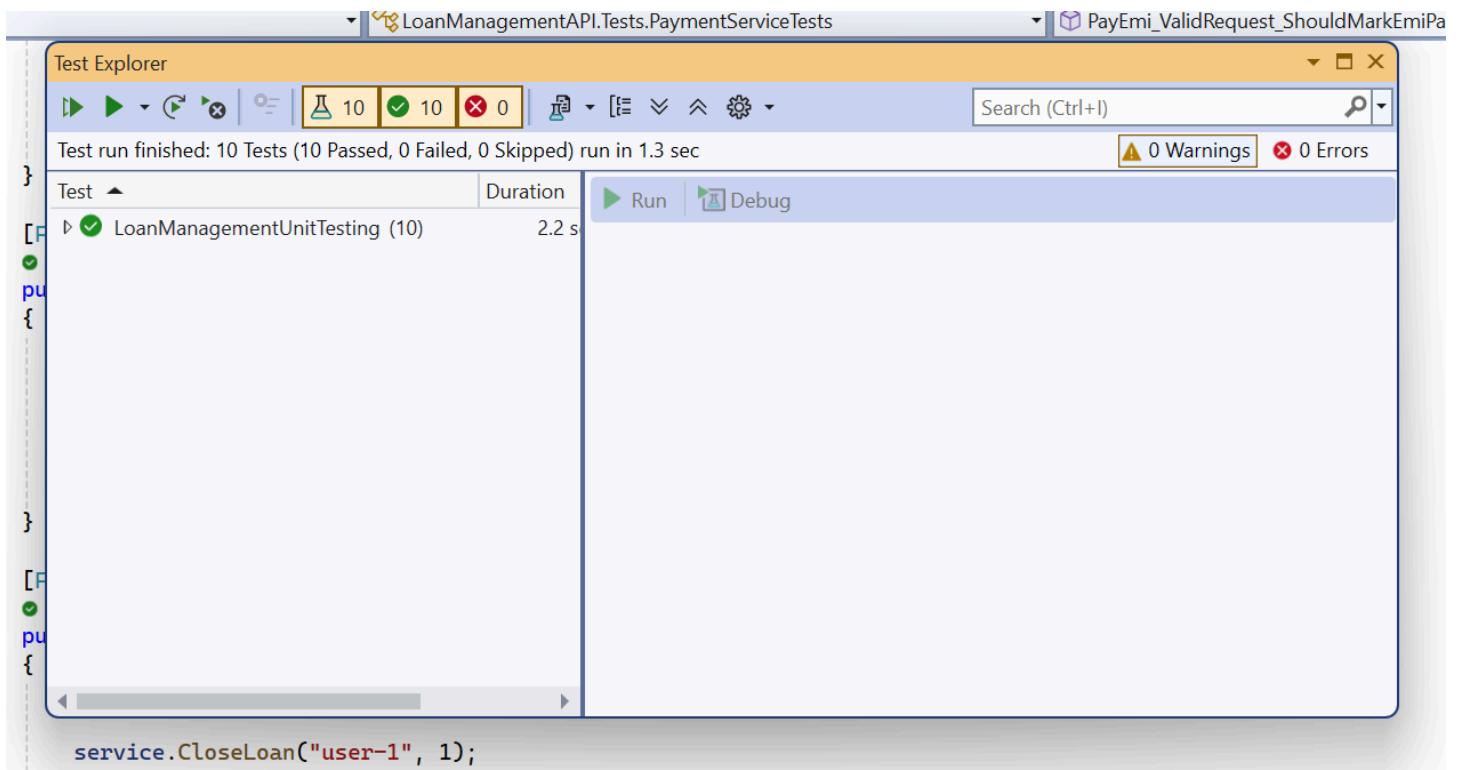


# Project Screenshots:

## xUnit Testing:



## LINQ methods :

```
3 references
public IEnumerable<LoanStatusDto> GetCustomerLoans(string userId)
{
    var customerId = _context.Customers
        .Where(c => c.UserId == userId)
        .Select(c => c.CustomerId)
        .FirstOrDefault();

    if (customerId == 0)
        throw new Exception("Customer profile not found");

    return _context.LoanApplications
        .Include(l => l.LoanType)
        .Where(l => l.CustomerId == customerId)
        .Select(l => new LoanStatusDto
    {
        LoanId = l.LoanId,
        LoanTypeName=l.LoanType.Name,
        Amount = l.Amount,
        Tenure = l.Tenure,
        Status = l.Status,
        AppliedDate = l.AppliedDate
    })
    .ToList();
}
```

```

2 references
public IEnumerable<EmiDto> GetEmis(int loanId)
{
    return _context.EMIs
        .Where(e => e.LoanId == loanId)
        .OrderBy(e => e.InstallmentNumber)
        .Select(e => new EmiDto
    {
        EMIId = e.EMIId,
        InstallmentNumber = e.InstallmentNumber,
        DueDate = e.DueDate,
        Amount = e.Amount,
        PaidStatus = e.PaidStatus
    })
    .ToList();
}

public IEnumerable<EmiDto> ProcessLoan(int loanId, LoanApprovalDto dto)
{
    var loan = _context.LoanApplications
        .Include(l => l.EMIs)
        .FirstOrDefault(l => l.LoanId == loanId)
        ?? throw new Exception("Loan not found");

    if (!dto.IsApproved)
    {
        loan.Status = dto.Status;
        loan.Remarks = dto.Remarks;
        _context.SaveChanges();
        return Enumerable.Empty<EmiDto>();
    }

    public void PayEmi(string userId, int loanId, int installmentNumber)
    {

        var customerId = _context.Customers
            .Where(c => c.UserId == userId)
            .Select(c => c.CustomerId)
            .FirstOrDefault();

        if (customerId == 0)
            throw new Exception("Customer profile not found");

