

STEP 5 LAYERED PATTERN

**HUNGER
STATION**

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SUITABLE PATTERNS AND WHY?

We assumed that...

Pattern	Why chosen?	Why don't chose?
Pipe and filter	Suitable in some phases of the application (such as the payment process	Because it does not cover all the requirements of the application
MVC	helpful when we need to present the same data in different ways with changes made in one representation shown in all of them	Because it's required to write additional codes which make the code more complicated .

We choose Layers pattern because the app contains several layers

TRADE-OFFS

Flexibility vs. Simplicity

Some systems need to have a lot of flexibility and expandability built into them because you know you're starting with the kernel of an idea and it's going to get bigger. Others simply require a straight forward implementation with repeated reminders of YAGNI (You Ain't Gonna Need It).

Space vs. Time

If time is of the essence then you'll want to start pulling tricks like pre-computing possible values similar to what OLAP cubes do. Ever wonder how you can report on billions of rows across a range of dimensions so quickly? The aggregations are precomputed so that by the time you ask, the data is ready for you (or very close). On the other hand, you may need to minimize space and can afford some time which means you'll be looking at compression and normalization to minimize redundant storage.

Latency vs. Throughput

Which do you need to optimize, the time for the first result or the number of results you can process in a given period of time? Think of this in terms of moving people a quarter mile, do you need a bus to move a lot of people or a motorcycle to get the first person there in the shortest amount of time?

