1. **Why is this project initiated?**

The project was initiated to improve upon the existing manual loan management system, which has several critical issues:

1. Inefficiencies in the manual process : Managing loans manually is time-consuming and prone to errors. Automation can reduce these inefficiencies and streamline the process.
2. Lack of proper security : The current system does not offer adequate protection for sensitive customer data, making it vulnerable to breaches or misuse. A modern solution would prioritize security features like encryption and access control.
3. Poor user experience : The current system is not user-friendly, making it difficult for employees and customers to interact with it efficiently. An upgraded solution would focus on usability and accessibility.
4. Challenges in data management and loan tracking : Keeping track of customer data and loan statuses is cumbersome. Automating this process will allow for real-time tracking, better organization, and quicker updates.
5. Time-consuming report generation : Generating reports in a manual system takes excessive time and effort. Automating the process will not only save time but also provide more accurate,

up-to-date reporting for decision-making.

The new system aims to enhance efficiency, security, and user satisfaction..

1. **What are the current problems?**

The current problems with the existing system are:

* + Manual process : It's inefficient and prone to errors.
	+ Lack of security : Sensitive data is not properly protected.
	+ Time-consuming : Managing customer data and paperwork takes too long.
	+ Poor user experience : Customers can't easily view their profiles, leading to dissatisfaction.
	+ No easy form access : Loan forms can't be easily downloaded, adding to the inconvenience.
1. **With this project, how many problems could be solved?**
	* The new system addresses several issues, including:

Previously we ware uploading salary slip manually now using Perfois data management services

* Faster access to loan details and customer information.
* Easier loan application tracking for customers.
* Reduction of paperwork by transitioning to a paperless system.

- Automation of EMI calculations and loan approval processes, improving decision-making speed and reducing workload .

1. **What are the resources required?**

The resources required for the project are:

1. Hardware Resources :
	* Server side :
		+ Processor: 2.4 GHz
		+ Disk space: 40 GB
		+ RAM: 2 GB
	* Client side :
		+ Processor: 1.9 GHz
		+ Disk space: 20 GB
		+ RAM: 1 GB
2. Software Resources :
	* Java/JDK 1.6.0 : For application development and execution.
	* MySQL Server 5.1 : For database management.
	* Apache Tomcat : For web server and application deployment.

**NetBeans**: Java IDE that offers built-in support for web applications, Java, and MySQL integration. It’s lightweight and integrates well with Apache Tomcat.

1. **How much organizational change is required to adopt this technology?**

Adopting the new technology will require moderate organizational change , including:

1. Staff Training : Employees will need to be trained to use the new automated system, shifting away from manual processes.
2. Workflow Adjustments : Existing workflows will need to be modified to integrate digital processes and automation, which may replace certain manual tasks.
3. Change Management : The organization will need to manage the transition carefully, ensuring a smooth shift from the old system to the new one, addressing any resistance, and fostering user acceptance.
4. Process Standardization : The shift to automation may require standardizing certain operations that were previously handled manually, ensuring consistency across departments.
5. Support Infrastructure : IT support may need to be enhanced or restructured to maintain and troubleshoot the new system effectively.

Overall, while the changes will not be overwhelming, they will require careful planning and execution to ensure a smooth transition.

1. **Time frame to recover ROI?**

The estimated project duration is 120 days . Although the document doesn't provide a specific ROI recovery timeline, it's expected that the automation , reduced manual workload , and faster loan processing will start delivering cost savings shortly after implementation. With these improvements, the ROI should be recovered within a few months post-implementation , depending on factors like the scale of operations and cost of deployment.

