

# Payment Services

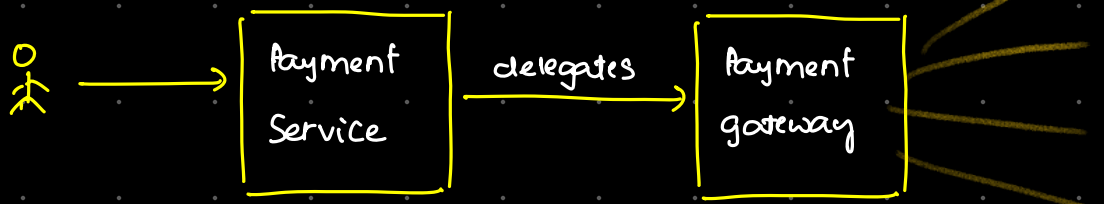
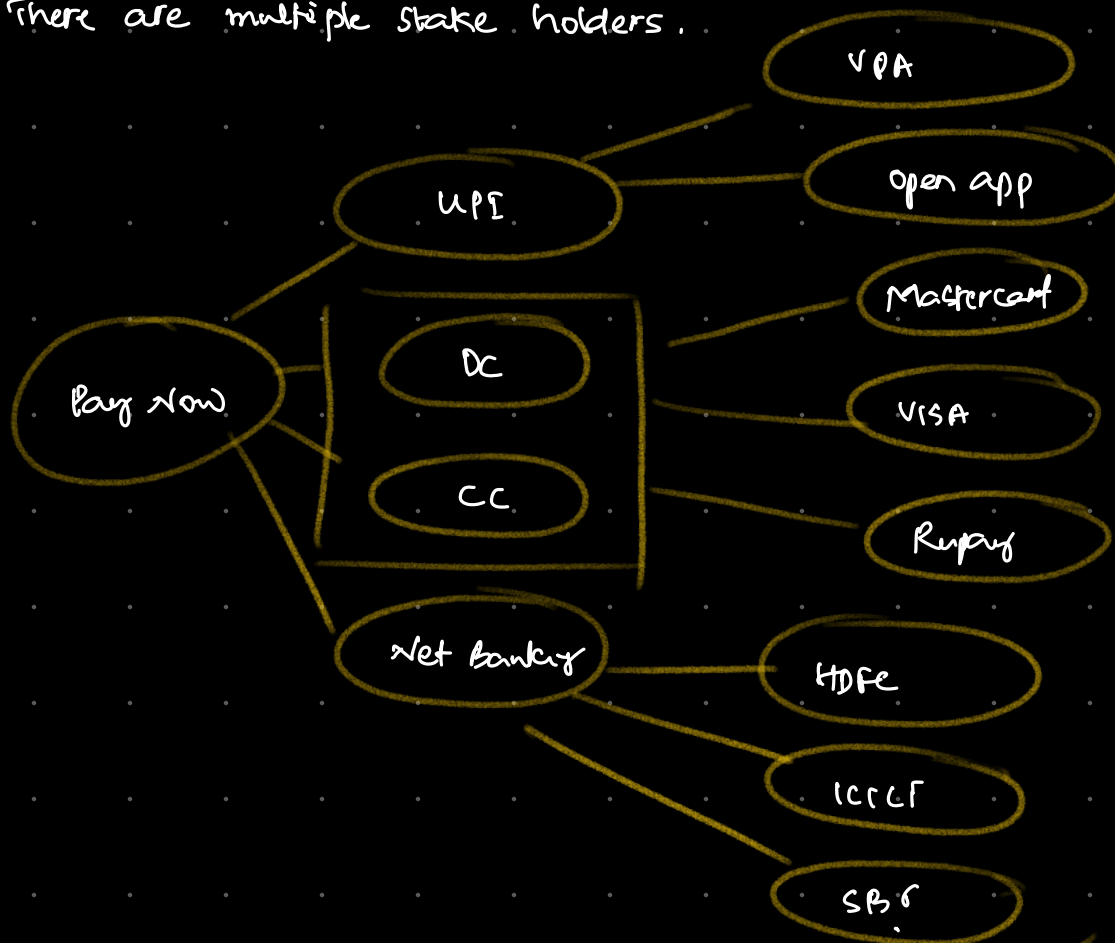
Part-1 -> Theory ✓

Part-2 -> Implementation

How companies implement payment services? -

The data that we're dealing with is critical data / sensitive

There are multiple stake holders.



