

# QShelter Mortgage Flow - Complete API Documentation

**Version:** 1.0

**Last Updated:** January 25, 2026

**Environment:** AWS Staging

## Executive Summary

This document describes the complete end-to-end mortgage application flow for the QShelter platform. It follows the journey of **Chidi Nnamdi**, a 40-year-old first-time homebuyer purchasing a ₦85,000,000 3-bedroom flat at **Lekki Gardens Estate** in Lagos, Nigeria.

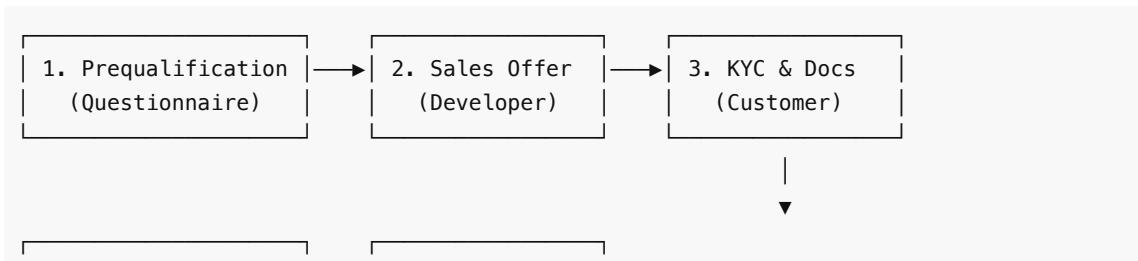
## Key Actors

Actor	Role	Organization	Email
<b>Adaeze Okonkwo</b>	Mortgage Operations Officer	QShelter	<a href="mailto:adaeze@mailsac.com">adaeze@mailsac.com</a>
<b>Chidi Nnamdi</b>	Customer (Buyer)	—	<a href="mailto:chidi@mailsac.com">chidi@mailsac.com</a>
<b>Emeka Okafor</b>	Developer Rep	Lekki Gardens	<a href="mailto:emecka@mailsac.com">emecka@mailsac.com</a>
<b>Nkechi Adebayo</b>	Loan Officer	Access Bank	<a href="mailto:nkechi@mailsac.com">nkechi@mailsac.com</a>

## Property Details

Field	Value
Property	Lekki Gardens Estate, Phase 3
Unit	14B (Block B, Floor 14)
Type	3-Bedroom Flat
Size	150 sqm
Price	₦85,000,000
Downpayment	10% (₦8,500,000)
Mortgage	90% (₦76,500,000)

## Application Phases





## Service Endpoints

Service	Base URL
User Service	<a href="https://[user-api-id].execute-api.us-east-1.amazonaws.com">https://[user-api-id].execute-api.us-east-1.amazonaws.com</a>
Property Service	<a href="https://[property-api-id].execute-api.us-east-1.amazonaws.com">https://[property-api-id].execute-api.us-east-1.amazonaws.com</a>
Mortgage Service	<a href="https://[mortgage-api-id].execute-api.us-east-1.amazonaws.com">https://[mortgage-api-id].execute-api.us-east-1.amazonaws.com</a>

## Phase 1: System Bootstrap

### Step 1.1: Bootstrap Tenant

Creates the tenant, default roles, and admin user.

**Endpoint:** POST /admin/bootstrap-tenant

**Service:** User Service

**Authentication:** Bootstrap Secret Header

#### Request Headers

```
x-bootstrap-secret: {{bootstrapSecret}}
Content-Type: application/json
```

#### Request Body

```
{
  "tenant": {
    "name": "QShelter Real Estate",
    "subdomain": "qshelter"
  },
  "admin": {
    "email": "adaeze@mailsac.com",
    "password": "SecureAdmin123!",
    "firstName": "Adaeze",
    "lastName": "Okonkwo"
  }
}
```

#### Response (201 Created)

```
{
  "tenant": {
    "id": "cm...",
    "name": "QShelter Real Estate",
    "subdomain": "qshelter"
  }
}
```

```
        "subdomain": "qshelter",
        "isNew": true
    },
    "admin": {
        "id": "cm...",
        "email": "adaeze@mailsac.com",
        "isNew": true
    },
    "roles": [
        { "id": "...", "name": "admin", "isNew": true, "permissionsCount": 1 },
        { "id": "...", "name": "user", "isNew": true, "permissionsCount": 6 },
        { "id": "...", "name": "DEVELOPER", "isNew": true, "permissionsCount": 6 },
        { "id": "...", "name": "LENDER", "isNew": true, "permissionsCount": 6 }
    ],
    "syncTriggered": true
}
```

