

LAB 1 – PASSPORT AUTOMATION SYSTEM

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AIM - To write the Problem Statement and Software Requirements Specification (SRS) for Passport Automation System.

Problem Statement:

The current process of passport issuance involves a manual and time-consuming process that requires applicants to physically visit the passport office, fill out paper forms, and wait for several weeks to receive their passports. This process is prone to errors, delays, and inefficiencies, leading to long wait times for applicants and increased workload for passport officials. To address these issues, there is a need for a Passport Automation System that streamlines and automates the passport issuance process, reducing the time and effort required by both applicants and officials. The system should provide a user-friendly interface for applicants to apply for passports online, track their application status, and receive their passports through a secure and reliable delivery system. The system should also provide passport officials with a centralized database of applicant information, automated verification and approval processes, and real-time reporting and analytics on passport issuance activity.

Software Requirement Specification (SRS)

1 Introduction:

1.1 Purpose:

The purpose of this document is to provide a detailed description of the Passport Automation System. The document will explain the functional and non-functional requirements of the software system to be developed.

1.2 Scope:

Passport Automation System is an online platform that automates and streamlines the entire passport application and issuance process. The system aims to reduce the time and effort required to obtain a passport and improve the accuracy and efficiency of the process. It also reduces manual efforts, improves accuracy, and enhances the overall user experience. The development time for the system is estimated to be nine months, and the budget for the project is \$720,000.

1.3 Overview:

A Passport Automation System is a computerized system designed to automate the process of issuing passports. The system aims to streamline the passport issuance process, reduce the processing time, and enhance the security of the passport issuance process. The system consists of hardware components, such as passport scanners, cameras, fingerprint scanners, and printers, and software applications that automate the passport issuance process.

2 General Description:

A Passport Automation System is a software-based solution that streamlines the passport application and issuance process. The system utilizes advanced technology to automate many of the manual processes involved in passport application processing and helps reduce processing times and improve the accuracy of passport data.

The system comprises various modules such as application processing, data capture, document verification, and printing. The application processing module handles the passport application process, allowing applicants to submit their applications online or at a designated application center. The system automatically checks the application for completeness, ensuring that all necessary fields are completed and that the required documents are attached.

The data capture module captures applicant biometric data, including facial recognition, fingerprints, and iris scans. The module ensures that the data is captured accurately and securely, minimizing the risk of identity theft or fraud.

3 Functional Requirements:

The following are the functional requirements of a passport automation system:

- Applicant registration: The system should allow applicants to register and create their profiles. The profile should include all necessary personal information required for a passport application.
- Application submission: The system should enable applicants to submit their passport applications online. The application should include all required information, such as personal details, travel history, and supporting documents.
- Application processing: The system should process the application and verify the information provided by the applicant. The system should perform checks such as criminal record verification and cross-checking the applicant's information with the database of previous passport applications.
- Appointment scheduling: The system should schedule an appointment for the applicant to visit the passport office to complete the application process, including capturing biometric data such as fingerprints and photographs.
- Payment processing: The system should facilitate payment for the passport application, including online payment options and payment at the passport office.
- Passport issuance: The system should issue the passport upon successful completion of the application process, including the payment of the necessary fees.

4 Interface Requirements:

Here are the interface requirements of a Passport Automation System:

- User Interface - The system should have an intuitive and user-friendly interface that is easy to use and navigate, reducing the learning curve for users. The interface should guide the user through the passport application process step-by-step.
- Input Devices - The system should be able to accept input from various devices, such as a keyboard, mouse, or touch screen, depending on the deployment environment.
- Biometric Sensors - The system should be able to capture biometric data, such as fingerprints, facial images, and iris scans, to ensure the authenticity of the passport applicant.
- Printing and Scanning Devices - The system should have interfaces to connect with printing and scanning devices to generate and produce passport books and other travel documents.

5 Performance Requirements:

Here are the performance requirements of a Passport Automation System:

- Speed - The system should process passport applications quickly and efficiently, ensuring that applicants do not face long wait times.
- Response Time - The system should respond to user requests within a reasonable timeframe, providing a smooth and seamless user experience.
- Accuracy - The system should be accurate in processing passport applications, ensuring that

passports are issued only to eligible and verified applicants.

- Data Backup and Recovery - The system should have regular data backup and recovery processes in place to prevent data loss and minimize downtime in the event of a system failure.

6 Design Constraints

Here are the design constraints of a Passport Automation System:

- Compliance with Government Standards - The system must comply with government regulations and standards for passport processing, such as data privacy and security regulations.
- User-Friendly Interface - The system should have a user-friendly interface that is easy to use and navigate, even for non-technical users.
- Integration with Other Systems - The system should be able to integrate with other systems, such as border control systems and visa processing systems, to facilitate the passport application and processing workflow.
- Scalability - The system must be able to scale up or down to accommodate changing demand for passport applications and processing.

7 Non-Functional Requirements:

Here are the non-functional requirements of a Passport Automation System:

- Security - The system should have robust security measures in place to protect the personal data of the passport holders, such as biometric data and passport information.
- Reliability - The system should be reliable, with minimal downtime or system errors.
- Availability - The system should be available to users 24/7, with minimal maintenance or downtime.
- Compliance - The system should comply with relevant regulatory requirements, such as data protection laws and industry-specific regulations.
- Multilingual Support - The system should support multiple languages, allowing users to choose their preferred language.
- Accessibility - The system should comply with accessibility standards, ensuring that it is accessible to users with disabilities.

8 Preliminary Schedule and Budget:

Schedule:

Requirements Gathering: 2 weeks

System Design: 4 weeks

Development: 20 weeks

Testing: 6 weeks

Deployment: 2 weeks

User Acceptance Testing: 2 weeks

Training and Documentation: 2 weeks

Total project duration: 38 weeks (Approximately 9 months)

Budget:

Salaries and Wages for Developers and Team Members: \$500,000

Hardware and Software Costs: \$100,000

Licensing Fees: \$50,000

Testing and Quality Assurance: \$50,000

Training and Documentation: \$20,000

Total project cost: \$720,000