        var loan = _context.LoanApplications
            .FirstOrDefault(l => l.LoanId == loanId && l.CustomerId == customerId);

        if (loan == null)
            throw new Exception("Loan not found or unauthorized");

        var emi = _context.EMIs
            .FirstOrDefault(e =>
                e.LoanId == loanId &&
                e.InstallmentNumber == installmentNumber);
    }

    public void CloseLoan(string userId, int loanId)
    {
        var loan = _context.LoanApplications
            .Include(l => l.EMIs)
            .Include(l => l.Customer)
            .FirstOrDefault(l => l.LoanId == loanId);

        if (loan == null)
            throw new Exception("Loan not found");

        if (loan.Customer.UserId != userId)
            throw new Exception("Unauthorized loan access");

        if (loan.Status == "Closed")
            throw new Exception("Loan already closed");
    }
}

```

## UI Screenshots :

### Admin:

**LoanBox**  
Admin Portal

Hi, Admin 🙌 🔔

### Admin Dashboard

System overview and administrative controls

Total Users  
**12**

Approved Users  
**6**

Pending Approvals  
**1**

### Loan Types

| ID | Name          | Interest | Max Tenure | Min Amount | Max Amount  |
|----|---------------|----------|------------|------------|-------------|
| 1  | Personal Loan | 10.5%    | 36 months  | ₹ 5,000    | ₹ 500,000   |
| 2  | Home Loan     | 8.5%     | 240 months | ₹ 500,000  | ₹ 5,000,000 |

**LoanBox**  
Admin Portal

### User Management

+ Add User

#### Loan Officer Approval Requests

| Email       | Requested Role | Status  | Assign |
|-------------|----------------|---------|--------|
| asd@lms.com | LoanOfficer    | Pending | Update |

#### All Users

| Email         | Role     | Assigned Role | Status   | Update | Delete |
|---------------|----------|---------------|----------|--------|--------|
| sanjana@a.com | Customer | Customer      | Approved | Update | trash  |