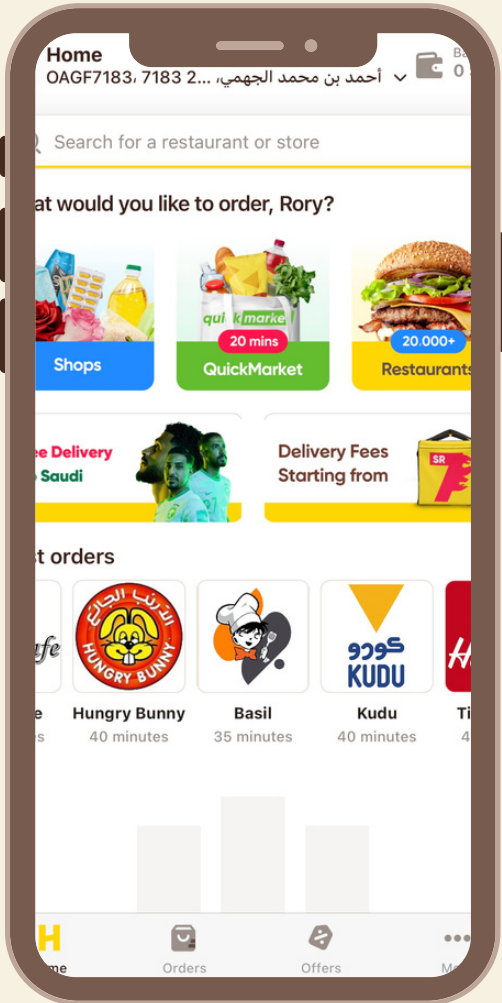


Apply A Layered Architecture Pattern For The Hungerstation App

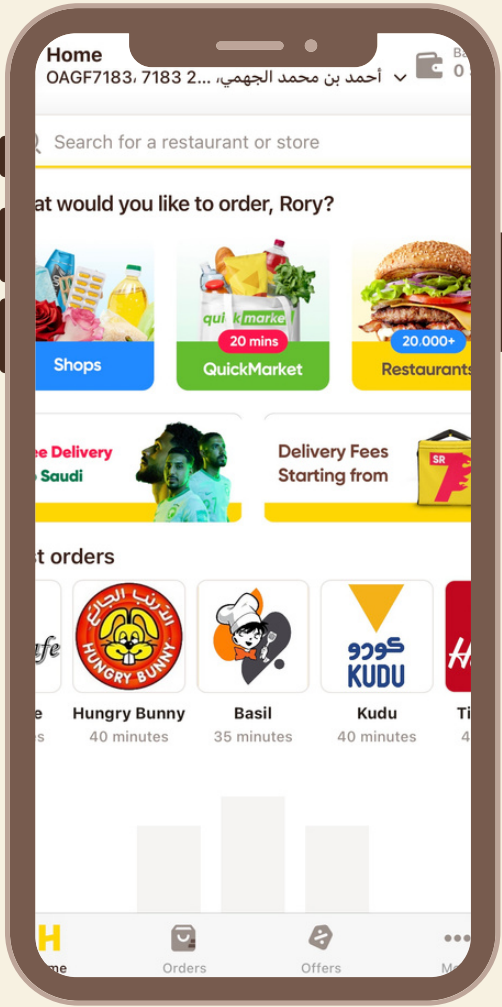


When placing an order, you must specify the location, then the restaurant, then the products, specify the quantity of each product, and then ask for registration or sign in if the customer does not do so, then move to pay and then the information is transmitted to the restaurant to be approved. Then the representative will be shown the customer's location during delivery. These are all layers that depend on each other

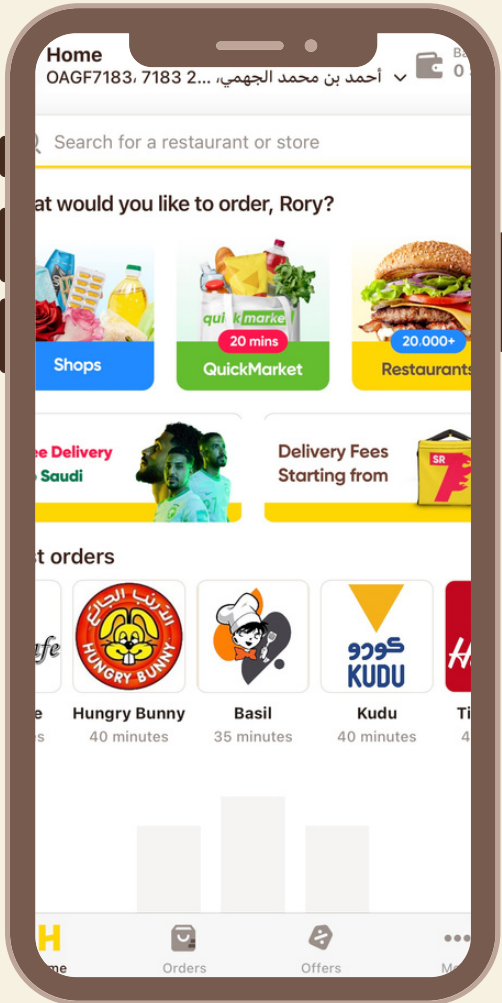
Requirement	Apply Pattern
The system shall allow the user to search for specific restaurant in the list of available restaurants.	After entering the application it goes to the list of restaurants and then can search
Customer shall be able to view their bills upon purchase	After completing the payment, the bill is displayed to the customer
The customer shall be able to register by providing his phone number and password and email in order to purchase from the application.	After entering the application go to the options and includes the recording after choosing it moves to the interface to enter the data



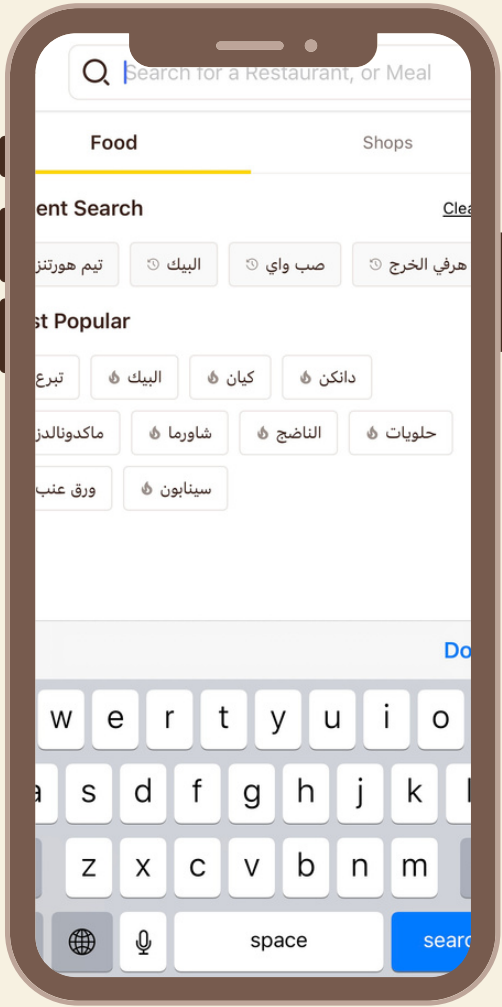
Requirement	Apply Pattern
The customer shall be able to pay using either Cash / Visa / PayPal / mada	After completing the order, the payment methods are displayed after choosing the payment method, the data is entered
The system should allow the customer to track the delegate after the order has been processed	After receiving a message that the order is ready, the customer can go to the interface to track the representative
The customer shall enter information when sign in by providing his phone number and password	After entering the application, the customer chooses to log in and then can enter his data
The system should allow the customer to modify his information	After logging in, he moves to his personal page and then can edit his information
The system should allow the customer to add more than one location	Go to the personal page, then select the location option, then add the new location



