

FRD-103: Store Personal Details in CUSTOMER Table

1. Functionality Summary

The system must store the customer's personal details in the CUSTOMER table after validation. This includes name, date of birth, email, and mobile number. The storage process must ensure data integrity, encryption for sensitive fields, and audit logging. This record becomes the primary identity reference for all subsequent onboarding operations.

2. Detailed Functional Description

2.1 Input Fields

Field	Type	Mandatory	Rules
fullName	String	Yes	Alphabetic + spaces, min length 3
dob	Date	Yes	Age must be ≥ 18
email	String	Yes	Valid email format
mobile	String (10 digits)	Yes	Must match $^[0-9]{10}\$$

2.2 Data Persistence Flow

```
# ENDPOINT
POST /customer/create

# HEADERS
Content-Type: application/json

# REQUEST
{
  ■"fullName": "John Doe",
  ■"dob": "1994-02-14",
  ■"email": "john.doe@mail.com",
  ■"mobile": "9876543210"
}

# DB OPERATION (INSERT)
INSERT INTO CUSTOMER (
  ■customer_id,
  ■full_name,
  ■dob,
  ■email,
  ■mobile,
  ■created_at,
  ■updated_at
) VALUES (
  ■:uuid,
```

```

■:fullName,
■:dob,
■:email,
■:mobile,
■CURRENT_TIMESTAMP,
■CURRENT_TIMESTAMP
);

# RESPONSE (SUCCESS)
{
  ■"status": "SUCCESS",
  ■"customerId": "UUID-GENERATED"
}

# RESPONSE (FAILURE)
{
  ■"status": "FAILURE",
  ■"errorCode": "ERR-1034",
  ■"message": "Failed to store customer details"
}

```

2.3 System Behavior

On valid data:

- Insert customer record into CUSTOMER table
- Generate customer_id (UUID)
- Return SUCCESS response with customerId

On invalid data:

- Reject request and return validation errors

On DB failure:

- Return SYSTEM ERROR and log event

3. Error Codes

Error Code	Description	When Triggered
ERR-1030	Full name format invalid	Regex fails / contains numbers
ERR-1031	User under 18	DOB rule fails
ERR-1032	Email format invalid	Regex fails
ERR-1033	Mobile format invalid	Regex fails
ERR-1034	Database insert failure	DB connectivity / constraint error
ERR-1035	Duplicate mobile number	Mobile already exists

4. Preconditions

- Personal details collected from BRD-001.
- Mobile uniqueness validated (BRD-004).
- CUSTOMER table exists and is reachable.

5. Postconditions

- New record inserted into CUSTOMER table.
- customer_id generated and returned to client.
- Audit log created for record creation.

6. Acceptance Criteria

AC ID	Acceptance Criteria
AC-301	System stores valid personal details into CUSTOMER table.
AC-302	System encrypts sensitive fields (email, mobile).
AC-303	Duplicate mobile → error ERR-1035.
AC-304	DB insert failure triggers ERR-1034.
AC-305	Successful insert returns customerId (UUID).
AC-306	Audit logs must capture stored fields (masked).

7. Data Storage Impact

Table: CUSTOMER

Fields affected:

- customer_id (NEW)
- full_name
- dob
- email (Encrypted)
- mobile (Encrypted)
- created_at
- updated_at

8. Non-Functional Requirements

- Insert operation < 2 seconds.
- Encryption must follow AES-256 standard.
- CUSTOMER table indexed on mobile + email.
- Must support 100 RPS during peak onboarding.