

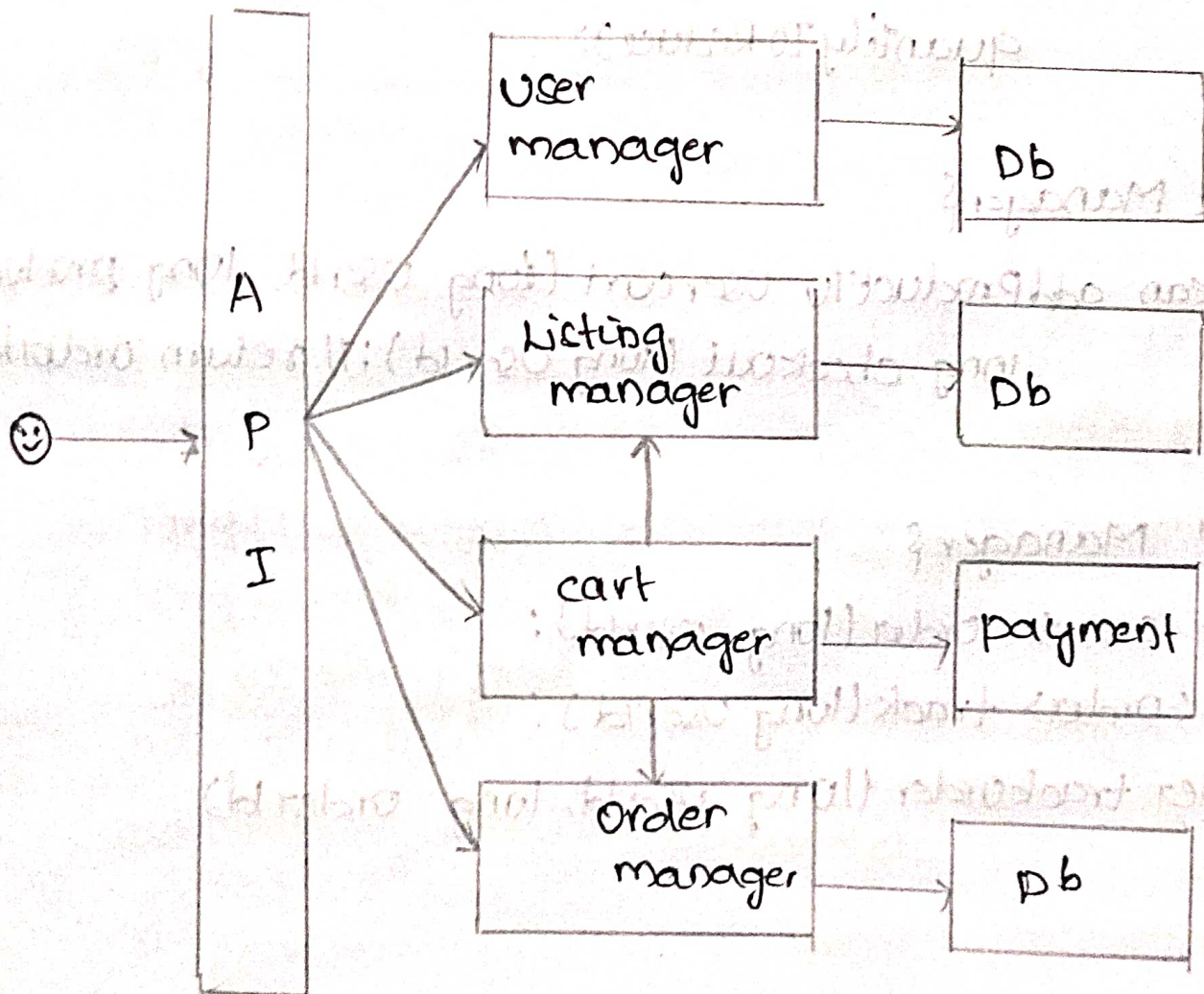
10. Design an E-commerce system, which includes the following set of features.

- user can login/sign up using their contact no.
- User can place order
- cart system
- product listing
- product review, rating and wishlist.

A) Firstly, the user will contact the API layer of the e-commerce system, which depending on the user request it is route to different services, to create (or) update the user profile, it will contact the user manager, which stores the user details in the data base management.

- To the get the list of products we contact the listing manager, which also has it own data
- for adding the item to the cart, we talk to the cart manager, which add's the product to the user cart

- For buying the product, we contact the cart manager, which will update the quantity in the listing manager, we do this because, the product with 10 quantity, we don't want to sell it for 1000 \$ques.
- Once the quantity is updated in the listing manager, the cart manager will call the order manager, to create the orders;
- orders will have list of user id and product id.



coming to API:

- User Manager {

boolean create User (User user);

void update User (User user);

}

- Listing Manager {

list < product > getProducts();

boolean reduce Quantity (long productid, int
quantityToReduce);

}

- cart Manager {

boolean addProductTo Usercart (long userid, long productid,
long checkout (long userid); // return orderid.

}

- order Manager {

void create order (long userid);

list < order > track (long userid);

order trackOrder (long userid, long orderid)

}

Database Model

User {

long id;

Name name;

string email;

phone phone;

//... other details

}

Product {

long id;

string name;

double price;

int quantity;

}

order {

long id;

long userid;

list<product> products;

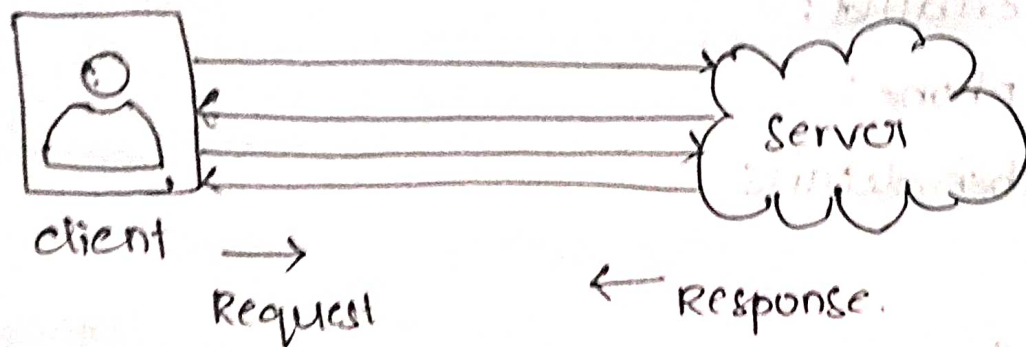
date placedOn;

list<Tracking detail> tracking details;

}

QD) Design a polling system like Telegram.
where users have multiple options to vote them.
Allow user to vote and show the live vote count.

A)



- polling is a technique that allows the servers to push information to a client.
- It involves the client requesting information from the server in the same way that standard polling does.
- The Basic life cycle of an application that uses HTTP polling:
 1. The client sends an HTTP request and then waits for a response.
 2. When an update is available, the server provides the client a complete response.
 3. After getting a response, the client typically sends a new long-poll request, either

Immediately or after a pause, to allow for an appropriate latency duration.

- when building a real-time application like Telegram with HTTP polling server push, you'll have to develop your communication management system.
- This means that you'll be responsible for updating, maintaining, and scaling your backend infrastructure.
- Therefore the polling helps to provide frequent updates.