Software Requirement Specifications
For
parkingFriendly

Version 1.0 approved

Prepared by Gabriel Cabrera, Nicholas Greer, & Michael Mogannam

HSU Computer Science

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Software Requirements Specification for parkingFriendly

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1. Introduction

1.1 Purpose

parkingFriendly is an application which will make meter parking much more friendly. By eliminating the need for change to feed your meter this application will allow for easier payment, less parking violations and less stress. Our purpose is to allow users to pay for parking meters through their mobile device through multiple options, such as QR code scanning, manual meter number input or GPS location.

1.2 Intended Audience and Reading Suggestions

This document is intended for developers, users, testers and marketers by offering the full scope of the application from project description to code implementation to UI design and user functionality.

1.3 Product Scope

Parking Meters in most parts of america require coin change as a means of payment. This product allows the users that do not carry around loose change to pay for a parking meter by means of debit/credit card or paypal account. It also displays a timer that will notify you when your time is near ending and allow you to add additional credit if needed. Utilizing QR codes on individual parking meters will allow users ease of access when paying for a parking meter. Our goal is to modernize a dated platform, to re-update and revamp a monetary means of parking.

2. Overall Description

2.1 Product Perspective

This product is a new, self-contained website application that will aid in the monitoring and the payment for parking meters on school campuses.

2.2 Product Functions

- Allow regular users to purchase credit and apply credit towards parking meters

- Gives regular users notifications about time expiring and allows them the opportunity to apply more credit remotely
- Allows security personnel easy access to monitoring parking meters
- Gives regular users a map layout of meters that lets them know of available parking
- Gives regular users ability to check out of parking meter with an incentive for potential credit applied back to their account

2.3 User Classes and Characteristics

Users involved consist of security personnel which are issued administrator privileges, and users which are issued regular user privileges. The security personnel are in charge of monitoring the meters and issuing tickets to individuals that are parked at a meter with no credit applied to said meter, they have admin capabilities to aid in issuing tickets, monitoring of the meters to ensure no tampering, and provide assistance to anyone that may be a victim of a hit-and-run or other safety related issues. The individual user is allowed to charge credit to a parking meter, use the online payment service to purchase credit, and is in charge of checking out of meters.

2.4 Operating Environment

School campuses that which utilize parking meters for partial or full parking options, existing or new meters will be used to pay for said parking. A credit system similar to the existing monetary system will be utilized to apply credit to the parking meters. The users will be able to access a website that will allow them to pay for the meter they are parking at, or apply extra credit if needed when they are AFV(away from vehicle). Potential use of QR codes will allow users an easy access way to pay for their meter.

2.5 Design and Implementation Constraints

Limitations may come from city ordinance. Other concerns could be related to integration with pre-existing parking meters. Implementation of this software will be accessible to all users who use any of the supported browsers and meet the base system requirements.

2.6 User Documentation

parkingFriendly User Manual
Tutorials on how to purchase credit, credit a meter, maneuver website

Customer Support 24/7

2.7 Assumptions and Dependencies

We are assuming that Paypal or other similar payment processors will be able to integrate with local city ordinance. We are also depending on users owning and being able to use a smartphone that runs any of the supported browsers.

3. External Interface Requirements

3.1 User Interfaces

Standard web browser interface with login. Internet connection is required. Most downtown/campuses have free WiFi so connection to internet should not be an issue. PayPal OR Venmo account is necessary. Once user logs into account they must input the parking meter ID and the amount they want to pay. Standard meter limits apply (i.e four hour maximum). Once submit button is pressed, user will see an image of a meter with the ID number and how much time they have remaining. History of meter usage is logged and is accessible to both user and admin. User can pay for multiple meters if they choose. Error page simply reloads the input meter ID and payment amount page. User can view transactions from ‘history’ page and/or their paypal account transaction history.

3.2 Hardware Interfaces

Hardware Requirements
Mobile device that can connect to the internet and access web pages
We strongly recommend a computer fewer than 5 years old.

Processor: Minimum 1 GHz; Recommended 2GHz or more
Ethernet connection (LAN) OR a wireless adapter (Wi-Fi)
Memory (RAM): Minimum 1 GB; Recommended 4 GB or above

3.3 Software Interfaces

parkingFriendly supports the following Web Browsers:
• Chrome
• Microsoft Edge

• Firefox
• Internet Explorer
• Safari

If an issue is discovered with one of the recommended browsers listed above, please report it to Skyward Support so that our development team can review the issue.

3.4 Communications Interfaces

parkingFriendly uses email to communicate with users. User's email is obtained during account creation. User must receive and confirm the email before account is active.