1. **How to identify Stakeholders?**

To identify stakeholders for this project, consider the following categories:

1. Customers : Individuals applying for loans and managing their loan profiles. Their needs and experiences will directly influence system requirements.
2. Administrators : Bank or finance company staff who manage various aspects of the loan process, including loan types, customer information, and processing EMI payments. They will be key users of the system.
3. Company's Agents : Personnel responsible for contacting customers, verifying documents, and assisting in the loan approval process. Their input is crucial for ensuring the system meets operational needs.
4. IT Support Staff : Individuals who will maintain and support the new system, ensuring it runs smoothly and addressing any technical issues.
5. Management : Decision-makers who will oversee the project and assess its alignment with organizational goals.
6. Regulatory Bodies : Organizations that may impose compliance requirements related to loan processing and customer data management.
7. Investors/Shareholders : Stakeholders interested in the project's impact on the company’s financial performance.

Identifying these stakeholders will help ensure that all relevant perspectives are considered during the project's planning and implementation phases.

**Document 2: BA Strategy**

* 1. BA Approach Strategy
		+ First, understand what the project is about and what’s expected. Then, plan how you will gather requirements, document them, and ensure the project meets business needs.

# Conclusion

Switching to a digital loan management system will fix the problems of the old manual process. It will improve security, make it easier for customers to apply for loans and check their status, and reduce paperwork. With features like downloadable loan forms and better reporting, this new system will make things faster and more user-friendly, leading to happier customers

* 1. Steps to Complete the Project
		+ Start : Understand the project goals.
		+ Identify Stakeholders : List who is involved (customers, admins, etc.).
		+ Gather Requirements : Talk to stakeholders using interviews, workshops, or surveys.
		+ Write Documents : Create documents like Business Requirements (BRD) and Functional Specifications (FSD).
		+ Validate & Sign-off : Make sure everyone agrees on the requirements before starting the work. Conclusion

**Improved Tracking of Customer Information**: The current manual processes lead to significant delays and inefficiencies in tracking customer data. By digitizing this information, the new system will enable quick and easy retrieval of customer details and loan histories. This improvement will reduce the time and effort required for staff to access and manage records, allowing them to focus on providing better service

* 1. Elicitation Techniques
		+ Interviews : Talk to key people one-on-one.
		+ Workshops : Bring groups together to discuss the project.
		+ Surveys : Collect opinions from large groups.
		+ Document Analysis : Review existing materials and processes.
		+ Prototyping : Show early designs to get feedback. Conclusion

**Increased Customer Engagement**: The new system will offer customers a user-friendly online platform to access their profiles, track their loan applications, and find relevant information at their convenience. This self-service capability will significantly improve customer satisfaction, as clients will no longer need to rely solely on staff for basic inquiries, leading to a more engaged and informed customer base.

* 1. Stakeholder Analysis (RACI)
		+ RACI Matrix : This helps define who is Responsible, Accountable, Consulted, and Informed for each task in the project.
		+ Interest/Influence Matrix : Identify stakeholders who have the most interest and power in the project, and focus on keeping them updated.

Conclusion

**Streamlined Application Process**: The inclusion of downloadable loan forms in various formats, such as MS Word, will simplify the application process for customers. This feature will eliminate the need for excessive paperwork, making it easier for customers to apply for loans and submit necessary documentation, ultimately speeding up the processing time.

* 1. Documents to Write
		+ BRD (Business Requirements) : What the business wants.
		+ FSD (Functional Specifications) : How the system should work.
		+ Use Case Diagrams : Diagrams that show how the system will be used.
		+ UAT Plan : A plan for testing the system with users. Conclusion

**Faster Decision-Making**: With quick access to customer and loan details, staff will be able to make informed decisions more rapidly. This efficiency will lead to a more consistent and reliable service, reducing wait times for customers and enhancing the overall lending experience.

* 1. Sign-off Process
		+ Review : Go through the documents with stakeholders.
		+ Feedback : Make changes based on feedback.
		+ Final Approval : Get everyone to formally agree (sign-off) on the documents before moving forward.

**User-Friendly Interface**: A key benefit of the new system is its focus on user experience. By creating a straightforward and intuitive interface, both customers and staff will find it easier to navigate the system, resulting in reduced training time and greater user adoption.