---

## Step 1.2: Admin Login

**Endpoint:** POST /auth/login

**Service:** User Service

**Authentication:** None

### Request Body

```
{
    "email": "adaeze@mailsac.com",
    "password": "SecureAdmin123!"
}
```

### Response (200 OK)

```
{
    "success": true,
    "data": {
        "accessToken": "eyJhbGciOiJIUzI1NiIs...",
        "refreshToken": "...",
        "user": {
            "id": "cm...",
            "email": "adaeze@mailsac.com",
            "firstName": "Adaeze",
            "lastName": "Okonkwo"
        }
    }
}
```

---

## Phase 2: Customer Registration

## Step 2.1: Customer Signup

Chidi creates his account on the platform.

**Endpoint:** POST /auth/signup

**Service:** User Service

**Authentication:** None

### Request Body

```
{  
  "email": "chidi@mailsac.com",  
  "password": "CustomerPass123!",  
  "firstName": "Chidi",  
  "lastName": "Nnamdi",  
  "tenantId": "{{tenantId}}"  
}
```

### Response (201 Created)

```
{  
  "success": true,  
  "data": {  
    "accessToken": "eyJhbGciOiJIUzI1NiIs... ",  
    "user": {  
      "id": "cm...",  
      "email": "chidi@mailsac.com",  
      "firstName": "Chidi",  
      "lastName": "Nnamdi"  
    }  
  }  
}
```

---

## Phase 2.5: Partner Setup

### Step 2.5.1: Create Developer Organization (Lekki Gardens)

**Endpoint:** POST /organizations

**Service:** User Service

**Authentication:** Bearer Token (Admin)

### Request Headers

```
Authorization: Bearer {{adminAccessToken}}  
Content-Type: application/json  
x-idempotency-key: create-lekki-gardens
```

### Request Body

```
{  
  "name": "Lekki Gardens Development Company",  
  "type": "DEVELOPER",  
  "email": "lekkigardens@mailsac.com",  
  "phone": "+234-1-453-0000",  
  "address": "Lekki-Epe Expressway, Lekki, Lagos",  
  "city": "Lekki",  
  "state": "Lagos",  
  "country": "Nigeria",  
  "cacNumber": "RC-123456",  
  "description": "Premium property developer in Lagos"  
}
```

#### Response (201 Created)

```
{  
  "success": true,  
  "data": {  
    "id": "cm...",  
    "name": "Lekki Gardens Development Company",  
    "type": "DEVELOPER",  
    "status": "ACTIVE"  
  }  
}
```

---

#### Step 2.5.2: Create Developer User (Emeka)

**Endpoint:** POST /auth/signup

**Service:** User Service

#### Request Body

```
{  
  "email": "emeka@mailsac.com",  
  "password": "DeveloperPass123!",  
  "firstName": "Emeka",  
  "lastName": "Okafor",  
  "tenantId": "{{tenantId}}"  
}
```

---

#### Step 2.5.3: Add Emeka to Lekki Gardens

**Endpoint:** POST /organizations/{{lekkiGardensOrgId}}/members

**Service:** User Service

**Authentication:** Bearer Token (Admin)

#### Request Body

```
{  
  "userId": "{{emekaId}}",  
  "role": "OFFICER",  
  "title": "Sales Manager",  
  "department": "Sales",  
  "canApprove": true  
}
```

---

#### Step 2.5.4: Create Bank Organization (Access Bank)

**Endpoint:** POST /organizations

**Service:** User Service

**Authentication:** Bearer Token (Admin)

##### Request Body

```
{  
  "name": "Access Bank PLC",  
  "type": "BANK",  
  "email": "mortgages@mailsac.com",  
  "phone": "+234-1-280-2800",  
  "address": "999c Danmole Street, Victoria Island, Lagos",  
  "bankCode": "044",  
  "swiftCode": "ABNGNGLA",  
  "description": "Leading Nigerian commercial bank"  
}
```