**LoanBox**  
Admin Portal

### Manage Loan Types

Update available loans

#### Loan Types

4 configured

| ID | Loan Type      | Interest | Min Amount | Max Amount  | Max Tenure | Action |
|----|----------------|----------|------------|-------------|------------|--------|
| 1  | Personal Loan  | 10.5%    | ₹ 5,000    | ₹ 500,000   | 36 months  | Edit   |
| 2  | Home Loan      | 8.5%     | ₹ 500,000  | ₹ 5,000,000 | 240 months | Edit   |
| 3  | Vehicle Loan   | 9.25%    | ₹ 100,000  | ₹ 1,500,000 | 60 months  | Edit   |
| 4  | Education Loan | 7.6%     | ₹ 100,000  | ₹ 3,000,000 | 120 months | Edit   |

# Edit Loan Type

Update configuration for Personal Loan

Loan Type Name

Personal Loan

Interest Rate (%)\*

10.5

Minimum Amount\*

5000

Maximum Amount\*

500000

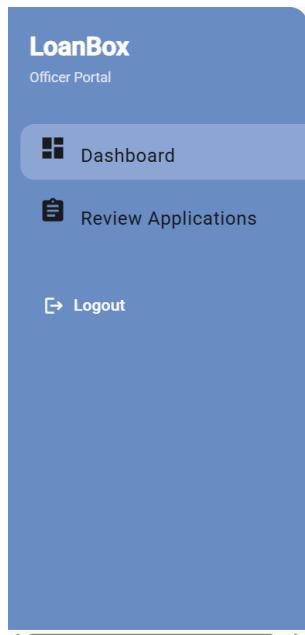
Maximum Tenure (months)\*

36

[Update Loan Type](#)

[Cancel](#)

## Loan Officer:



Hi, Officer 🙌



### Loan Officer Dashboard

Monitor and manage customer loan applications



Active Loans  
3



Closed Loans  
2



Pending Loans  
1

### Processed Loan Applications

Filter by Loan Type ▾

| Loan ID | Customer ID | Loan Type | Amount | Applied On | Status | Action |
|---------|-------------|-----------|--------|------------|--------|--------|
|---------|-------------|-----------|--------|------------|--------|--------|

**LoanBox**  
Officer Portal

[Dashboard](#)

[Review Applications](#)

[Logout](#)

**Loan Status:**  
**Approved**

Loan ID: 5

**Account Summary**

|                                       |   |
|---------------------------------------|---|
| Total Loan Amount<br><b>₹ 5000000</b> | Outstanding Amount<br><b>₹ 4628042.96</b> |
| Paid EMIs<br><b>6</b>                 | Pending EMIs<br><b>114</b>                |

**EMI Schedule**

| EMI No | Due Date    | Amount     | Status            |
|--------|-------------|------------|-------------------|
| 1      | Feb 4, 2026 | ₹ 61992.84 | <span>Paid</span> |

**LoanBox**  
Officer Portal

[Dashboard](#)

[Review Applications](#)

[Logout](#)

Hi, Officer

**Pending Loan Applications**  
Loans awaiting officer review

| Loan ID | Loan Type | Amount    | Applied On  | Status                                   |
|---------|-----------|-----------|-------------|--|
| 13      | Home Loan | ₹ 600,000 | Jan 5, 2026 | <span>Applied</span> <span>Review</span> |

**LoanBox**  
Officer Portal

[Dashboard](#)

[Review Applications](#)

[Logout](#)

**Loan Review**

Loan ID: 13

Customer: **Sanjana Sinha (ID: 4)**

Amount: **₹ 600000**

Interest: **8.5%**

Applied On: **Jan 5, 2026**

Loan Type: **Home Loan**

Tenure: **24 months**

Annual Income: **₹ 1000000**

**Officer Remarks**

Under Review Approve Reject

**Customer:**

**LoanBox**  
Customer Portal

- Dashboard**
- Apply Loan**
- My Loans**
- Pay EMI**

[Logout](#)