* 1. Client Approval
		+ Hold regular meetings to show progress.
		+ Use emails and project tools to track and document approvals .
		+ Ensure there’s a clear process for escalating issues if needed.

**Automated Reporting Capabilities**: The existing system struggles with generating reports due to its manual nature. The new system will include automated reporting features that will allow management to generate essential reports quickly and accurately. This capability will facilitate better data analysis and support timely decision-making aligned with business needs.

* 1. Communication Channels During Implementation
		+ Emails for formal updates.
		+ Project Management Tools (Jira, Trello) to track tasks.
		+ Meetings for updates (daily or weekly).
		+ Slack/Teams for quick chats.
		+ Weekly Reports to share progress with everyone.

**Reduction in Maintenance Complexity**: By moving to a digital platform, the challenges associated with managing customer information and records will be alleviated. The new system will provide more accurate and up-to-date records, simplifying maintenance and reducing the chances of errors.

* 1. Handling Change Requests
		+ Record the Request : Document any requested changes.
		+ Impact Analysis : Check how the change will affect time, cost, and scope.
		+ Get Approval : Share the analysis and get permission before making changes.

**Effective Communication Channels**: The new system will enhance communication between the lender and the customers. By providing timely updates on loan statuses and quick responses to inquiries, customers will feel more connected and informed, fostering a sense of trust and reliability.

* 1. Updating Project Progress
		+ Share weekly status reports .
		+ Use a project tool to show real-time progress .
		+ Have review meetings after key milestones.

**Overall Transformation**: Ultimately, this digital loan management system is designed to create a more efficient, secure, and user-friendly environment for both customers and staff. By addressing the limitations of the existing manual process, the organization will be better equipped to meet customer needs, improve operational efficiency, and cultivate long-term loyalty and trust from clients. This transformation will not only benefit the customers but also enhance the overall reputation and competitiveness of the lending institution in the marketplace.

* 1. Sign-off on UAT
		+ Prepare for Testing : Create a UAT plan with the client.
		+ Test the System : Work with the client to test.
		+ Get Feedback : Fix any issues found during UAT.
		+ Final Sign-off : Get the client’s final approval that everything is good.

**Document 3: Functional Specifications :**

---

Functional Specification Document

1. Project Information

|  |  |
| --- | --- |
| Project Name | Loan Management System |
| Customer Name | BANK |
| Project Version | Version 1.1 |
| Project Sponsor |  Kunal Gawali |
| Project Manager |  Shalaka Muley |
| Project InitiationDate | 20-09-2024 |

Functional Requirements Document

|  |  |  |  |
| --- | --- | --- | --- |
| **Req ID** | **Req Name** | **Req Description** | **Priority** |
| FR0001 | User Login | Users should be able to log in to the application securely to access their accounts and perform actions. | High |
| FR0002 | Customer Profile Access | Customers should be able to view and manage their profiles, including personal information and loan details. | High |
| FR0003 | Loan Application | Customers should be able to apply for loans online through a user-friendly application form. | High |
| FR0004 | Loan Tracking | After loan approval, customers should be able to track the status of their loan applications online. | High |

|  |  |  |  |
| --- | --- | --- | --- |
| FR0005 | Download Loan Forms | The system should provide options to download various loan forms in MS Word format. | Medium |
| FR0006 | EMI Details | Customers should have access to details about their EMI, including calculations and schedules. | Medium |
| FR0007 | Customer Search | Admin users should be able to easily search for customer information in the system. | High |
| FR0008 | Report Generation | The system should allow users to generate reports related to loans and customer information easily. | High |
| FR0009 | Interest Rates Availability | The system should display current interest rates and loan details readily for customers. | Medium |
| FR0010 | User-Friendly Interface | The application should have a user-friendly interface to enhance the customer experience. | High |
| FR0011 | Communication Features | The system should provide effective communication channels for customers to get support and updates. | Medium |
| FR0012 | EMI Calculator | The system should include an EMI calculator to help customers understand their monthly payments. | Medium |
| FR0013 | Data Extraction & Analysis | The system will use Perfois software for data extraction, curation, categorization, analysis, and presentation. | High |