---

#### Step 2.5.5: Create Lender User (Nkechi)

**Endpoint:** POST /auth/signup

**Service:** User Service

##### Request Body

```
{  
  "email": "nkechi@mailsac.com",  
  "password": "LenderPass123!",  
  "firstName": "Nkechi",  
  "lastName": "Adebayo",  
  "tenantId": "{{tenantId}}"  
}
```

---

#### Step 2.5.6: Add Nkechi to Access Bank

**Endpoint:** POST /organizations/{{accessBankOrgId}}/members

**Service:** User Service

**Authentication:** Bearer Token (Admin)

## Request Body

```
{  
  "userId": "{{nkechiId}}",  
  "role": "MANAGER",  
  "title": "Mortgage Loan Officer",  
  "department": "Retail Banking",  
  "canApprove": true,  
  "approvalLimit": 500000000  
}
```

## Phase 3: Property Setup

### Step 3.1: Create Property

**Endpoint:** POST /property/properties

**Service:** Property Service

**Authentication:** Bearer Token (Admin)

## Request Body

```
{  
  "title": "Lekki Gardens Estate",  
  "description": "Premium residential estate in Lekki Phase 1",  
  "category": "SALE",  
  "propertyType": "APARTMENT",  
  "country": "Nigeria",  
  "currency": "NGN",  
  "city": "Lagos",  
  "district": "Lekki"  
}
```

## Response (201 Created)

```
{  
  "success": true,  
  "data": {  
    "id": "cm...",  
    "title": "Lekki Gardens Estate",  
    "status": "DRAFT"  
  }  
}
```

### Step 3.2: Create Property Variant

**Endpoint:** POST /property/properties/{{propertyId}}/variants

**Service:** Property Service

**Authentication:** Bearer Token (Admin)

#### Request Body

```
{  
  "name": "3-Bedroom Flat",  
  "nBedrooms": 3,  
  "nBathrooms": 3,  
  "nParkingSpots": 1,  
  "area": 150,  
  "price": 8500000,  
  "totalUnits": 20,  
  "availableUnits": 15  
}
```

#### Step 3.3: Create Property Unit

**Endpoint:** POST /property/properties/{{propertyId}}/variants/{{variantId}}/units

**Service:** Property Service

**Authentication:** Bearer Token (Admin)

#### Request Body

```
{  
  "unitNumber": "14B",  
  "floorNumber": 14,  
  "blockName": "Block B"  
}
```

#### Step 3.4: Publish Property

**Endpoint:** PATCH /property/properties/{{propertyId}}/publish

**Service:** Property Service

**Authentication:** Bearer Token (Admin)

#### Response (200 OK)

```
{  
  "success": true,  
  "data": {  
    "id": "cm...",  
    "status": "PUBLISHED"  
  }  
}
```

### Phase 4: Payment Configuration

#### Step 4.1: Create Downpayment Plan

**Endpoint:** POST /payment-plans

**Service:** Mortgage Service

**Authentication:** Bearer Token (Admin)

#### Request Body

```
{  
  "name": "10% One-Off Downpayment",  
  "description": "Single payment for 10% downpayment",  
  "frequency": "ONE_TIME",  
  "numberOfInstallments": 1,  
  "interestRate": 0,  
  "gracePeriodDays": 0  
}
```

