	105	Sonali	IT	60000
	106	Sheetal	HR	50000
	107	Shweta	Manager	40000
	108	Supriya	marketing	30000
	109	Shreya	HR	20000
	110	Shivani	Analyst	10000

10rows in set(0.00sec)

\* Query → 16

mysql> Select roll\_no name from Student order by name desc;

O/P	roll_no	name
	6	Shobhit
	3	Shashank
	4	Shani
	5	Sanket
	1	Anurag
	7	Ankit
	8	Anil
	9	Aman
	2	Abhimanyu
	10	Abhay

10 rows in set(0.00 sec)

## ★ Query → ⑧

mysql> Select roll\_no, name from student limit 3,4;

O/P	roll_no	name
4	Shani	
5	Sanket	
6	Shobhit	
7	Ankit	

4 rows in set (0.00 sec)

## ★ Query → ⑨

mysql> Select roll\_no, name from Student order by name;

O/P	rollno	name
10	abhay	
2	abhimanyu	
9	Aman	
8	Anil	
7	Ankit	
1	Anurag	
5	Sanket	
4	Shani	
3	Shashank	
6	Shobhit	

10 rows in set (0.00 sec)

★ Query → ④

mysql> Select distinct(D\_O\_B) from student;

O/P	D_O_B
—	2004-02-25
	2006-03-25
	2007-03-25
	2007-04-25
	2007-05-24
	2007-06-24
	2001-07-22
	2001-07-21

8 rows in set(0.00 sec)

★ Query → ⑤

mysql> Select distinct City, contact\_no from student;

O/P	City	Contact_no
—	mumbai	1234567890
	nagpur	1234567891
	nashik	1234567892
	mumbai	1234567893
	banglore	1234567893
	mumbai	1234567895
	nagpur	1234567896
	mumbai	1234567897
	nashik	1234567898
	delhi	1234567899

10 rows in set(0.00 sec)

\* Query → ②

mysql> Select roll\_no, name from Student;

O/P	roll_no	name
→	1	Anurag
	2	Abhimanyu
	3	Shashank
	4	Shani
	5	Sanket
	6	Shobhit
	7	ankit
	8	anil
	9	aman
	10	abhay

10 rows in set (0.00 sec)

\* Query → ③

mysql> select distinct City from Student;

O/P	city
	mumbai
	nagpur
	nashik
	banglore
	delhi

5rows in set(0.00 sec)

~~# inserting values~~

```
mysql> insert into Student values(1,"Anumag","mumbai","2004-02-25",
1234567890),
→(2,"Abhimanyu","nagpur","2004-02-25",1234567891),
→(3,"Shashank","nashik","2006-03-25",1234567892),
→(4,"Shani","mumbai","2007-03-25",1234567893),
→(5,"Sanket","banglore","2007-04-25",1234567893),
→(6,"Shobhit","mumbai","2007-04-25",1234567895),
→(7,"ankit","nagpur","2007-05-24",1234567896),
→(8,"anil","mumbai","2007-06-24",1234567897),
→(9,"aman","nashik","2001-07-22",1234567898),
→(10,"abhay","delhi","2001-07-21",1234567899);
```

O/P Query OK , 10 rows affected (0.01 Sec)

Records: 10 Duplicates: 0 Warnings: 0

\* Query → ①

mysql> Select \* from Student;

O/P	rollno	name	city	D_O_B	contact_no
	1	Anumag	mumbai	2004-02-25	1234567890
	2	Abhimanyu	nagpur	2004-02-25	1234567891
	3	Shashank	nashik	2006-03-25	1234567892
	4	Shani	mumbai	2007-03-25	1234567893
	5	Sanket	banglore	2007-04-25	1234567893
	6	Shobhit	mumbai	2007-04-25	1234567895
	7	ankit	nagpur	2007-05-24	1234567896
	8	anil	mumbai	2007-06-24	1234567897
	9	aman	nashik	2001-07-22	1234567898
	10	abhay	delhi	2001-07-21	1234567899

Teacher's Sign. :

mysql> alter table Stud\_fyCS modify contact\_no bigint unique key;

O/P      Query OK, 0 rows affected (0.02 sec)  
 — Records: 0    Duplicates: 0    Warnings: 0

mysql> desc Stud\_fyCS;

O/P	Field	Type	NULL	Key	Default	Extra
	rollno	int(11)	YES	(PRT)	NULL	
	stu_name	varchar(20)	YES		NULL	
	contact_no	bigint(20)	YES	(UNT)	NULL	

3 rows in set (0.01 sec)

mysql> Show tables;

O/P Empty Set (0.00 Sec)

### \* modify in table

# Creating a table in fycs\_b1 database

# Table without constraints :

mysql> Create table Stud\_fycs( Roll\_no int, Stu\_name varchar(20), Contact\_no Bigint);

O/P Query OK, 0 rows affected (0.01 sec)

mysql> desc Stud\_fycs;