**Document 4: Requirement Traceability Matrix (RTM)** Requirement Traceability Matrix

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Req ID** | **Req Name** | **Req Description** | **Design****D1** | **T1** | **D2** | **T2** | **UAT** |
| FR000 1 | User Login | User must be able to log in to access the application. | Yes | Pending | No | Yes | Yes |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| FR000 2 | Customer Profile Access | Customer must be able to view and manage their profiles, including personal and loan details. | Yes | Pending | No | Yes | Yes |
| FR000 3 | Loan Application | Customer must be able to apply for loans online through auser-friendly application form. | Yes | Pending | No | Yes | Yes |
| FR000 4 | Loan Tracking | After approval, customer must be able to track the status of their loan applicationsonline. | Yes | Pending | No | Yes | Yes |
| FR000 5 | Download Loan Forms | System must provide options to download various loan forms in MS Word format. | Yes | Pending | No | Yes | Yes |
| FR000 6 | EMI Details | Customer must have access to details about their EMI, including calculations andschedules. | Yes | Pending | No | Yes | Yes |
| FR000 7 | Customer Search | Admin must be able to easily search for customer information in the system. | Yes | Pending | No | Yes | Yes |
| FR000 8 | Report Generation | System must allow users to generate reports related to loans and customer information easily. | Yes | Pending | No | Yes | Yes |
| FR000 9 | Interest Rates Availability | System must display current interest rates and loan details readily forcustomers. | Yes | Pending | No | Yes | Yes |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| FR001 0 | User-Friendly Interface | Application must have auser-friendly interface to enhance the customer experience. | Yes | Pending | No | Yes | Yes |
| FR001 1 | Communicatio n Features | System must provide effective communication channels for customers to get support andupdates. | Yes | Pending | No | Yes | Yes |
| FR001 2 | EMI Calculator | System must include an EMI calculator to help customers understand their monthly payments. | Yes | Pending | No | Yes | Yes |
| FR001 3 | Data Extraction & Analysis | System will use Perfois software for data extraction, curation, categorization, analysis, andpresentation. | Yes | Pending | No | Yes | Yes |

Explanation of Columns :

* Req ID : Unique identifier for the requirement (e.g., FR0001).
* Req Name : Short name of the requirement (e.g., "Login").
* Req Description : Brief explanation of what the requirement entails.
* Design (D1) : Status of the design phase for the requirement (Yes/No).
* Test Case (T1) : Status of the test case creation for the requirement (Pending/Yes/No).
* Design (D2) : Status of any second design or refinement.
* Test Case (T2) : Status of any second round of test case creation.

**Business Requirements Document (BRD)**

|  |  |  |
| --- | --- | --- |
| Date | Version Number | Document Changes |
| 10-12-2024 | 1 | LOAN MANAGEMENT SYATEM |
| 10-12-2024 | 1.1 | Integration of perfois |

# Approvals

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Role** | **Name** | **Title** | **Signature** | **Date** |
| Project Sponsor |  Kunal Gawali | Senior VP of Operations |  Kunal Gawali | 10-12-2024 |
| Business Owner | Priya Sharma | Business Owner | Priya Sharma | 10-12-2024 |
| Project Manager | Arjun Singh | Project Manager | Arjun Singh | 10-12-2024 |
| System Architect | Vikram Iyer | System Architect | Vikram Iyer | 10-12-2024 |
| Development Lead | Neha Gupta | Development Lead | Neha Gupta | 10-12-2024 |
| User Experience Lead | Suresh Nair | User Experience Lead | Suresh Nair | 10-12-2024 |
| Quality Lead | Kavita Rao | Quality Lead | Kavita Rao | 10-12-2024 |
| Content Lead | Akash Patel | Content Lead | Akash Patel | 10-12-2024 |

