# **PROJECT CHARTER**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. General Project Information | | | | |
| **Project Name:** | | Implementation of a Time-Based One-Time Password (TOTP) System for Enhanced Customer Authentication | | |
| **Project Description:** | | Develop a Linux-based TOTP system to improve customer authentication security. It replaces weak passwords, prevents breaches, and includes testing, user guides, and compliance checks for a secure, user-friendly solution. | | |
| **Executive Sponsor & Department:** | | Chief Information, Data and Digital Officer | | |
| 2. Project Team | | | | |
| Role | | **Name** | | |
| **Project Manager** | | Lila Venkata Sairam Rayala | | |
| **System Administrator** | | Mohanram Shrinivasan | | |
| **Developer** | | Sai Ganesh Rao Patike Eranna | | |
| **Tester** | | Samyuktha Rani Pulagam | | |
| **Customer Lead Support** | | Amith Pitta | | |
| 3. Stakeholders | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Stakeholder** | **Role on Project** | **Level of Interest** | **Influence** | **Determination** | | **Customers** | End-Users | Medium | Medium | Will use the TOTP system; their feedback ensures usability and adoption. | | **Project Team** | Students | High | High | Develop and implement the TOTP system; responsible for project success. Assist with system integration and maintenance if needed. | | **Mentors/Instructors** | Guides/Evaluators | High | High | Provide technical guidance, feedback and evaluate project outcomes. | | **Organization/Business** | Beneficiary | High | High | Gains improved security, customer trust, and compliance with standards. | | | | | |
| 4. Project Scope Statement | | | | |
| **Problem Statement / Business Justification** | | | | |
| Ally Financial Inc. relies on phone numbers for multi-factor authentication (MFA), raising security concerns due to spoofing, phishing, and SIM-swapping. This outdated method undermines customer trust and may lead to account closures. Implementing Time-Based One-Time Passwords (TOTP) can enhance security, reduce reliance on Personally Identifiable Information (PII), and strengthen customer confidence. | | | | |
| **Objectives** | | | | |
| * The TOTP system will improve security by stopping unauthorized access and making customers feel safer when using the service. * This directly supports the organization's focus on better cybersecurity, following regulations, and protecting customer data. * We expect it to increase security, lower the chance of data breaches, and make users more confident in their accounts. * The benefits will be clear: it could reduce breaches by up to 90%, and even boost customer loyalty by 5-10%, all while improving the company's reputation for strong security | | | | |
| **Deliverables** | | | | |
| * Working Linux-based TOTP system for secure authentication. * User guide for customers to set up and use TOTP. * Manual Test Cases Report * Project Demonstration via Linux Interface or Web User Interface | | | | |
| **Scope** | | | | |
| **In-Scope:**   * Development of a Linux-based TOTP system for secure authentication. * Creation of a simple user guide for setting up and using the TOTP system. * Connecting TOTP with existing login methods like password authentication. * Testing the system to make sure it works correctly and securely. * Documentation of the development process and lessons learned   **Out-of-Scope:**   * Full-scale deployment in a live business environment. * Advanced features like biometrics as a multi-factor authentication (MFA). * Long-term maintenance or post-project support. | | | | |
| **Project Milestones** | | | | |
| |  |  | | --- | --- | | **Milestone** | **Date** | | Set up the database and user tables | Feb 10 – Feb 23 | | Develop user account creation and login script | Feb 24 – Mar 9 | | Implement TOTP integration and QR code generation. | Mar 10 – Mar 16 | | Test and validate the login system | Mar 17 – Mar 29 | | User Guide & Documentation | Mar 30 - Apr 5 | | Final Review & Project Submission | Apr 6 - Apr 12 | | | | | |
| **Resources** | | | | |
| |  |  | | --- | --- | | **Resource** | **Amount** | | Open-Source Software: Red Hat Enterprise Linux OS, Python 3, MariaDB | Free | | Employee Wages: Software Development, Testing & QA | $19,500 | | Employee Wages: System Administration, Project Management | $12,000 | | Employee Wages: Documentation & Reporting, Training & Skill Development | $6,700 | | Employee Wages: Other IT Operations | $5,000 | | **Total** | **$43,200** | | | | | |
| **Major Known Risks** | | | | |
| |  |  |  | | --- | --- | --- | | **Risk** | **Risk Rating (Hi, Med, Lo)** | **Mitigation Strategy** | | Technical issues in TOTP implementation | High | Test the system thoroughly and seek guidance from mentors. | | Low customer adoption | Medium | Provide clear user guides and training for customers, along with a deadline for TOTP setup. | | Budget or resource constraints | Medium | Plan resources carefully and use open-source tools | | | | | |
| **Heat Map:** *Map the identified risks in your table on a heat map*  **Heatmap Representation:**   * **X-Axis (Likelihood of Occurrence):** Low, Medium, High * **Y-Axis (Impact of Risk):** Low, Medium, High   **Black Dots (⚫) Represent Specific Risks**  **Red (High Risk - Critical): Technical issues in TOTP implementation** (High Likelihood & High Impact).Critical risks that need immediate action.  **Yellow (Medium Risk - Manageable):** **Low customer adoption and Budget/resource constraints** (Medium Likelihood & Medium Impact). Manageable but still require mitigation.  **Green (Low Risk - Minimal concern):** No significant low-impact risks. Minimal concern, but should be monitored. | | | | |
| **Constraints** | | | | |
| * **Limited Budget:** The project must use open-source tools and free resources to stay within budget. * **Time Constraints:** The project has a fixed deadline, limiting the time for development and testing. * **Limited Personnel:** Only a small team is available, restricting the scope and speed of work. * **Technical Expertise:** Team members may have limited experience with Linux and TOTP systems, requiring additional learning time. * **Resource Availability:** Access to necessary hardware or software tools may be restricted. | | | | |
| **External Dependencies** | | | | |
| * **Mentors/Instructors:** Guidance and feedback are needed. (Agreed) * **Customers:** Testing and feedback required. (Agreed) * **Open-Source Tools:** Integration with TOTP libraries. (Freely available) | | | | |
| Assumptions | | | | |
| * **Mentor Support:** Mentors will provide timely guidance and feedback. * **Customer Participation:** A group of customers will be available for testing and feedback. * **Resource Availability:** Necessary open-source tools and hardware will be accessible. * **Team Skills:** Team members can quickly learn and implement Linux and TOTP concepts. * **Timeframe:** The project can be completed within the given deadline. | | | | |
| 5. Sign-off | | | | |
|  | Name | | Signature | Date (MM/DD/YYYY) |
| Executive Sponsor | Chief Information & Data and Digital Officer | | **Digitally Signed ✅** | 02/04/2025 |
| Project Manager | Lila Venkata Sairam Rayala | | **Digitally Signed ✅** | 02/04/2025 |