

## OFFLINE PAYMENT GATEWAY

**Case 1:** If Merchant & Client both are online then

1. Client can pay via Credit Card, Debit Card, Wallet

- In two ways client can pay via Wallet:

- i. Direct payment to online invoice.
- ii. Transfer money via QR Code as like in PayTm.

2. Merchant can receive payment direct in bank account if client paid by Credit card, Debit Card or Online Invoice Payment through wallet.

- Merchant can receive payment in wallet if client transfer money via QR Code as like in PayTm.

**Case 2:** If Merchant & Client both are offline then

1. Client can pay via

- i. QRCode i.e. Client have to generate QR Code & Merchant will scan that code.
- ii. Bluetooth i.e. Client can transfer money to merchants wallet via Bluetooth.

2. Merchant can receive payment in wallet via

- i. QRCode i.e. Client have to generate QR Code & Merchant will scan that code.
- ii. Bluetooth i.e. Client can transfer money to merchants wallet via Bluetooth.

**Case 3:** If Merchant is Offline & Client is Online then

1. Client can pay via Credit Card, Debit Card or from Wallet to invoice online.
2. Merchant can receive SMS for the confirmation of Payment.

**Case 4:** If Merchant is Online & Client is Offline then same as Case 2.

## Security Checks

1. All the data should be saved in local Database if internet not found and Sync with server whenever internet connection found.
2. All the data should be encrypted in local database.
3. The data that is transferred via QRCode or Bluetooth is also encrypted and for more security we can add some prefix or suffix in encrypted data.
4. Rest of the Security checks of the offline transactions can avail in backend via Unique Transaction Id is generated for every transaction Id.

- If the merchant got any money via offline transaction then that transaction id should be available in clients database in case client has synced with server.

- If the merchant got any money via offline transaction and yet client not synced up with server then the merchant should have wait for approval that transaction till the client should not synced up with server, and auto approve after 3 days and send a SMS to client to inform that transaction and the client can puts claim on fraud transactions from app.

### **Usefulness & Potential of App**

1. Customers have to save money in our Wallet service that should be beneficial for Company.
2. Customers can pay without internet connection or without network coverage.
3. Cashless transactions graph increased.
4. This concept can enlarge as you want or serve with multi-tenant.

### **Architecture & Design of this gateway**

1. All Api's should be under secure server's with SSL Domain.
2. Required 3rd party SMS gateway.
3. SDK should be provided to developers for Android App's to integrate in app with all test cases.
4. Required 128 Bit AES Encryption for Secure Api Transactions.