# FUNCTIONAL SPECIFICATION DOCUMENT

Dans Multi Pro - Tokopedia Virtual Account

# FUNCTIONAL SPECIFICATION DOCUMENT

**Status** : Final

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# DOCUMENT HISTORY

| Date | Document Version | Description |
|------|------------------|-------------|
| Jan 14, 2026 | 1.0 | Create Functional Specification Document – Tokopedia Virtual Account v.1.0 |

# 1 INTRODUCTION

## 1.1 Purpose

This document aims to define the functional specifications of the product purchase feature using a Virtual Account (VA) payment method in the Tokopedia application, where the transaction is recorded and completed without an actual payment being made by the user.

## 1.2 Scope

The scope of this document includes order creation, selection of the Virtual Account payment method, VA number generation, and transaction status (paid or completion without payment). Actual bank payment integration is excluded from this scope.

## 1.3 References

The reference documents used in the preparation of this document are:

1. Business Requirement Document (BRD) from Business Analyst Team
2. Tokopedia mobile application user guidance

## 1.4 Definitions, Acronyms, and Abbreviations

| Term | Definition |
|------|------------|
| VA | Virtual Account |
| User | Tokopedia Application User |
| Order | User-created order |

# 2  APPLICATION OVERVIEW

## 2.1  Description

Tokopedia is an e-commerce platform that enables users to purchase products online using various payment methods, including Virtual Account.

## 2.2  Configuration

- Platform: Mobile
- Backend: Tokopedia backend services
- Third-Party: Virtual Account systems

## 2.3 Business Requirements

### 2.3.1 System Actors

The system actors involved in Virtual Account payment in the Tokopedia application are:

a. User: The customer who performs the purchase process and selects Virtual Account as the payment method.

b. Tokopedia System: The Tokopedia application system that manages orders, payments, and transaction status.

c. VA System: The Virtual Account provider system that generates VA numbers for transactions.

### 2.3.2 Use Case List

1. **Create Order:** This use case describes the process in which the user selects a product and creates an order in the Tokopedia application until the system successfully records the order.

   Actor: User

   Pre-condition: The user has logged in to the application and the product is available for purchase.

   Post-condition: The order is successfully created with Pending Payment status.

2. **Select Virtual Account Payment Method:** This use case describes the user action of selecting the Virtual Account payment method on the checkout page.

   Actor: User

   Pre-condition: The order has been created, The user is on the payment page.

   Post-condition: The Virtual Account payment method is recorded in the order.

3. **Receive Virtual Account Number:** This use case describes the system process of generating and displaying a Virtual Account number to the user after the payment method is selected.

   Actor: Tokopedia System, Virtual Account System

Pre-condition: The Virtual Account payment method has been selected.

Post-condition: The Virtual Account number is displayed to the user and The Virtual Account expiration time is defined by the system.

4. **Complete Transaction Without Payment:** This use case describes the condition in which the transaction is marked as completed by the system even though no payment is made by the user.
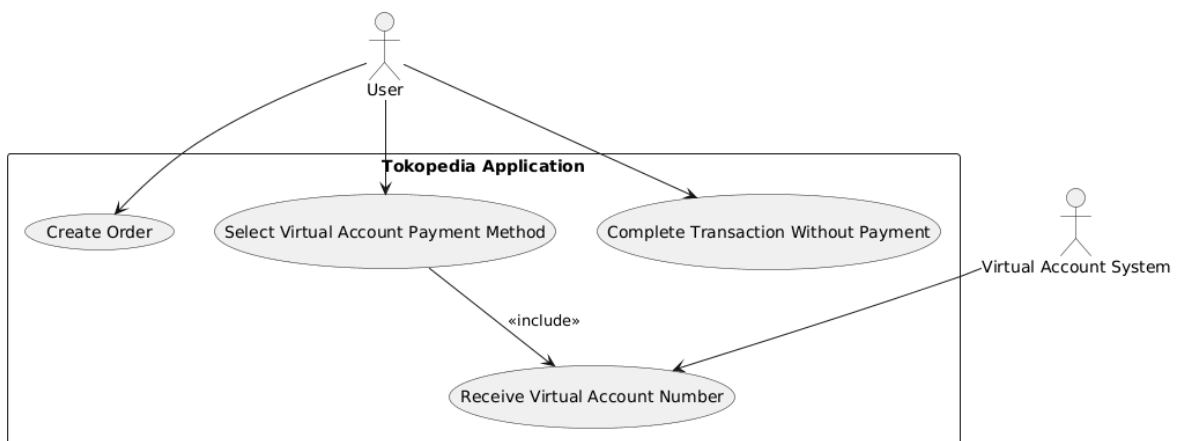
Actor: Tokopedia System

Pre-condition: The Virtual Account has expired and no payment has been received.

Post-condition: The transaction status is updated to Completed or Closed.