Hi, Sanjana Sinha 🙌

### Dashboard Overview

Your loan activity summary



Total Loans  
**4**



Active Loans  
**2**



Rejected Loans  
**1**



Closed Loans  
**0**

### Loan Repayment Progress

Paid Amount  

Outstanding  

**LoanBox**  
Customer Portal

- Dashboard**
- Apply Loan**
- My Loans**
- Pay EMI**

[Logout](#)

### Select Loan Type



**Personal Loan**

Interest: 10.5%  
Max Tenure: 36 months  
Amount: ₹ 5000 – ₹ 500000



**Home Loan**

Interest: 8.5%  
Max Tenure: 240 months  
Amount: ₹ 500000 – ₹ 5000000



**Vehicle Loan**

Interest: 9.25%  
Max Tenure: 60 months  
Amount: ₹ 100000 – ₹ 1500000



**Education Loan**

Interest: 7.6%  
Max Tenure: 120 months  
Amount: ₹ 100000 – ₹ 3000000

### Apply for Home Loan

Loan Type  
Home Loan

Loan Amount\*

**LoanBox**  
Customer Portal

- Dashboard**
- Apply Loan**
- My Loans**
- Pay EMI**

[Logout](#)

### My Loans

Manage your loan applications

| Loan ID | Loan Type     | Amount      | Tenure     | Status   | Applied On  | Action                       |
|---------|---------------|-------------|------------|----------|-------------|------------------------------|
| 5       | Home Loan     | ₹ 5,000,000 | 120 months | Approved | Jan 4, 2026 | <a href="#">View Details</a> |
| 6       | Personal Loan | ₹ 200,000   | 40 months  | Rejected | Jan 4, 2026 | —                            |
| 7       | Vehicle Loan  | ₹ 1,200,000 | 24 months  | Approved | Jan 5, 2026 | <a href="#">View Details</a> |
| 13      | Home Loan     | ₹ 600,000   | 24 months  | Applied  | Jan 5, 2026 | <a href="#">View Details</a> |

**LoanBox**  
Customer Portal

- Dashboard
- Apply Loan
- My Loans
- Pay EMI

Logout

₹ Total Loan **₹ 1200000**

Total Outstanding **₹ 1090081.12**

Paid EMIs **2**

Pending EMIs **22**

### EMI Schedule

| EMI | Due Date    | Amount     | Status                  |
|-----|-------------|------------|-------------------------|
| #1  | Feb 5, 2026 | ₹ 54959.44 | Paid                    |
| #2  | Mar 5, 2026 | ₹ 54959.44 | Paid                    |
| #3  | Apr 5, 2026 | ₹ 54959.44 | <a href="#">Pay Now</a> |
| #4  | May 5, 2026 | ₹ 54959.44 | <a href="#">Pay Now</a> |

**LoanBox**  
Customer Portal

- Dashboard
- Apply Loan
- My Loans
- Pay EMI

Logout

### Pay EMI

Secure loan repayment

Loan ID\*

[Fetch Loan Details](#)

Pay Next EMI  Pay Full Outstanding

**Installment No: 3**  
**Amount: ₹ 54959.44**

Choose Payment Method

UPI  Debit Card  Credit Card

[Pay Now](#)

**LoanBox**  
Customer Portal

- Dashboard
- Apply Loan
- My Loans
- Pay EMI

Logout

Loan ID\*

[Fetch Loan Details](#)

EMI paid successfully

**Payment Receipt**

|                |                         |
|----------------|-------------------------|
| Loan ID        | 7                       |
| Payment Type   | EMI                     |
| EMI No         | 3                       |
| Amount Paid    | ₹ 54959.44              |
| Payment Method | UPI                     |
| Payment Date   | Jan 6, 2026, 1:13:42 PM |