SRS- ParkingLotSystem

Team 1 - T.A.P (The Art of Programming)

1. Introduction

1.1 Purpose

To define the functional and non-functional requirements of the Parking Management System to guide its development.

1.2 System Scope

Automation of parking operations, including access management, space allocation, and security.

2. Functional Requirements

Entry and Exit Registration: The system must record the vehicle's entry and exit times and the assigned space (RF-001).

Space Management: It must mark the parking space as occupied or available in real time (RF-002).

Rate Calculation: It must calculate the total parking cost based on the time and applicable rate (RF-003).

Transaction Reporting: It must record each payment as an entry in the transaction report (RF-004).

Tariff Configuration: The Administrator must be able to create, modify, and deactivate tariff structures (TariffManager) (RF-005).

Membership Management: The system must manage the creation and expiration of memberships for users (RF-006).

Security Log: The system must allow Security Personnel to manually log incidents (SecurityLog) (RF-007).

Vehicle Management: The system must allow users to register and manage their vehicles (Vehicle) (RF-008).

3. Non-Functional Requirements

Security

RNF-001: Two-factor authentication must be implemented for administrative access (Administrator/Manager).

RNF-002: User personal data must be encrypted at rest (encryption of stored data).

Availability and Integration

RNF-003: The system must operate with 99.9% availability for access control.

RNF-004: Must be able to interact with external hardware (LPR and access/exit barriers).