### Step 4.2: Create Prequalification Questionnaire Plan

**Endpoint:** POST /questionnaire-plans

**Service:** Mortgage Service

**Authentication:** Bearer Token (Admin)

#### Request Body

```
{  
  "name": "Mortgage Prequalification",  
  "description": "Collects applicant age and income to validate mortgage  
eligibility",  
  "isActive": true,  
  "passingScore": 100,  
  "scoringStrategy": "MIN_ALL",  
  "autoDecisionEnabled": false,  
  "estimatedMinutes": 5,  
  "category": "PREQUALIFICATION",  
  "questions": [  
    {  
      "questionKey": "applicant_age",  
      "questionText": "What is your current age?",  
      "questionType": "NUMBER",  
      "order": 1,  
      "isRequired": true,  
      "validationRules": { "min": 18, "max": 59 },  
      "scoringRules": [  
        { "operator": "LESS_THAN_OR_EQUAL", "value": 55, "score": 100 },  
        { "operator": "GREATER_THAN", "value": 55, "score": 0 }  
      ],  
      "scoreWeight": 1,  
      "category": "ELIGIBILITY"  
    },  
    {  
      "questionKey": "monthly_income",  
      "questionText": "What is your monthly income?",  
      "questionType": "NUMBER",  
      "order": 2,  
      "isRequired": true,  
      "validationRules": { "min": 0, "max": 10000 },  
      "scoringRules": [  
        { "operator": "GREATER_THAN", "value": 5000, "score": 100 },  
        { "operator": "LESS_THAN_OR_EQUAL", "value": 5000, "score": 0 }  
      ],  
      "scoreWeight": 1,  
      "category": "ELIGIBILITY"  
    }  
  ]  
}
```

```

        "questionText": "What is your monthly gross income?",
        "questionType": "CURRENCY",
        "order": 4,
        "isRequired": true,
        "scoringRules": [
            { "operator": "GREATER_THAN_OR_EQUAL", "value": 500000, "score": 100 },
            { "operator": "LESS_THAN", "value": 500000, "score": 0 }
        ],
        "scoreWeight": 1,
        "category": "AFFORDABILITY"
    }
]
}

```

### Step 4.3: Create Sales Offer Documentation Plan

**Endpoint:** POST /documentation-plans

**Service:** Mortgage Service

**Authentication:** Bearer Token (Admin)

#### Request Body

```
{
    "name": "Sales Offer Documentation",
    "description": "Developer uploads sales offer letter",
    "isActive": true,
    "documentDefinitions": [
        {
            "documentType": "SALES_OFFER_LETTER",
            "documentName": "Sales Offer Letter",
            "uploadedBy": "DEVELOPER",
            "order": 1,
            "isRequired": true,
            "description": "Sales offer letter prepared by the property developer",
            "maxSizeBytes": 10485760,
            "allowedMimeTypes": ["application/pdf"]
        }
    ],
    "approvalStages": [
        {
            "name": "Developer Document Verification",
            "order": 1,
            "reviewParty": "DEVELOPER",
            "autoTransition": true,
            "waitForAllDocuments": true,
            "onRejection": "CASCADE_BACK"
        }
    ]
}
```

## Step 4.4: Create KYC Documentation Plan

**Endpoint:** POST /documentation-plans

**Service:** Mortgage Service

**Authentication:** Bearer Token (Admin)

### Request Body

```
{
  "name": "Mortgage KYC Documentation",
  "description": "Standard KYC documentation workflow",
  "isActive": true,
  "documentDefinitions": [
    {
      "documentType": "ID_CARD",
      "documentName": "Valid ID Card",
      "uploadedBy": "CUSTOMER",
      "order": 1,
      "isRequired": true
    },
    {
      "documentType": "BANK_STATEMENT",
      "documentName": "Bank Statements",
      "uploadedBy": "CUSTOMER",
      "order": 2,
      "isRequired": true
    },
    {
      "documentType": "EMPLOYMENT_LETTER",
      "documentName": "Employment Letter",
      "uploadedBy": "CUSTOMER",
      "order": 3,
      "isRequired": true
    },
    {
      "documentType": "PREAPPROVAL_LETTER",
      "documentName": "Preapproval Letter",
      "uploadedBy": "LENDER",
      "order": 4,
      "isRequired": true
    }
  ],
  "approvalStages": [
    {
      "name": "QShelter Staff Review",
      "order": 1,
      "reviewParty": "INTERNAL",
      "slaHours": 24
    },
    {
      "name": "Bank Review",
      "order": 2,
      "reviewParty": "EXTERNAL",
      "slaHours": 48
    }
  ]
}
```

```
        "order": 2,
        "reviewParty": "BANK",
        "slaHours": 48
    },
]
}
```

---

#### Step 4.5: Create Mortgage Offer Documentation Plan

**Endpoint:** POST /documentation-plans

**Service:** Mortgage Service

**Authentication:** Bearer Token (Admin)

##### Request Body

```
{
  "name": "Mortgage Offer Documentation",
  "description": "Bank (lender) uploads mortgage offer letter",
  "isActive": true,
  "documentDefinitions": [
    {
      "documentType": "MORTGAGE_OFFER_LETTER",
      "documentName": "Mortgage Offer Letter",
      "uploadedBy": "LENDER",
      "order": 1,
      "isRequired": true
    }
  ],
  "approvalStages": [
    {
      "name": "Bank Document Upload",
      "order": 1,
      "reviewParty": "BANK",
      "autoTransition": true
    }
  ]
}
```