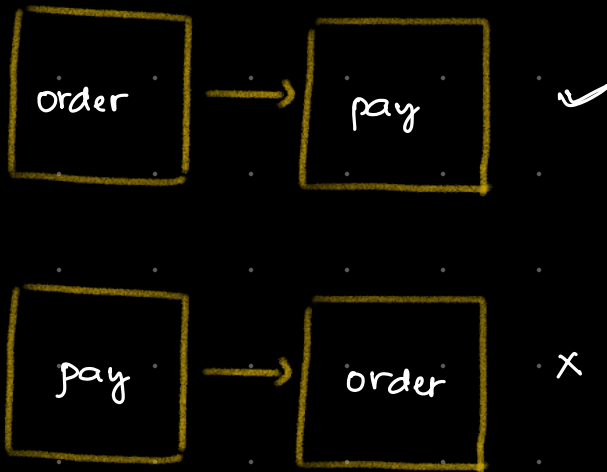
## Payment Gateway

Third party that manages the integration with banks and certifications on your behalf and simplifying the implementation payment collection for your company.

Manage the flow of collecting payment.

→ UI to collect the card details.

## amazon / flipkart



Why order is created first and then pay? —

mapping between order ↔ payment

reason 1:

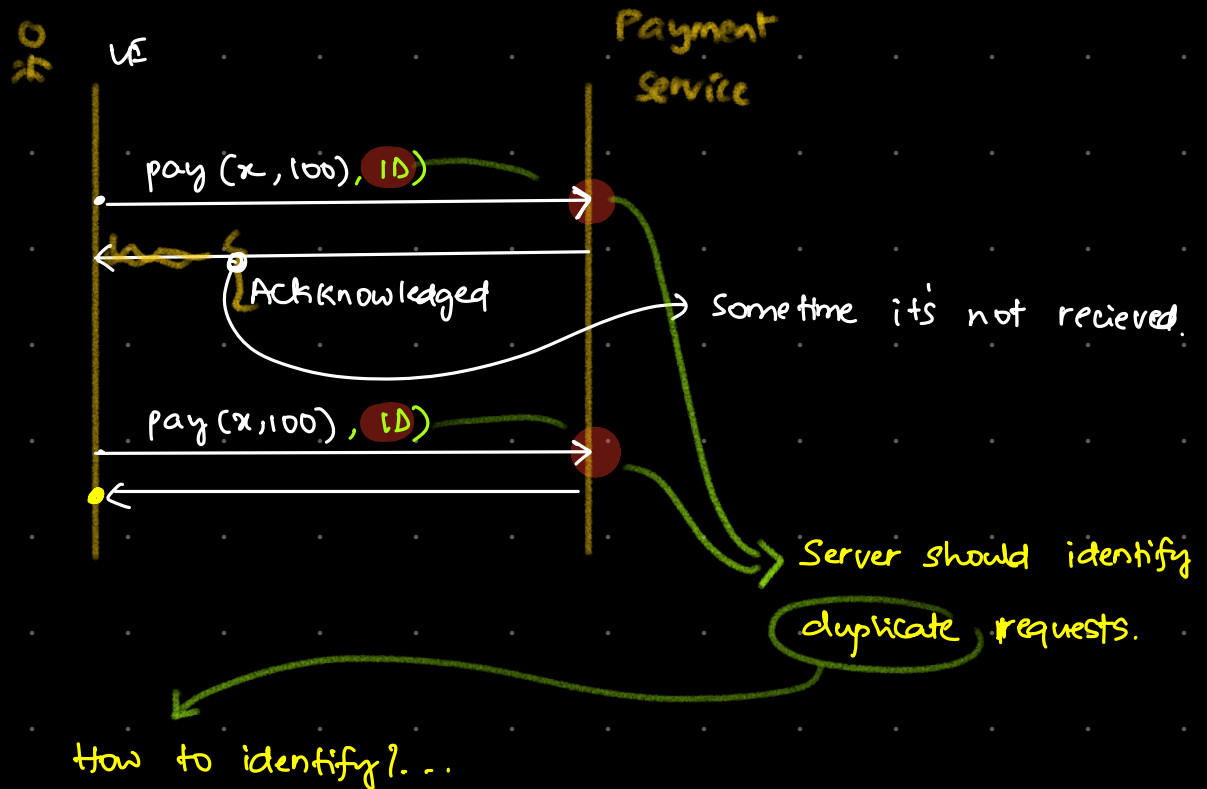
During payment collection there can be some issues.