<u>O/P</u>	field	Type	Null	Key	Default	Extra
→	Roll_no	int(11)	YES		NULL	
	Stu_name	varchar(20)	YES		NULL	
	Contact_no	bigint(20)	YES		NULL	

3 rows in set (0.00 sec)

→ # modify in table

mysql> alter table Stud\_fycs modify Roll\_no int primary key;

O/P Query OK, 0 rows affected (0.02 sec)

Records: 0 Duplicates: 0 Warnings: 0

O/P

Query OK , 1 row affected (0.01 sec)

Row matched:1 Changed:1 Warnings:0

mysql&gt; update Student set Stu\_marks = 55 where roll\_no = 3;

O/P

Query OK , 1 row affected (0.00 sec)

Row matched:1 Changed:1 Warnings:0

# display student table after inserting marks in stu\_marks

mysql&gt; Select \* from Student;

roll_no	Stu_name	Stu_address	Contact_no	stu_marks
1	Anurag	Vasai	3534343991	45
3	Sanket	Mira road	3534343993	55
4	Sachin	Bhayander	3534343994	NULL
5	Ravi	Malad	3534343995	NULL

4 rows in set (0.00 sec)

②

□ Dropping / Truncating / Renaming Tables

①

★ Renaming Tables

→ Command

mysql&gt; alter table Student Rename to practical;

O/P

Query OK , 0 row affected (0.01 sec)

# table name changed Student → practical Teacher's Sign. :

# display deleted value table

mysql> Select \* from Student;

O/P	rollno	stu_name	stu_address	Contact_no
	1	Anurag	Vasai	3534343991
	3	Sanket	Mira road	3534343993
	4	Sachin	Bhayander	3534343994
	5	Ravi	Malad	3534343995

4 rows in set (0.00 sec)

→ Record - ② was deleted

## ② \* Updating

→ Command

mysql> update Student Set Stu\_name="Sachin" where roll\_no=4;

O/P Query ok, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

→ # display updating table Student

mysql> Select \* from Student;

O/P	roll_no	stu_name	stu_address	Contact_no
	1	Anurag	Vasai	3534343991
	2	Shubham	Virar	3534343992
	3	Sanket	Mira road	3534343993
	4	(Sachin)	Bhayander	3534343994
	5	ravi	Malad	3534343995

5 row in set (0.01 sec) → name changed

## ③ \* Deleting

→ Command

mysql> delete from student where roll\_no=2;

O/P Query OK, 1 row affected (0.00 sec)

# viewing tables

→ command

mysql&gt; Show tables;

O/P Empty Set(0.00 sec) - [ Set is empty because tables did not created in database fys h]

## (4) creating tables (with and without constraints)

→ command

# table with constraint

mysql> Create table Student (roll\_no int primary key,  
 → stu\_name varchar(20) not null,  
 → stu\_address varchar(20) not null,  
 → contact\_no bigint);

O/P Query OK, 0 rows affected (0.01 sec)

→ # display table

mysql&gt; desc Student;

	Field	Type	Null	Key	Default	Extra
	roll_no	int(11)	NO	PRI	NULL	
	stu_name	varchar(20)	NO		NULL	
	stu_address	varchar(20)	NO		NULL	
	Contact_no	bigint(20)	YES		NULL	

②  creating a Database

→ Command

`mysql> create database fycs_b1;`

O/P Query OK, 1 row affected (0.00 sec)

`mysql> Show databases;`

O/P

Database
information schema
employee
fy
fycs
<u>fycs_b1</u>
mysql
name
Sampdb
test

→ database created

9 rows in set (0.00 sec)

③  viewing all Tables in a Database

→ Command - (First, we can enter in database fycs\_b1)

`mysql> use fycs_b1;`

O/P Database changed

- Creating views (with and without check option)
- Dropping view
- selecting from a view

mysql> Create view stud\_info as select name,address from student where roll\_no<4;

O/P Query OK, 0 rows affected (0.01 sec)

mysql> select \* from stud\_info;

O/P

name	address
ram	delhi
shyam	nagpur
suraj	delhi

3 rows in set (0.00 sec)

mysql> Create view student\_marks as

→ select student.roll\_no,student.name,

→ ~~student~~ marks.science from student,

→ ~~student~~ marks where student.roll\_no = stu\_marks.roll\_no;

O/P Query OK, 0 rows affected (0.00 sec)

mysql> select \* from student\_marks;

\*  with exist clause

mysql> select name,address from student where exists(select \* from stu\_marks where student.roll\_no=stu\_marks.roll\_no);

roll	name	address
ram	delhi	
bhym	nagpur	
sunaj	delhi	
shani	patha	
sonu	delhi	

5 rows in set (0.00 sec)

EXPERIMENT:

No.