---

#### Step 4.6: Create Payment Method (5 Phases)

**Endpoint:** POST /payment-methods

**Service:** Mortgage Service

**Authentication:** Bearer Token (Admin)

##### Request Body

```
{
  "name": "10/90 Lekki Mortgage",
  "description": "Prequalification → Sales Offer → KYC → Downpayment → Mortgage Offer",
```

```

"requiresManualApproval": true,
"phases": [
  {
    "name": "Prequalification",
    "phaseCategory": "QUESTIONNAIRE",
    "phaseType": "PRE_APPROVAL",
    "order": 1,
    "questionnairePlanId": "{{prequalificationPlanId}}"
  },
  {
    "name": "Sales Offer",
    "phaseCategory": "DOCUMENTATION",
    "phaseType": "VERIFICATION",
    "order": 2,
    "documentationPlanId": "{{salesOfferDocPlanId}}"
  },
  {
    "name": "Preapproval Documentation",
    "phaseCategory": "DOCUMENTATION",
    "phaseType": "KYC",
    "order": 3,
    "documentationPlanId": "{{kycDocPlanId}}"
  },
  {
    "name": "10% Downpayment",
    "phaseCategory": "PAYMENT",
    "phaseType": "DOWNPAYMENT",
    "order": 4,
    "percentOfPrice": 10,
    "paymentPlanId": "{{downpaymentPlanId}}"
  },
  {
    "name": "Mortgage Offer",
    "phaseCategory": "DOCUMENTATION",
    "phaseType": "VERIFICATION",
    "order": 5,
    "documentationPlanId": "{{mortgageOfferDocPlanId}}"
  }
]
}

```

### Step 4.7: Link Payment Method to Property

**Endpoint:** POST /payment-methods/{{paymentMethodId}}/properties

**Service:** Mortgage Service

**Authentication:** Bearer Token (Admin)

#### Request Body

```
{
  "propertyId": "{{propertyId}}",
```

```
        "isDefault": true  
    }  
}
```

## Phase 5: Customer Application

### Step 5.1: Chidi Creates Application

**Endpoint:** POST /applications

**Service:** Mortgage Service

**Authentication:** Bearer Token (Customer - Chidi)

#### Request Body

```
{  
    "propertyUnitId": "{{unitId}}",  
    "paymentMethodId": "{{paymentMethodId}}",  
    "title": "Purchase Agreement - Lekki Gardens Unit 14B",  
    "applicationType": "MORTGAGE",  
    "totalAmount": 85000000,  
    "monthlyIncome": 2500000,  
    "monthlyExpenses": 800000,  
    "applicantAge": 40  
}
```

#### Response (201 Created)

```
{  
    "success": true,  
    "data": {  
        "id": "cm...",  
        "title": "Purchase Agreement - Lekki Gardens Unit 14B",  
        "status": "PENDING",  
        "totalAmount": 85000000,  
        "phases": [  
            {  
                "id": "...",  
                "name": "Prequalification",  
                "order": 1,  
                "status": "IN_PROGRESS"  
            },  
            { "id": "...", "name": "Sales Offer", "order": 2, "status": "PENDING" },  
            {  
                "id": "...",  
                "name": "Preapproval Documentation",  
                "order": 3,  
                "status": "PENDING"  
            },  
            {  
                "id": "...",  
                "name": "10% Downpayment",  
                "order": 4,  
                "status": "PENDING"  
            }  
        ]  
    }  
}
```

```

        "order": 4,
        "status": "PENDING",
        "totalAmount": 8500000
    },
    { "id": "...", "name": "Mortgage Offer", "order": 5, "status": "PENDING" }
]
}
}

```

## Phase 6: Prequalification Questionnaire

### Step 6.1: Chidi Submits Questionnaire Answers

**Endpoint:** POST

/applications/{{applicationId}}/phases/{{prequalificationPhaseId}}/questionnaire/submit

**Service:** Mortgage Service

**Authentication:** Bearer Token (Customer - Chidi)

#### Request Body

```
{
  "answers": [
    { "fieldName": "applicant_age", "value": "40" },
    { "fieldName": "mortgage_type", "value": "SINGLE" },
    { "fieldName": "employment_status", "value": "EMPLOYED" },
    { "fieldName": "monthly_income", "value": "2500000" },
    { "fieldName": "monthly_expenses", "value": "800000" },
    { "fieldName": "desired_term_years", "value": "20" }
  ]
}
```