reason 2

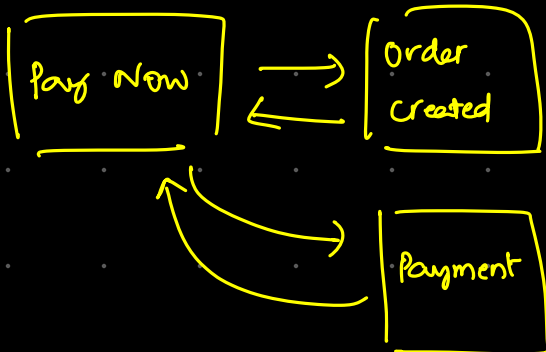
## Idempotency

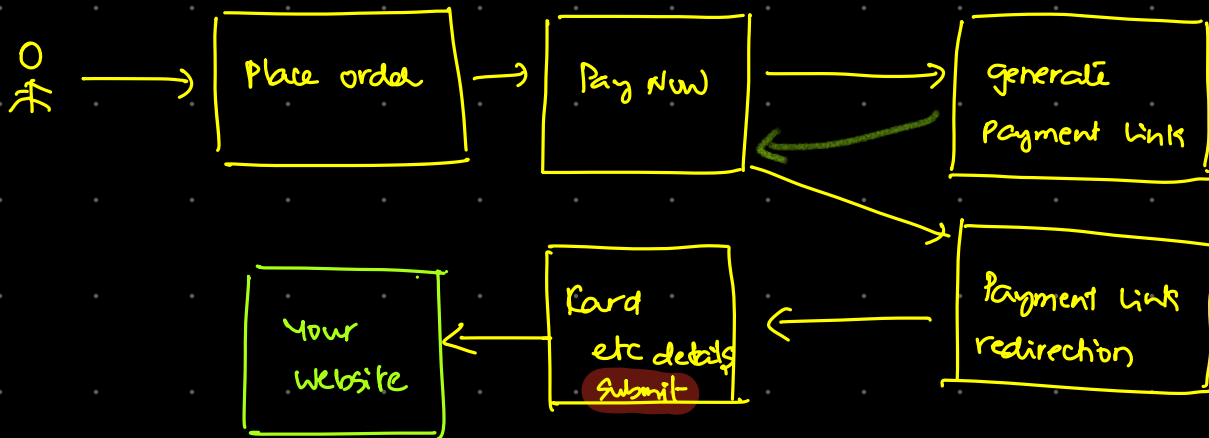
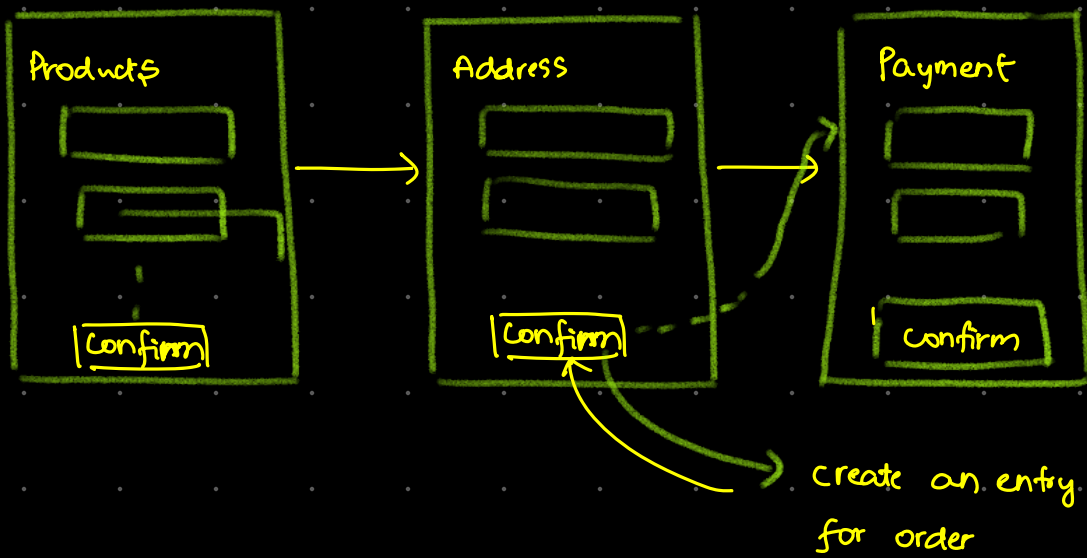
Re-directing to the payment page more than once.