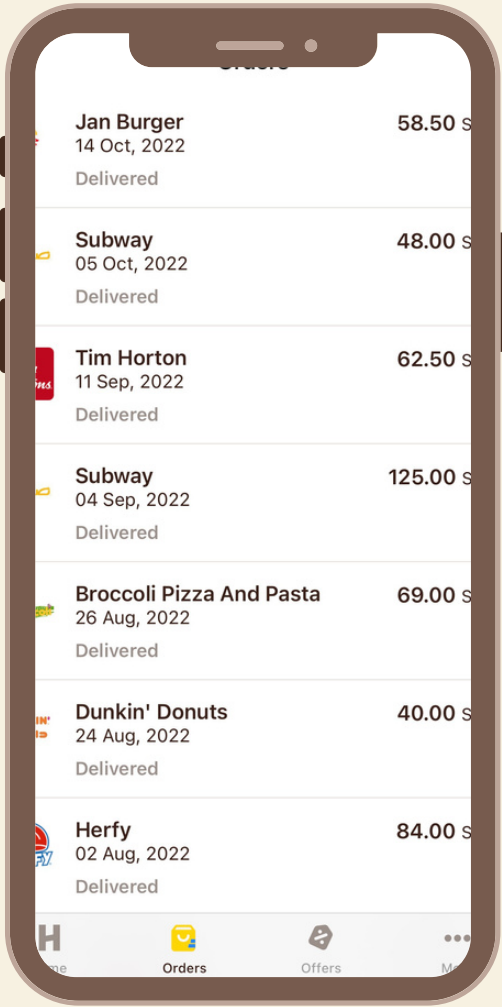
Requirement	Apply Pattern
The system shall display the delivery fee to the customer	After selecting the restaurant from the restaurant list, the customer is shown the delivery fee
The system should display a list of restaurants that have offers	After logging in to the app go to the list of offers
The system shall provide multiple food stores for a customer’s selection.	After the customer selects his location, the food stores that provide the service in his area appear to him
The system shall display to the customer the prices of different food items.	After the customer selects the appropriate food store for him, a list of available meals will appear with the price of each meal
The customer shall be able to add multiple food items to the cart in the same order.	When choosing items, more than one item can be selected from the same list



