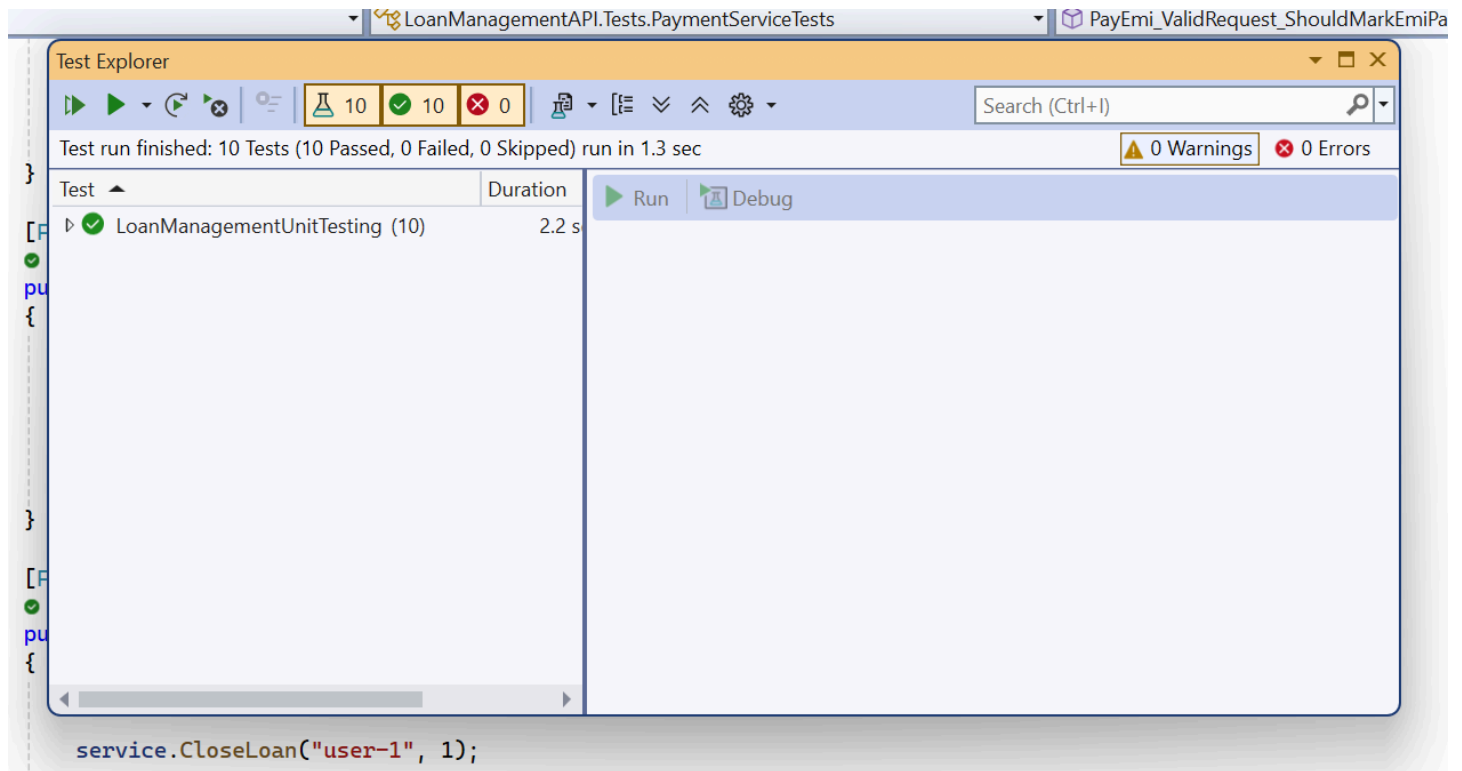


Project Screenshots:

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
        {
            EMIIId = e.EMIIId,
            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

Dashboard

Manage Users

Manage Loan Types

Logout

Hi, Admin

Admin Dashboard

System overview and administrative controls

Total Users12

Approved Users6

Pending Approvals1

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

Dashboard

Manage Users

Manage Loan Types

Logout

User Management

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	

LoanBox

Admin Portal

Dashboard

Manage Users

Manage Loan Types

Logout

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:

LoanBox

Officer Portal

Dashboard

Review Applications

Logout

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

₹ 5000000

Paid EMIs

6

Outstanding Amount

₹ 4628042.96

Pending EMIs

114

EMI Schedule

EMI No	Due Date	Amount	Status
1	Feb 4, 2026	₹ 61992.84	Paid

LoanBox

Officer Portal

Dashboard

Review Applications

Logout

Hi, Officer

Hi, Officer

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	Applied

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 or Status

Loan Type

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

LoanBox

Customer Portal

Dashboard

Apply Loan

My Loans

Pay EMI

Logout

₹

Total Loan

₹ 1200000

📅

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	Pay Now
#4	May 5, 2026	₹ 54959.44	Pay Now

LoanBox

Customer Portal

Dashboard

Apply Loan

My Loans

Pay EMI

Logout

Pay EMI

Secure loan repayment

Loan ID*

7

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

Payment Type

EMI No

Amount Paid

Payment Method

Payment Date

7

EMI

3

₹ 54959.44

UPI

Jan 6, 2026, 1:13:42 PM