1. **RACI Chart**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Business Requiremen t ID** | **Description** | **R****(Responsible)** | **A****(Accountable)** | **C****(Consulted)** | **I (Informed)** |
| BR001 | Secure user login functionality | Neha Gupta (Developmen t Lead) | Arjun Singh (Project Manager) | Priya Sharma (Business Owner) | Users |
| BR002 | Customers can view and manage profiles | Neha Gupta (Developmen t Lead) | Arjun Singh (Project Manager) | Priya Sharma (Business Owner) | Customers |
| BR003 | Customers can apply for loans online | Neha Gupta (Developmen t Lead) | Arjun Singh (Project Manager) | Priya Sharma (BusinessOwner) | Customers |
| BR004 | Customers can track loan status | Neha Gupta (Developmen t Lead) | Arjun Singh (Project Manager) | Priya Sharma (Business Owner) | Customers |
| BR005 | System provides downloadable loan forms | Neha Gupta (Developmen t Lead) | Arjun Singh (Project Manager) | Priya Sharma (BusinessOwner) | Customers |
| BR006 | Customers have access to EMI details | Neha Gupta (Developmen t Lead) | Arjun Singh (Project Manager) | Priya Sharma (Business Owner) | Customers |
| BR007 | Admin users can search for customer data | Neha Gupta (Developmen t Lead) | Arjun Singh (Project Manager) | Priya Sharma (BusinessOwner) | Admin Users |
| BR008 | Easy report generation for management | Neha Gupta (Developmen t Lead) | Arjun Singh (Project Manager) | Priya Sharma (BusinessOwner) | Managemen t |
| BR009 | System displays current interest rates/loan details | Neha Gupta (Developmen t Lead) | Arjun Singh (Project Manager) | Priya Sharma (Business Owner) | Customers |
| BR010 | User-friendly interface for application | Suresh Nair (UX Lead) | Arjun Singh (Project Manager) | Priya Sharma (BusinessOwner) | Users |
| BR011 | Effective communication channels for support | Neha Gupta (Developmen t Lead) | Arjun Singh (Project Manager) | Priya Sharma (Business Owner) | Customers |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| BR012 | System includes an EMI calculator | Neha Gupta (Developmen t Lead) | Arjun Singh (Project Manager) | Priya Sharma (BusinessOwner) | Customers |
| BR013 | Data extraction and analysis via Perfois | Neha Gupta (Developmen t Lead) | Arjun Singh (Project Manager) | Priya Sharma (Business Owner) | Admin Users |

* 1. Business Goals Need:

The goal is to create a digital solution that enhances the efficiency of loan management processes for banks and financial institutions. The organization aims to reduce manual work, improve data accuracy, and provide a better experience for customers by enabling online loan applications, EMI management, and customer profile tracking.

* 1. Business Objectives

To provide an IT solution for:

* Automating loan applications and approvals.
* Managing customer profiles and loan details.
* Implementing an EMI calculator for accurate calculations.
* Generating reports on loan statuses, payments, and customer information.
* Providing a secure portal for both administrators and customers to track loan progress and manage payments.

---

* 1. Business Rules

Organization Policies, Procedures, and Rules:

* Loan approval must follow internal compliance procedures.
* Customer personal information must comply with data protection regulations (e.g., GDPR).
* Interest rates must be updated regularly as per financial market trends.
* EMI payments should be tracked and updated with late fee penalties for overdue payments.
* Customers must authenticate using secure login credentials.

---

* 1. Background

The current loan management system is manual, leading to errors, delays in processing, and dissatisfaction among customers. The project was proposed to automate these processes, reduce paperwork, and provide an online platform that improves communication between the bank and its customers. Implementing this system is expected to increase efficiency, improve data security, and offer a more user-friendly experience for customers and administrators.

