what is database?
database is a collection of data stored in a computer system

list of databases
1. MySQL
2. Oracle
3. MongoDB
4. PostgreSQL
5. SQLite

what is MySQL?
MySQL is a relational database management
system (RDBMS) based on SQL - Structured Query Language.

CRUD operations
1. Create: INSERT,Database,Table
2. Read: SELECT
3. Update: UPDATE
4. Delete: DELETE

mysql functions?
1. connect()
2. join()
3. min()
4. max()
5. avg()
6. sum()
7. count()
8. group_by()
9. order_by()
10. limit()
11. offset()
12. distinct(): remove duplicate values
13. where()
14. having(): group by
15. insert()
16. update()
17. delete()
18. drop()
19. truncate()
20. create()
21. alter()
22. show()
23. desc()
24. asc()
25. like()
26. in()
27. between()
28. and()
29. or()
30. not()
31. is(): check null
32. isnull()
33. isnotnull()
34. exists()
35. notexists()
36. union()

37. intersect()
38. except()
39. select()
40. from()
41. into()
42. values()
43. set()
44. innerjoin()
45. leftjoin()
46. rightjoin()
47. fulljoin()
48. crossjoin()
49. naturaljoin()
50. on()
51. as()
52. distinct()
53. all()
54. distinctrow()
55. distincton()

```
commands
SHOW DATABASES
DROP DATABASE python5pm;
CREATE DATABASE python5pm;
CREATE DATABASE IF NOT EXISTS python5pm;

use database name
CREATE TABLE IF NOT EXISTS students(
    id int PRIMARY KEY AUTO_INCREMENT,
    name varchar(100)


)

INSERT INTO students(name)VALUES('ram');
ALTER TABLE  students ADD phone varchar(100) add column
ALTER TABLE `students`
  DROP `price`,
  DROP `phone`;
UPDATE students SET phone=876543 WHERE id=1 update column value
DELETE FROM students WHERE id=1 delete row
TRUNCATE TABLE students
DROP TABLE students
DELETE FROM students WHERE id=1 OR id=2
DELETE FROM students WHERE id IN(1,2)
DELETE FROM students WHERE id NOT IN(1,2)
DELETE FROM students WHERE id BETWEEN 1 AND 2
DELETE FROM students WHERE id NOT BETWEEN 1 AND 2
SELECT COUNT(name) as total FROM students;
SELECT name as student_name,phone FROM students

ALTER TABLE students ADD price int AFTER name

SELECT SUM(price) FROM students
SELECT SUM(price) as total FROM students
SELECT MIN(price) FROM students
```

```
SELECT MAX(price) FROM students
SELECT AVG(price) FROM students
SELECT * FROM `students`  LIMIT 2
SELECT * FROM students ORDER BY name ASC
SELECT * FROM students ORDER BY name DESC
SELECT * FROM `students` LIMIT 2 OFFSET 3;
SELECT DISTINCT(name) FROM students
DESCRIBE students


CREATE TABLE course(
id int PRIMARY KEY AUTO_INCREMENT,
course_name varchar(100),
student_id int,
FOREIGN KEY(student_id) REFERENCES students(id)

)


SELECT students.*,course.* FROM course
JOIN students ON course.student_id=students.id

SELECT students.*,course.* FROM course
JOIN students ON students.id=course.student_id
WHERE course.course_name='python'
```