#### Response (200 OK)

```
{
  "success": true,
  "data": {
    "phaseId": "...",
    "status": "AWAITING_APPROVAL",
    "score": 100,
    "passingScore": 100,
    "passed": true
  }
}
```

### Step 6.2: Admin Approves Prequalification

**Endpoint:** POST

/applications/{{applicationId}}/phases/{{prequalificationPhaseId}}/questionnaire/review

**Service:** Mortgage Service  
**Authentication:** Bearer Token (Admin)

#### Request Body

```
{  
  "decision": "APPROVE",  
  "notes": "Chidi meets all eligibility criteria. Approved for mortgage."  
}
```

#### Response (200 OK)

```
{  
  "success": true,  
  "data": {  
    "phaseId": "...",  
    "status": "COMPLETED"  
  }  
}
```

---

## Phase 7: Sales Offer

### Step 7.1: Developer Uploads Sales Offer Letter

**Endpoint:** POST /applications/{{applicationId}}/phases/{{salesOfferPhaseId}}/documents

**Service:** Mortgage Service

**Authentication:** Bearer Token (Developer - Emeka)

#### Request Body

```
{  
  "documentType": "SALES_OFFER_LETTER",  
  "url": "https://s3.amazonaws.com/qshelter/developer/sales-offer-chidi.pdf",  
  "fileName": "sales-offer-letter.pdf"  
}
```

#### Response (201 Created)

```
{  
  "success": true,  
  "data": {  
    "id": "...",  
    "documentType": "SALES_OFFER_LETTER",  
    "status": "UPLOADED"  
  }  
}
```

**Note:** Phase auto-completes when developer uploads the required document.

---

## Phase 8: KYC Documentation (Two-Stage Review)

**Important:** KYC documents go through a **two-stage approval workflow**:

1. **Stage 1 (Internal):** Adaeze (QShelter Mortgage Operations Officer) reviews documents first
2. **Stage 2 (Bank):** Nkechi (Access Bank Loan Officer) reviews documents after internal approval

The phase only completes when both stages have approved all documents.

### Step 8.1: Chidi Uploads KYC Documents

Customer uploads three documents:

**Endpoint:** POST /applications/{{applicationId}}/phases/{{kycPhaseId}}/documents

**Service:** Mortgage Service

**Authentication:** Bearer Token (Customer - Chidi)

#### Document 1: ID Card

```
{  
  "documentType": "ID_CARD",  
  "url": "https://s3.amazonaws.com/qshelter/chidi/id.pdf",  
  "fileName": "id.pdf"  
}
```

#### Document 2: Bank Statements

```
{  
  "documentType": "BANK_STATEMENT",  
  "url": "https://s3.amazonaws.com/qshelter/chidi/bank.pdf",  
  "fileName": "bank.pdf"  
}
```

#### Document 3: Employment Letter

```
{  
  "documentType": "EMPLOYMENT_LETTER",  
  "url": "https://s3.amazonaws.com/qshelter/chidi/employment.pdf",  
  "fileName": "employment.pdf"  
}
```

---

### Step 8.2: Stage 1 - Adaeze (Internal) Reviews Documents

QShelter Mortgage Operations Officer performs internal verification.

**Endpoint:** POST /applications/{{applicationId}}/documents/{{documentId}}/review

**Service:** Mortgage Service

**Authentication:** Bearer Token (Adaeze - Mortgage Operations Officer)

#### Request Body (for each document)

```
{  
  "status": "APPROVED",  
  "note": "Internal review: Document verified by QShelter Mortgage Operations",  
  "reviewParty": "INTERNAL"  
}
```

### Step 8.3: Stage 2 - Nkechi (Bank) Reviews Documents

After internal approval, Access Bank Loan Officer performs bank-level verification.