The payment will get deducted more than once.



ID  $\longrightarrow$  order ID.





Who generates payment link?

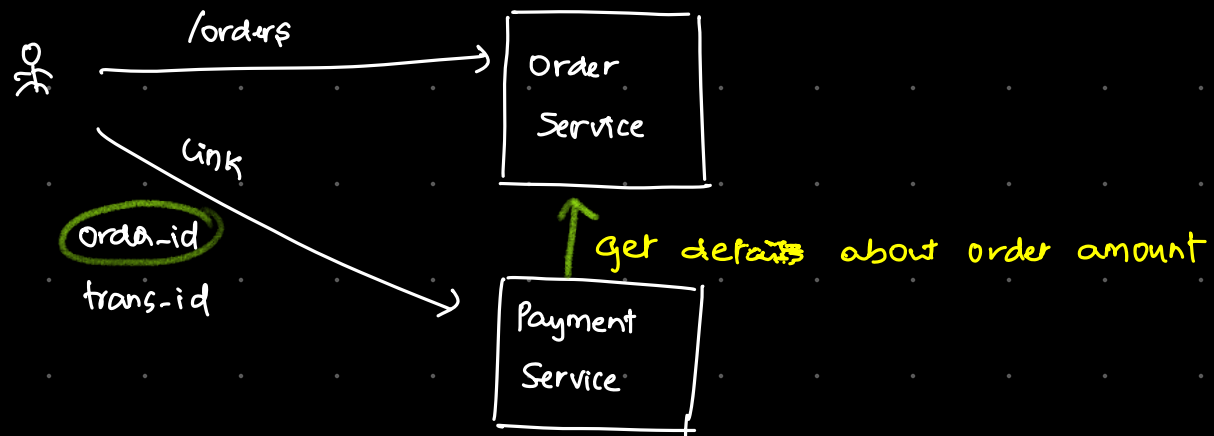
3rd party gateway integration

Can I send,

POST ; payment service / link ? amount = 500

This is a bad idea.

What's better? :



What happens after redirection?

