**Software Requirements Specification**

**For**

**Parking-lot Management System**

Version 1.0 approved

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**Introduction**

Purpose:-

The main purpose of our system is to make a parking-lot management easy and is to develop software that replaces the manual system into an automated management system. This document serves as the unambiguous guide for the developers of this software system.

Scope:-

The document only covers the requirement specification for the parking lot management system. This document does not provide any references to the other component of the parking lot management system. All the external interfaces and the dependencies are also identified in this document.

Feasibility Study:

The overall scope of the feasibility study was to provide sufficient information to allow a decision to be made as to whether the parking lot management system project should proceed and so, its relative priority in the context of the other existing parking lot management system.

The feasibility study of this project had undergone through various steps which as describe as under:

* Identify the origin of the information at different level.
* Identify the expectation of user from computerized system.
* Analyze the drawback of existing system.

Definition, Acronyms, Abbreviations:-

CFD: - Context Flow Diagram

DFD: - Data Flow Diagram

IDE: - Integrated Development Environment Java:-Platform Independence

SQL: - Structured Query Language

SRS: - Software Requirement Specification.

ER: - Entity Relationship

Reference:-

An integrated approach to software engineering, Third edition by Pankaj jalote

Java – Balaguruswamy

SQL server 2005 – Joseph L Jordan

Overview:-

The implementation of Parking-lot Management starts with entering and updating master records like vehicle details, person information. Any further transaction like parking, return will automatically update the current status of each platform available for parking.

**Overall Description:**

Product Perspective:

The proposed Parking lot Management System will take care of any given parking space detail at any point of time. The parking, vacating will update the parking space details automatically so that user will get the updated details.

Product function:

The main purpose of this project is to reduce the manual work. This software is capable of managing parking spaces, allotments, and Calculating/Managing Fine, Generating various Reports for Record keeping according to end user requirements.

User Characteristics:

We have 2 levels of users

**User module:** In the user module, user will check the availability of the parking space, choose parking space and vacate.

**Administration module:** the following are the sub module in the administration module.

Register user

Entry details

Person details.

General Constrains:

Any update regarding the space from the parking lot is to be recorded to have update & correct values.

Assumption and dependencies:

All the data entered will be correct and up to date. This software package is developed using java as front end which is supported by sun micro system, Microsoft SQL server 2005 as the back end which is supported by window 7.

Specific Requirement:

External Interface Requirement:

It should be simple and easy to understand and use. It should also be an interactive interface .The system should prompt for the user and administrator to login to the application and for proper input criteria

User Interface:

The software provides good graphical interface for the user any administrator can operate on the system, performing the required task such as show availability, update, viewing the details of the vehicle parked. Allows user to view quick reports like available spaces at between particular time.

Hardware interface:

Operating system : windows

Hard disk : 40 GB

RAM : 256MB

Processor : Pentium(R)Dual-core CPU

Software interface:

Java language

Net beans IDE 7.0.1

MS SQL server 2005

Communication interface:

Window

Functional requirements:

Vehicle entry: In this module we can store the details of the vehicles parked.

Register user: in this module we can keep the details of the new user.

Park-space issue: This module is used to keep a track of parking space issue details.

Park-space vacate: This module enables to keep a track of vacating the space.

Performance requirements:

The capability of the computer depends on the performance of the software. The software can take any number of inputs provided the database size is larger enough. This would depend on the available memory space.

Design constraints:

Each member will receive a token/card which can be used for identification purposes. Each user can avail the parking spot either on prior notification or immediately on arrival. Details like parking space number, vehicle details, duration, etc shall be updated while the space is allotted to the user. These details are to be stored in the database and can be called upon to provide user history. Any violation of reservations will be fined, else the user is billed according to the duration and vehicle parked.

System attributes:

**Maintainability:** There will be no maintained requirement for the software. The database is provided by the end user and therefore is maintained by this user.

**Portability:** The system is developed for secured purpose, so it is can’t be portable.

**Availability:** This system will available only until the system on which it is install, is running.

**Scalability:** Applicable

System Features

Some Performance requirements identified is listed below:

* The database shall be able to accommodate a minimum of 1,000 records of Users.
* The software shall support use of multiple users at a time.
* There are no other specific performance requirements that will affect development.

Registration

**Description and Priority:** This feature is of the highest priority, each of the users i.e.: the user with a login Id and password will allow to register and to use the system.

**Stimulus/Response Sequences:** First the user will be asked to register. If the user is already registered then it will automatically be logged in.

Other Nonfunctional Requirements

Performance Requirements:

The software is expected to have reasonably short response time. It should be able to log-in and feed the voter with new pages on request with a response time of the order of a few seconds.

Safety Requirements :

In order to prevent data loss in case of system failure, the data has to be saved in the database, for the system to resume the parking lot work on reboot. The system should be capable of gracefully recovering from earlier crashes.

Security Requirements:

The system should provide basic security features like password authentication and encrypted transactions.

All the passwords generated and communicated to the users should be stored in the server only in an encrypted form for login management to prevent misuse.

Software Quality Attributes:

The Quality of the System is maintained in such a way so that it can be very user friendly to all the users. The software quality attributes are assumed as under

* Accurate and hence reliable.
* Secured.
* Fast speed.
* Compatibility.