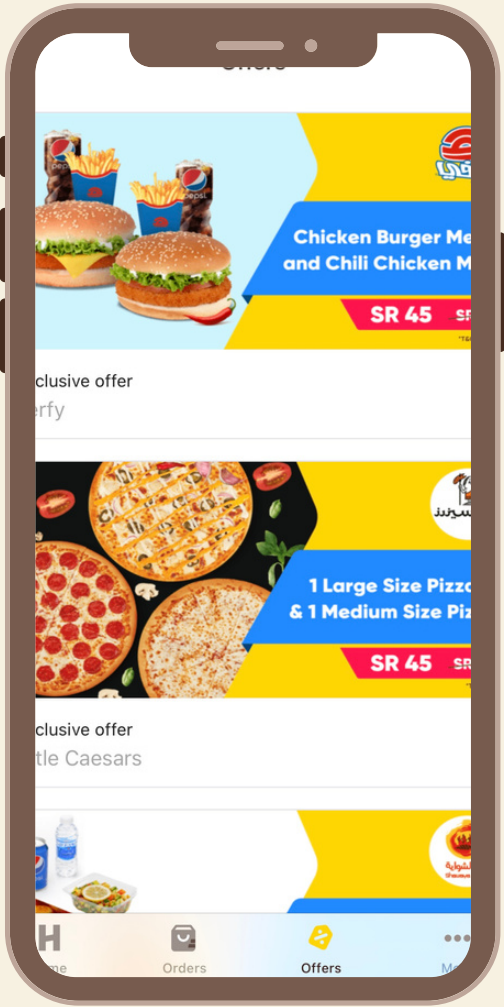
Requirement	Apply Pattern
The customer shall be able to add the same food item more than once.	When selecting products, the quantity is determined in the same interface
The customer shall be able to view his previous orders.	After logging in to the application, the customer can view all his previous orders
The system should show to the customer the expected delivery time for each order.	After selecting the food store, selecting the items and confirming the order, the customer will be shown the expected delivery time based on the order processing time and the location of the food store
The system shall notify the customer if there is an update to the application .	Notifying the customer of the order status and location updates depends on the update from the food store and the delegate



Requirement	Apply Pattern
The customer should be able to specify the side additions to the meals.	After the customer selects the product, a list of side additions to the meal will appear, if available
The system shall be allow the user to view the terms and conditions before confirming the order.	Confirmation of the order depends on agreeing to the terms and conditions, which is done in the same interface as the order confirmation
The system shall allow the customer to add a discount coupon code.	The customer can add discount coupons on the coupons page and use them on the order confirmation page
The system shall display for the customers a list of nearest restaurant to their location	After searching for the restaurant the nearest restaurants appear in a list plus clarifying the location by the kilometers.



Requirement	Apply Pattern
The system should provide English \ Arabic language	After entering the application the customer have a choice to choose between English or Arabic language
The system shall be able to show a site map that shows the distance of the delivery representative to the delivery location.	When the customer check detail of his order the site map included and allowing him to see how many distance between him and that delivery location
The system shall provide a chat page where customers can communicate with the restaurants delivery.	After confirming the order customer click on the chatting interface to communicate with the restaurants delivery
The customer shall get ordering tips which include receiving information about locations of restaurant areas	After logging in the application the ordering tips banners shows to the customer



Requirement	Apply Pattern
The customer should be able to send a feedback after the order arrival	After the order arrival the feedback Notification appears to the customer
The customer shall receive a warning sign if anything of the ordering process went wrong	Notifying the customer about any mistake he would've do during the ordering process
The system shall provide customers with a service number for emergency cases	The customer can contact the customer service by clicking on the number on the main page when facing any emergency
The customer shall be able to cancel the order after a specified period of time.	After completing the order, the customer can cancel the order by entering the order interface, then selecting the order and then canceling the order
The system shall save the canceled order money on the App wallet	After cancelling the order the money will saved on the application wallet

NON-FUNCTIONAL REQUIREMENTS

Performance requirements: it determines the acceptable response times for the system functions.

- Uploading time for the user's interfaces should not exceed two seconds.
- Verifying the register information should not exceed five seconds.
- Displaying the search results should not exceed five seconds.
- The system shall be available 24 hours a day
- The system shall be able to load any page with no more than 3 seconds

Reliability: determining the required factors to get the desired reliability from the software system at the submission time

- The system should be reliable, that is it can carry its specific operations under all conditions.

Robustness Requirement:

- The system must be robust in face of hardware power failures that could lead to data loss.

Availability: the system should be available all the time

Security:

- the final user should log out; also, the logging in information and password that are provided to the system should be secure and remembered. customer's personal information shall be encrypted and stored safely.

Maintainability: Hungerstation management system is being developed by the php programming language.

Portability requirements: System shall be accessible from different platforms (mobile, tabs, computers)

**Thank
you**

