LipaPay Integration Guide (with Diagrams & Examples)

1. Overview

This guide simplifies how to integrate LipaPay into your website to handle Deposits and Withdrawals, plus how to check payment status and account balance. We also show how to manage signatures and callbacks.

2. Typical Flow Diagram

Deposit (User sends money to platform):

User clicks DEPOSIT -> Call Prepaid Bill (optional) -> Call Unified Order -> User pays via phone -> Receive Callback -> Update User Balance.

Withdrawal (Platform sends money to user):

Admin/User clicks WITHDRAW -> Call Unified Order (Disbursement) -> Wait for Callback -> Update User Balance.

3. Key APIs

Unified Order:

- Used to initiate DEPOSIT or WITHDRAWAL.

- Payment channel decides: MTN = 1, Airtel = 2.

- TransactionType: 1 (Deposit), 2 (Withdraw).

Payment Result Query:

- Used to check if payment succeeded, failed, or pending.

Payment Callback Notification:

- System will notify your server of payment success/failure (you must handle this endpoint).

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Prepaid Bill:

- Optional step to get information before initiating deposit.

Get Balance:

- Used to display your platform's current balance.

Get Statement of Account:

- Useful for reconciliation (to verify transactions for bookkeeping).

4. Code Example - DEPOSIT

```
POST /api/pay/unifiedorder
{
  "Version": "v1.0",
  "MchID": 100001,
  "TimeStamp": 1694776093,
  "Channel": 1,
  "TransactionType": 1,
  "OutTradeNo": "ORDER-123456789",
  "TraderID": "0750000001",  # Customer phone number
  "Amount": 50000,
  "Sign": "computed_sign_here"
}
```

5. Code Example - WITHDRAW

```
POST /api/pay/unifiedorder
{
  "Version": "v1.0",
  "MchID": 100001,
  "TimeStamp": 1694776093,
  "Channel": 1,
  "TransactionType": 2,
  "OutTradeNo": "WITHDRAW-987654321",
```

```
  "TraderID": "0750000002",  # Customer phone number

  "Amount": 30000,

  "Sign": "computed_sign_here"

}
```

6. Code Example - Get Balance

```
POST /api/pay/balance

{

  "Version": "v1.0",

  "MchID": 100001,

  "TimeStamp": 1694776093,

  "Sign": "computed_sign_here"

}
```

7. Signature Generation (Important)

To compute 'Sign' for any request:

1. Concatenate all fields (in order), except 'Sign'.

2. Append privateKey at end.

3. Perform MD5 hash on result.

Example string:

Version=v1.0&MchID=100001&TimeStamp=1694776093&privateKey=YOUR_PRIVATE_KEY

Result:

MD5(Version=...&privateKey=...) -> "abcdef123456..."

8. Callback Example (Server Side)

```
@app.route('/payment_callback', methods=['POST'])

def payment_callback():

    data = request.json
```

```python
if verify_sign(data):
    if data['PayStatus'] == 1:
        # Payment successful
        update_user_balance(data['OutTradeNo'], data['Amount'])
        return "SUCCESS"
    else:
        # Payment failed
        log_failure(data['OutTradeNo'])
        return "SUCCESS"
else:
    return "FAILED"
```

9. Summary

- User Deposit: Call UnifiedOrder (TransactionType=1).

- User Withdrawal: Call UnifiedOrder (TransactionType=2).

- Always handle Callback properly.

- Use GetBalance API to show current funds.

- Use Payment Result Query for manual checks.

Best practice: Store transaction IDs and always verify callback signatures.