4. System Features

1) Mobile parking meter payment
2) Mobile meter notification
3) Ease of meter monitoring by parking enforcement officers

4.1 System Feature 1 Mobile parking meter payment

4.1.1 Description and Priority

Users create an account on the parkingFriendly website, use Paypal to upload credits to their account to pay for their selected meter. Meter selection based on QR code, manual input or GPS location

4.1.2 Stimulus/Response Sequences

User must login, load credit into account from paypal, then apply desired credit to chosen meter.

4.1.3 Functional Requirements

REQ-1: database
REQ-2: payment system
REQ-3: web based app for login and tracking of payments and timer

5. Other Nonfunctional Requirements

5.1 Performance Requirements

5.2 Safety Requirements

- Please do not utilize this web application while operating a vehicle as that can obstruct and distract you as a driver, which could potentially cause a car accident, property damage to the school, danger to any pedestrians in the area, and more.

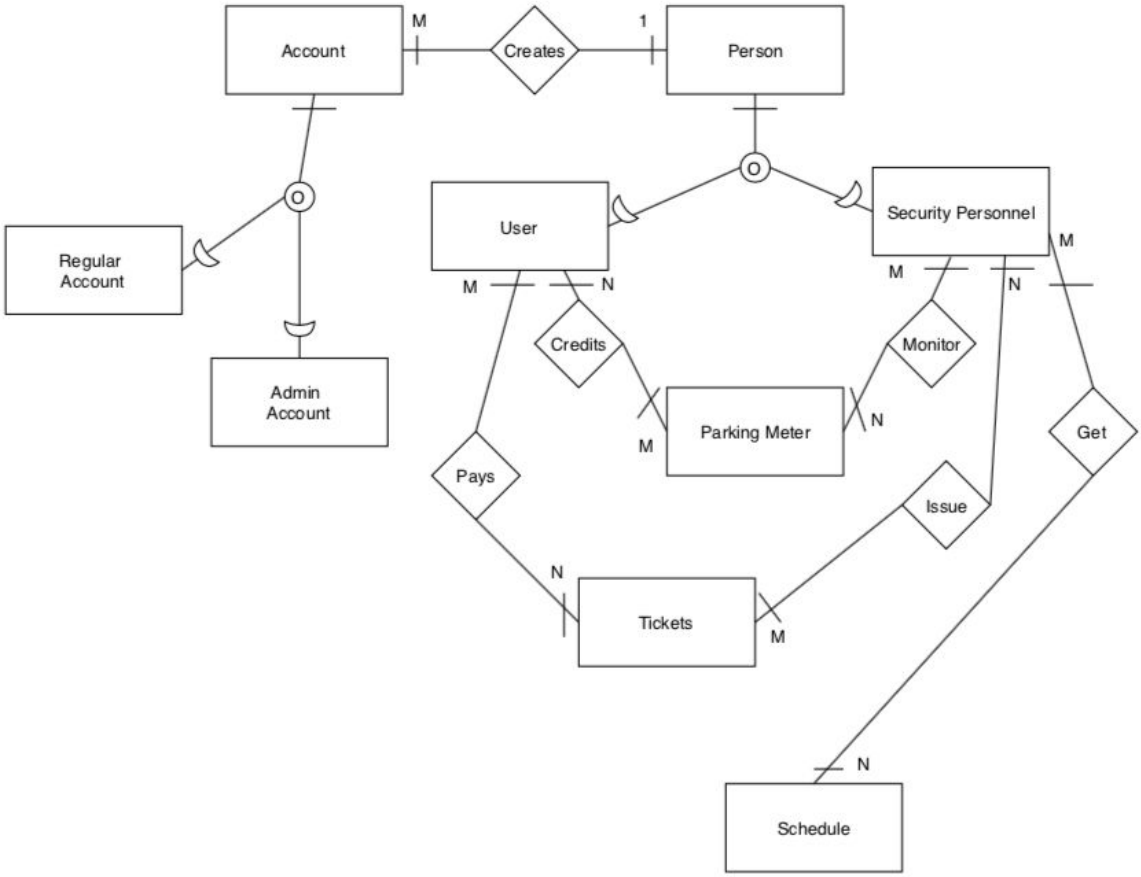
- There is a potential for system errors to occur which could involve:
    - Potential loss of crediting(purchasing credit does not credit account)
    - Paying for a meter in advance with another user taking spot
    - Payment to meter may not go through

6. Other Requirements

Appendix A: Glossary

AFV - away from vehicle

Appendix B: Analysis Models



Appendix C: To Be Determined List

- To be determined