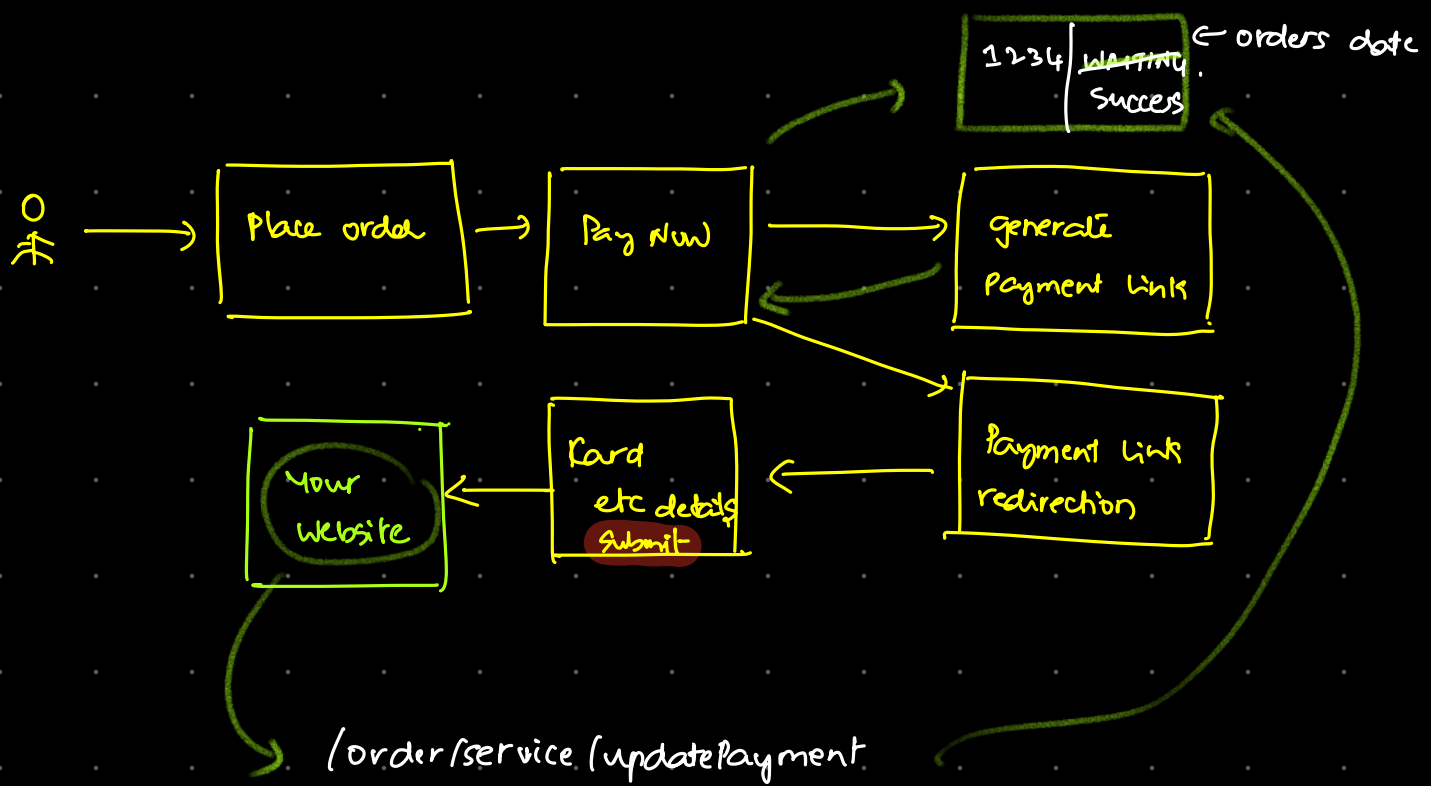
Whenever there's a change in the payment status,  
failure / success / unknown (Any of these)

I should get to know about this information.

How payment gateway can intimate your service

- Callback url
- webhooks
- Reconciliation

When a payment link is generated by the payment gateway, payment glw is also a re-direction link that it should redirect to whenever the payment status changes for this transaction.



```

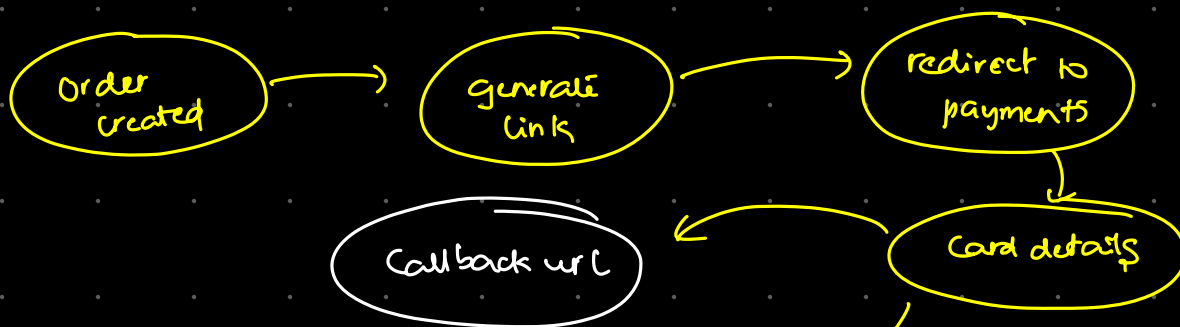
{
  "orderId": _____
  "status": "Success"
}

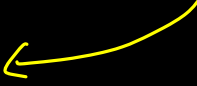
```

Call api will make some api requests to update the status  
(ie when we land on callback api)

Sol<sup>n</sup>: Webhooks

Instead of depending on the callback we hitting our backend api's, we ask the payment gateway to make the api calls to our services.





Webhooks  
requests sent to  
update status

## Reconciliation flow

Every  $x$  minutes (hours) we'll send out a collated list of transactions of past  $y$  hours (that happened for your company) and their updated status.

⇒ These will correct the db status of orders accordingly.