

Documentation Mapping JSON to SQL:

Table: customers

SQL Column	Type	JSON KEY	Description
customer_id	INT	customer_id	Unique identifier for the customer. Primary key.
first_name	VARCHAR	first_name	Customer's first name
last_name	VARCHAR	last_name	Customers' last name
phone_number	VARCHAR	phone_number	Customer's phone number
email	VARCHAR	email	Customer's email
created_at	DATETIME	created_at	Timestamp when the customer was created.

Json snippet

```
{
  "data": [
    {
      "from": "customers",
      "customer_id": 1,
```

```
"first_name": "John",

"last_name": "Doe",

"email": "john.doe@example.com",

"phone_number": "250700111111"

}
```

Table: savings_account

SQL Column	Type	JSON Key	Description
account_id	INT	account_id	Unique ID of the savings account. Primary key
customer_id	INT	customer_id	References the owning customer.
balance	DECIMAL	balance	Current balance of the account.
currency	VARCHAR	currency	Currency type (e.g., USD, RWF).
description	VARCHAR	description	Optional description of the account.

Visual JSON snippet (nested under customer):

```
{
  "comment": "4. get a user's savings account for user id 1",
  "data": [
    {
      "from": "savings_account",
```

```
"account_id": 1,
"customer_id": 1,
"saving_details": {
  "MoKash": {
    "balance": 15085456,
    "currency": "RWF"
  }
},
"last_updated": "2025-09-05"
}
]
```

Table: transaction_category

SQL Column	Type	Json Key	Description
category_id	INT	category_id	Unique Identifier for the transaction category
customer_id	INT	customer_id	References the customer
transaction_type	VARCHAR	transaction_type	Type of transaction

```
{
  "transaction_id": 1,
  "Customer_id": 1,
  "transaction_category": {
    "category_id": 1,
    "transaction_type": "salary"
  }
}
```

Table: expense

SQL Column	Type	JSON Key	Description
transaction_id	INT	transaction_id	Unique ID of the transaction. Primary key.
sms_id	INT	sms_id	References related SMS.
customer_id	INT	customer_id	References the customer.
transaction_type	VARCHAR	transaction_type	Type of transaction
beneficiary_name	VARCHAR	beneficiary.name	Name of the transaction recipient.
beneficiary_phone_number	VARCHAR	beneficiary.phone_number	Phone number of recipient.
transaction_date	DATETIME	transaction_date	Date and time of transaction.
amount	DECIMAL	transaction_details.amount	Amount of money transferred.
fee_paid	DECIMAL	transaction_details.fee_paid	Transaction fee.
balance_after	DECIMAL	transaction_details.balance_after	Account balance after transaction.
currency	VARCHAR	transaction_details.currency	Transaction currency.

{

"from": "expense",

"transaction_id": 1,

"sms_id": 1,

```
"customer_id": 1,  
  
"transaction_details": {  
  
  "amount": 20.00,  
  
  "fee_paid": 0.50,  
  
  "currency": "RWF",  
  
  "transaction_date": "2025-09-05"  
  
},  
  
"transaction_type": "bill_payment",  
  
"receiver_details": {  
  
  "beneficiary_name": "Kigali Supermarket",  
  
  "phone_number_code": "0009856"  
  
},  
  
"type_of_transaction": "M-Money"  
  
}
```

Table: income

SQL Column	Type	JSON Key	Description
transaction_id	INT	transaction_id	Unique ID of the transaction. Primary key.
sms_id	INT	sms_id	References related SMS.
customer_id	INT	customer_id	References the customer.
transaction_type	VARCHAR	transaction_type	Type of transaction.
sender_name	VARCHAR	sender.name	Name of sender.
sender_phone_number	VARCHAR	sender.phone_number	Sender phone number.
transaction_date	DATETIME	transaction_date	Date and time of transaction.
amount	DECIMAL	transaction_details.amount	Amount received.
fee_paid	DECIMAL	transaction_details.fee_paid	Fee paid for transaction.
balance_after	DECIMAL	transaction_details.balance_after	Balance after transaction.
currency	VARCHAR	transaction_details.currency	Currency of transaction.

Json snipet

```
{
  "from": "income",
  "transaction_id": 1,
  "sms_id": 3,
  "customer_id": 1,
  "transaction_details": {
    "amount": 12500.00,
    "fee_paid": 120.00,
    "currency": "RWF",
    "transaction_date": "2025-09-05"
```

```
    },
    "transaction_type": "salary",
    "sender_details": {
      "sender_name": "Alice Johnson",
      "sender_phone_number_code": "xxx256"
    },
    "type_of_transaction": "M-Money"
  }
}
```

Table: sms

SQL Column	Type	JSON KEY	DESCRIPTION
sms_id	INT	sms_id	Unique SMS ID. Primary Key
customer_id	INT	customer_id	References customer
address	VARCHAR	sms_details.address	M-Money
type	VARCHAR	sms_details.type	SMS type (incoming/outgoing)
service_center	VARCHAR	service_center	SMS service center
body	VARCHAR	sms_details.body	Message content
date_sent	DATETIME	sms_details.date_sent	When SMS was sent.

Json snippet

```
{
  "from": "sms",
  "sms_id": 1,
```

```
"customer_id": 1,
"sms_details": {
  "address": "M-Money",
  "type": "incoming",
  "body": "You have received 12500 RWF from Alice Johnson with number
xxxx25690"
},
"service_center": "MTN Center",
"date_sent": "2025-09-05"
}
```

Table: system_logs

SQL Column	Type	Json Key	Description
log_id	INT	log_id	Unique IF of log entry. Primary Key
transaction_id	INT	transaction_id	References transaction
Status	VARCHAR	status	Processing status
created_at	DATETIME	created_at	Timestamp when the log was created

Visual JSON snippet:

```
"system_logs": {
  "log_id": 2001,
  "status": "processed",
```



```
"transaction_id": 202,  
"created_at": "2025-09-20 09:16:00"  
}
```

Full transaction JSON visual representation

transaction (income/expense)

```
|— transaction_id  
|— transaction_date  
|— amount  
|— fee_paid  
|— balance_after  
|— currency  
|— sender / beneficiary  
|  |— name  
|  |— phone_number  
|— customer  
|  |— customer_id  
|  |— first_name  
|  |— last_name  
|  |— phone_number  
|  |— email  
|  |— savings_account  
|    |— account_id  
|    |— balance  
|    |— currency  
|    |— description  
|— transaction_category  
|  |— category_id  
|  |— transaction_type  
|— sms
```

- | | └─ sms_id
- | | └─ address
- | | └─ type
- | | └─ service_center
- | | └─ date_sent
- | | └─ body
- └─ system_logs
 - └─ log_id
 - └─ status
 - └─ created_at