BRD-004: Duplicate Mobile Number Prevention

1. Requirement Summary

The system must check whether the mobile number entered by the customer already exists in the MiniBank system. If the mobile number is found, onboarding must be blocked and the user must be guided to login or recover the existing account. This prevents duplicate accounts and maintains data integrity.

2. Detailed Description

Mobile Number Validation Rules:
• 10-digit Indian mobile number format
• Lookup in customer master table
• Lookup in in-progress applications
• Optional lookup in dormant/closed accounts

When Mobile Exists:
• Block onboarding
• Display appropriate error message
• Suggest login or account recovery

When Mobile Does NOT Exist:
• Proceed with onboarding
• Reserve the mobile number to prevent race conditions

Backend queries must be optimized using indexed fields. Audit logs must capture duplicate-block events.

3. Business Rationale

• Mobile number is a primary identifier
• Ensures regulatory compliance for unique identities
• Prevents duplicate savings accounts
• Protects against fraud and misuse
• Improves customer experience by redirecting existing users

4. Inputs & Outputs

Field	Validation	Mandatory
Mobile Number	10-digit Indian regex validation	Yes

Output:
Mobile status: 'Available' or 'Already Registered'. On duplicate, onboarding stops.

5. Acceptance Criteria

AC ID	Criteria
AC-001	Validate mobile number format before performing database check.
AC-002	Check customer master and in-progress applications for duplicates.
AC-003	Block onboarding if mobile exists and show correct message.
AC-004	Allow onboarding if mobile is unique.
AC-005	Duplicate attempts must be logged for audit.
AC-006	System must prevent simultaneous onboarding using the same number.

6. Preconditions

• Customer has entered mobile number.
• Customer database available.
• Mobile field indexed for fast lookup.

7. Postconditions

• Unique mobile → onboarding continues.
• Duplicate → user guided to login or recovery.
• Duplicate attempt logged.

8. Exceptions / Edge Cases

ID	Scenario	Expected Behavior
EC-001	Invalid mobile number format	Show inline error
EC-002	Mobile exists in active customer record	Block onboarding; suggest login
EC-003	Mobile exists in incomplete applications	Prevent duplicate; suggest resume
EC-004	Database unavailable	Show temporary error
EC-005	Rapid multiple entries	Throttle requests
EC-006	Simultaneous submissions	Allow one; block the other