**Endpoint:** POST /applications/{{applicationId}}/documents/{{documentId}}/review

**Service:** Mortgage Service

**Authentication:** Bearer Token (Nkechi - Access Bank Loan Officer)

#### Request Body (for each document)

```
{  
  "status": "APPROVED",  
  "note": "Bank review: Document approved by Access Bank lending team",  
  "reviewParty": "BANK"  
}
```

### Step 8.4: Nkechi Uploads Preapproval Letter

**Endpoint:** POST /applications/{{applicationId}}/phases/{{kycPhaseId}}/documents

**Service:** Mortgage Service

**Authentication:** Bearer Token (Lender - Nkechi)

#### Request Body

```
{  
  "documentType": "PREAPPROVAL_LETTER",  
  "url": "https://s3.amazonaws.com/qshelter/lender/preapproval-chidi.pdf",  
  "fileName": "preapproval-letter.pdf"  
}
```

**Note:** Phase completes when all documents are uploaded AND approved by both stages (Internal + Bank).

## Phase 9: Downpayment

### Step 9.1: Generate Downpayment Installment

**Endpoint:** POST

/applications/{{applicationId}}/phases/{{downpaymentPhaseId}}/installments

**Service:** Mortgage Service

**Authentication:** Bearer Token (Customer - Chidi)

#### Request Body

```
{  
  "startDate": "2026-01-25T00:00:00.000Z"  
}
```

#### Response (200 OK)

```
{  
  "success": true,  
  "data": {  
    "installments": [  
      {  
        "id": "...",  
        "amount": 8500000,  
        "dueDate": "2026-01-25T00:00:00.000Z",  
        "status": "PENDING"  
      }  
    ]  
  }  
}
```

### Step 9.2: Chidi Makes Payment

**Endpoint:** POST /applications/{{applicationId}}/payments

**Service:** Mortgage Service

**Authentication:** Bearer Token (Customer - Chidi)

#### Request Body

```
{  
  "phaseId": "{{downpaymentPhaseId}}",  
  "installmentId": "{{downpaymentInstallmentId}}",  
  "amount": 8500000,  
  "paymentMethod": "BANK_TRANSFER",  
  "externalReference": "TRF-CHIDI-DOWNPAYMENT-001"  
}
```

#### Response (201 Created)

```
{  
  "success": true,  
  "data": {  
    "id": "...",  
    "reference": "PAY-...",  
    "amount": 8500000,  
    "status": "PENDING"  
  }  
}
```

### Step 9.3: Process Payment Confirmation

**Endpoint:** POST /applications/payments/process

**Service:** Mortgage Service

**Authentication:** Bearer Token (Customer)

#### Request Body

```
{  
  "reference": "{{paymentReference}}",  
  "status": "COMPLETED",  
  "gatewayTransactionId": "GW-TRX-123456"  
}
```

**Note:** Phase completes when payment is confirmed.

## Phase 10: Mortgage Offer

### Step 10.1: Lender Uploads Mortgage Offer Letter

**Endpoint:** POST

/applications/{{applicationId}}/phases/{{mortgageOfferPhaseId}}/documents

**Service:** Mortgage Service

**Authentication:** Bearer Token (Lender - Nkechi)

#### Request Body

```
{  
  "documentType": "MORTGAGE_OFFER_LETTER",  
  "url": "https://s3.amazonaws.com/qshelter/lender/mortgage-offer-chidi.pdf",  
  "fileName": "mortgage-offer-letter.pdf"  
}
```

**Note:** Application completes when all phases are done.

### Step 10.2: Verify Application Completion

**Endpoint:** GET /applications/{{applicationId}}

**Service:** Mortgage Service

**Authentication:** Bearer Token (Customer - Chidi)

#### Response (200 OK)

```
{  
  "success": true,  
  "data": {  
    "id": "...",  
    "title": "Purchase Agreement – Lekki Gardens Unit 14B",  
    "status": "COMPLETED",  
    "totalAmount": 85000000,
```

```

    "phases": [
      { "name": "Prequalification", "status": "COMPLETED" },
      { "name": "Sales Offer", "status": "COMPLETED" },
      { "name": "Preapproval Documentation", "status": "COMPLETED" },
      { "name": "10% Downpayment", "status": "COMPLETED" },
      { "name": "Mortgage Offer", "status": "COMPLETED" }
    ]
  }
}

```

## Authorization & Access Control

### Authentication

All authenticated endpoints require:

```
Authorization: Bearer {{accessToken}}
```

### Role-Based Permissions

Role	Permissions
admin	Full access to all resources
user	View properties, manage own applications
DEVELOPER	Upload sales offer letters for properties they manage
LENDER	Upload preapproval and mortgage offer letters