---

* 1. Project Objective

The objective is to develop an online loan management system that automates the loan application, approval, and EMI payment processes. This system will integrate with existing banking platforms, provide secure user authentication, and offer real-time data for both customers and administrators, aligning with the organization’s business objective of operational efficiency and customer satisfaction.

---

* 1. Project Scope

What we are going to develop in the current project:

* Online loan application and approval process.
* EMI calculator and payment tracking.
* Customer profile management.
* Loan type and interest rate management.
* Report generation for loan status and EMI payments.
	+ 1. In Scope Functionality
			- Online loan applications and form downloads.
			- EMI calculation based on loan details.
			- Customer and loan data management.
			- Real-time reporting for administrators.
		2. Out Scope Functionality
			- Mobile applications for Android and iOS.
			- Integration with third-party financial tools.

---

1. Assumptions
* The system will be web-based with no mobile application in the initial release.
* Customer data will be securely stored and accessed only by authorized personnel.
* The system will integrate with the existing financial infrastructure of the organization.

---

1. Constraints
* The system must adhere to regulatory requirements for data privacy and loan management.
* Budget constraints may limit the initial development to essential features only.
* The timeline for project delivery is restricted to 90 days.

---

1. Risks

Technological Risks:

* New technology (web-based system) might introduce issues such as system crashes or security vulnerabilities.

Skills Risks:

* There may be difficulty finding staff with the necessary expertise in developing secure financial applications.

Political Risks:

* Regulatory changes in the financial sector could impact loan management rules and system requirements.

Business Risks:

* If the project fails, the organization could continue to experience inefficiencies, leading to customer dissatisfaction.

Requirements Risks:

* Some requirements may be misinterpreted or incomplete, leading to delays or rework.

Other Risks:

* Data migration issues from the legacy system to the new system.

---

1. Business Process Overview
	1. Legacy System (AS-IS)

The legacy system is primarily manual, relying heavily on paperwork and manual data entry for loan applications, approval, and EMI tracking. This results in delays, errors, and inefficient customer service.

Legacy Process Flow:

* + - Manual loan application submission.
		- Administrator reviews and approves applications.
		- EMI payments tracked manually.
	1. Proposed Recommendations (TO-BE)

The new system will automate the entire loan management process, allowing customers to apply for loans online, track their EMI payments, and download loan forms. Administrators will manage the entire process through a centralized system, improving accuracy and reducing manual work.

Proposed Process Flow:



---

1. Business Requirements

|  |  |  |  |
| --- | --- | --- | --- |
| **Business Requirement ID** | **Description** | **Priority** | **Stakeholders** |
| BR001 | Secure userlogin functionality. | High | Users |
| BR002 | Customers can view andmanage profiles. | Medium | Customers |
| BR003 | Customers can apply for loans online. | High | Customers |
| BR004 | Customers can track loan status. | High | Customers |
| BR005 | System provides downloadable loan forms. | Medium | Customers |
| BR006 | Customers have access to EMI details. | High | Customers |
| BR007 | Admin users can search for customer data efficiently. | Medium | Admin Users |
| BR008 | Easy report generation for management. | High | Managemen t |
| BR009 | System displays current interest rates and loan details. | High | Customers |
| BR010 | User-friendly interface for application. | Medium | Users |

|  |  |  |  |
| --- | --- | --- | --- |
| BR011 | Effective communication channels for customersupport. | Medium | Customers |
| BR012 | System includes an EMI calculator. | High | Customers |
| BR013 | Data extraction and analysis via Perfois software. | Low | Admin Users |

1. Appendices
	1. List of Acronyms
		* EMI: Equated Monthly Installment
		* GDPR: General Data Protection Regulation
	2. Glossary of Terms
		* Loan Tenure: The period over which a loan is repaid.
		* Interest Rate: The percentage of a loan charged as interest.
	3. Related Documents
		* Loan Management System Requirements Specification Document.
		* Loan Management System Technical Design Document.