Software Requirements Specification (SRS) Upark

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1 Introduction

1.1 Document Objective

This document establishes the functional and non-functional requirements for the development and implementation of the Parking Access Control System for the Technological University of Tijuana (UTT).

1.2 Project Scope

The system will address the automation of vehicle registration, the development of a web interface for checkpoint guards, and quick information retrieval to improve parking management and security.

2 Functional Requirements

2.1 Vehicle Registration Automation

Student Registration: Develop a platform that allows the systematic registration of vehicles associated with UTT students, including information such as names, license plates, models, and years of automobiles.

2.2 Development of a Web Interface for Checkpoint Guards

Intuitive Interface: Create an intuitive and user-friendly web interface for checkpoint guards. Access to Detailed Information: Allow checkpoint guards to access detailed information about vehicles and owners before authorizing access to the parking lot.

2.3 Quick Information Retrieval

Efficient Search: Facilitate quick and effective searches for information on specific vehicles and owners for checkpoint guards.

3 Non-Functional Requirements

3.1 Security

Access Verification: Implement a secure access verification mechanism to reduce the risk of unauthorized entries.

3.2 Performance

Quick Response: Ensure a quick system response, especially during real-time information queries.

3.3 Usability

Intuitive Interface: Ensure that the web interface is intuitive and easy to use for checkpoint guards.

4 Context and Justification

4.1 Objective of Database Knowledge Extraction

Data Conversion: Perform knowledge extraction in the database to convert stored data into valuable and meaningful information.

4.2 Motivation

Enhanced Security: Strengthen parking lot security by implementing an access control system. Improved Decision Making: Facilitate informed decision-making for checkpoint guards.

5 Issues or Needs

5.1 Problem Identification

Current Issues: Address identified issues in the current parking management system.

6 Applications

6.1 Service Customization

Personalized Recommendations: Provide personalized services to users based on historical patterns

6.2 Technological Modernization

License Plate Recognition: Implement advanced technologies, such as license plate recognition, to modernize parking services.

6.3 Enhanced Security

Access Control: Strengthen parking lot security through access control and license plate recognition.