### Multi-Tenancy

- All data is isolated by `tenantId`
- Users from one tenant cannot access another tenant's data
- Cross-tenant access returns `403 Forbidden` or `404 Not Found`

### Ownership Verification

- Customers can only view/modify their own applications
- Attempting to access another customer's application returns `403 Forbidden`

## Error Responses

### Standard Error Format

```
{
  "success": false,
  "error": {
    "code": "ERROR_CODE",
    "message": "Human-readable error message"
  }
}
```

```
    }  
}
```

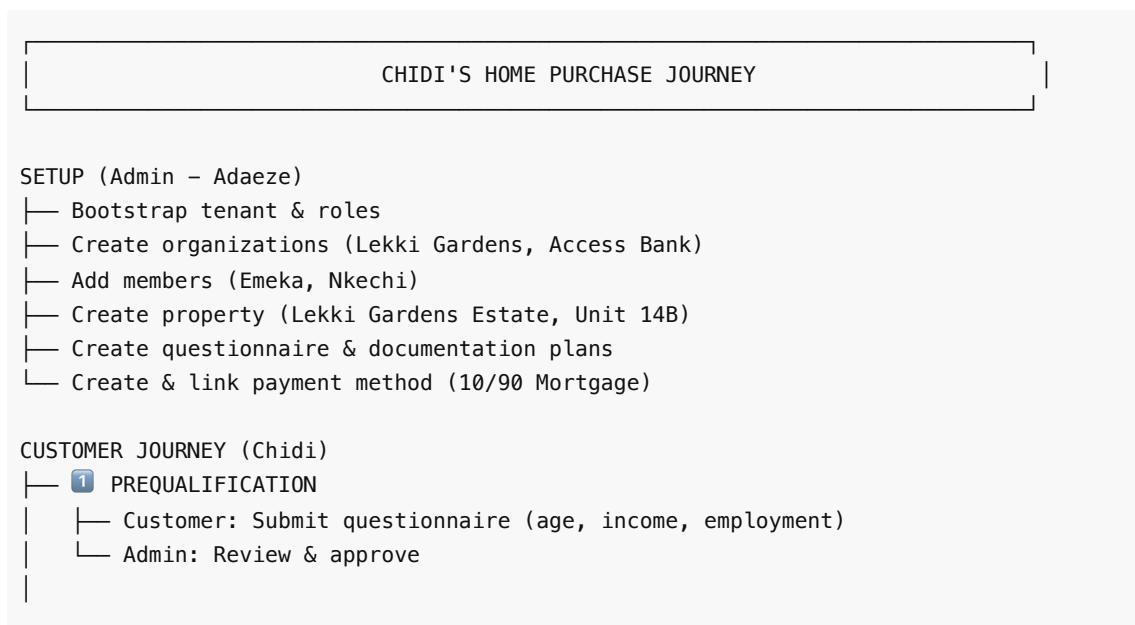
## Common Error Codes

Status	Code	Description
400	VALIDATION_ERROR	Invalid request body
401	UNAUTHORIZED	Missing or invalid token
403	FORBIDDEN	Insufficient permissions
404	NOT_FOUND	Resource not found
409	CONFLICT	Duplicate resource
500	INTERNAL_ERROR	Server error

## Running the Test

```
# Navigate to test directory  
cd tests/aws  
  
# Run full E2E test  
../scripts/run-full-e2e-staging.sh  
  
# Or run specific patterns  
npm run test:full-mortgage -- --testNamePattern="Phase 1"
```

## Appendix: Complete Flow Diagram



- └── 2 SALES OFFER
  - └── Developer (Emeka): Upload sales offer letter
- └── 3 KYC DOCUMENTATION
  - └── Customer: Upload ID, bank statements, employment letter
  - └── Admin: Review & approve documents
  - └── Lender (Nkechi): Upload preapproval letter
- └── 4 DOWNPAYMENT
  - └── Customer: Generate installment (₦8.5M)
  - └── Customer: Pay & confirm
- └── 5 MORTGAGE OFFER
  - └── Lender (Nkechi): Upload mortgage offer letter
- ✓ APPLICATION COMPLETED

---

Document generated from E2E test: `tests/aws/full-mortgage-flow/full-mortgage-flow.test.ts`