### 2.3.3   Use Case Diagram

The Use Case Diagram illustrates the relationship between the User and the Tokopedia System in the purchase process using a Virtual Account. The diagram includes use cases such as creating an order, selecting the Virtual Account payment method, receiving a Virtual Account number, and completing the transaction without payment.
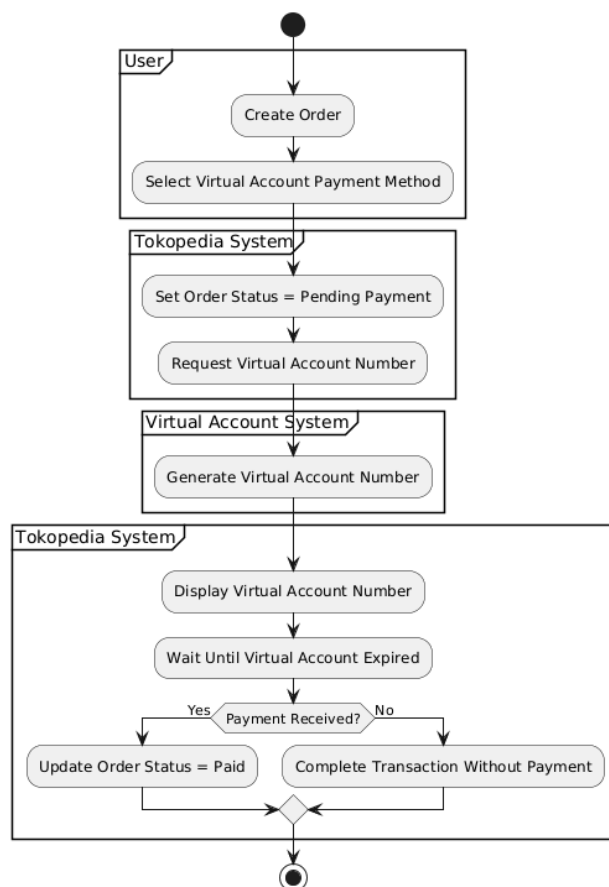
## 2.4  Functional Flow

### 2.4.1  Process Flow Description

The process starts when the user selects a product and proceeds to checkout. After the order is created, the user selects Virtual Account as the payment method. The system then generates a Virtual Account number and stores the transaction data. If no payment occurs within a defined period, the system automatically marks the transaction as completed without payment.

### 2.4.2  Flow Activity Diagram

The process starts when the user selects a product and proceeds to checkout. After the order is created, the user selects Virtual Account as the payment method. The system then generates a Virtual Account number and stores the transaction data. If no payment occurs within a defined period, the system automatically marks the transaction as completed without payment.
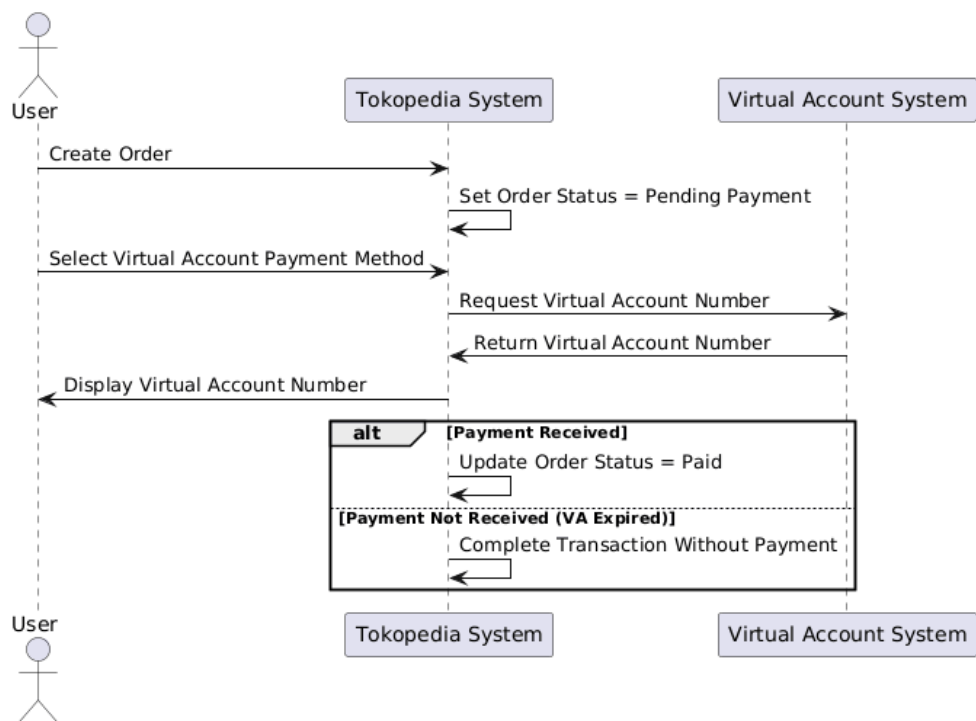
### 2.4.3 Sequence Diagram

This Sequence Diagram illustrates the interaction flow between the User, Tokopedia System, and Virtual Account System during a purchase using the Virtual Account payment method.

The user creates an order and selects Virtual Account as the payment method. The Tokopedia system records the order as Pending Payment and requests a Virtual Account number from the Virtual Account system, which is then displayed to the user.

If payment is received before expiration, the order status is updated to Paid. Otherwise, the transaction is completed without payment and marked as Completed or Closed.

## 2.5 Field Table

Field Table of Tokopedia Application:

| Field Name | Description | Required |
|---|---|---|
| order_id | Order unique ID | Yes |
| va_number | Virtual Account number | Yes |
| payment_method | Payment method | Yes |
| transaction_status | Transaction status | Yes |
| expired_time | Virtual Account expired time | Yes |

## 2.6 Business Rules

Business Rules of Tokopedia application:

| Code | Description |
|---|---|
| BR-01 | Virtual Account numbers have an expiration time |
| BR-02 | Transactions may be completed without payment |
| BR-03 | Transaction status is updated automatically by the system |

## 2.7 Error Handling and Validation

Error Handling and Validation of Tokopedia application:

a. The system displays an error message if VA generation fails
b. Order data validation is performed
c. The system handles VA service timeouts