→ # Creating table stu\_marks

mysql> create table stu\_marks (roll\_no int, science int, english int, math int);

OP: Query OK, 0 rows affected (0.00 sec)

mysql> insert into stu\_marks values (1, 40, 50, 60),

→ (2, 30, 50, 90),

→ (3, 45, 55, 65),

→ (4, 95, 99, 98),

→ (5, 49, 59, 69);

OP: Query OK, 5 rows affected (0.01 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> select \* from stu\_marks;

OP	roll_no	science	english	math
1	40	50	60	
2	30	50	90	
3	45	55	65	
4	95	99	98	
5	49	59	69	

\*  with in clause

mysql> select \* from stu\_marks where roll\_no = (select roll\_no from student where name = "ram" and address = "delhi")

O/P

roll_no	science	english	math
1	40	80	60

1 row in set (0.00 sec)

mysql> select \* from stu\_marks where roll\_no in (select roll\_no from student where address = "delhi");

O/P

roll_no	science	english	math
1	40	50	60
3	45	55	65
5	49	59	69

3 rows in set (0.00 sec)

mysql> select \* from stu\_marks where roll\_no not in (select roll\_no from student where address = "delhi");

O/P

roll_no	science	english	math
2	30	50	90
4	95	99	98

2 rows in set (0.00 sec)

Title: Subqueries

- with in clause
- with exists clause

→ # Creating a table Student

mysql> Create table Student (rollno int, name varchar(20), address varchar(20));

O/P → Query OK, 0 rows affected (0.02 sec)

→ # Inserting values in Student table

mysql> insert into Student values(1,"ram","delhi"),  
 → (2,"shyam","nagpur"),  
 → (3,"Suraj","delhi"),  
 → (4,"Shani","Patha"),  
 → (5,"Sonu","delhi");

O/P Query OK, 5 rows affected (0.00 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> select \* from student;

	roll_no	name	address
1	ram	delhi	
2	shyam	nagpur	
3	Suraj	delhi	
4	Shani	Patha	
5	Sonu	delhi	

Teacher's Sign. :

O/P	emp_id	emp_name	emp_id	address
	1	Shankar	1	delhi
	2	Narayan	2	mumbai
	3	Saurabh	3	nagpur

3 rows in set (0.00 sec)

→ ② Natural join

mysql> select \* from employee natural join employee\_detail  
where employee.emp\_id = employee\_detail.emp\_id;

O/P	emp_id	emp_name	address
	1	Shankar	delhi
	2	Narayan	mumbai
	3	Saurabh	nagpur

3 rows in set (0.00 sec)

\* □ Outer join

→ right outer join

mysql> Select \* from employee right outer join employee\_detail  
on (employee.emp\_id = employee\_detail.emp\_id);

O/P	emp_id	emp_name	emp_id	Address
	1	Shankar	1	delhi
	2	Narayan	2	mumbai
	3	Saurabh	3	nagpur
	NULL	NULL	4	Kolhapur
	NULL	NULL	6	Ramnagar

3 rows in set (0.00 sec)

→ Left outer join

mysql> select \* from employee left outer join employee\_detail  
on (employee.emp\_id = employee\_detail.emp\_id);

O/P	emp_id	emp_name	emp_id	address
1	Shankar	1	delhi	
2	narayan	2	mumbai	
3	Saurabh	3	nagpur	
5	Sachin	Null	Null	
7	Samarth	Null	Null	

5 rows in set (0.00 sec)

→ # creating a table employee detail

mysql> create table employee\_detail(emp\_id int, address varchar(20));

O/P Query OK, 0 rows affected (0.01 sec)

mysql> insert into employee\_detail values (1, "delhi"),  
 → (2, "mumbai"),  
 → (3, "nagpur"),  
 → (4, "kolhapur"),  
 → (5, "ramnagar");

O/P Query OK, 5 rows affected (0.01 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> select \* from employee\_detail;

O/P emp_id	address
1	delhi
2	mumbai
3	nagpur
4	kolhapur
5	ramnagar

\* InInner join

mysql> select \* from employee inner join employee\_detail  
 where employee.emp\_id=employee\_detail.emp\_id;

Title

- inner join  
 outer join

→ # Creating a table employee

mysql> Create table employee(emp\_id int ,emp\_name varchar(20));

O/P

Query OK, 0 rows affected (0.01 sec)

→ # Inserting values in employee table

mysql> insert into employee values(1,"Shankar"),  
 → (2,"norayen")  
 → (3,"Saumabh")  
 → (5,"Sachin")  
 → (7,"Samarth");

O/P

Query OK, 5 rows affected (0.01 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> select \* from employee;

O/P

emp_id	emp_name
1	Shankar
2	norayen
3	Saumabh
5	Sachin
7	Samarth

5 rows in set (0.00 sec)

Teacher's Sign. :

EXPERIMENT:

No.

OP	roll no	name	Science
1	nam		40
2	shyam		30
3	Syraj		45
4	Shani		95
5	Sony		49

5 rows in set (0.01 sec)