
University of South Alabama

JagTrack
Software Requirements Specification

Version 1.1

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| Jag Track | Version: 1.1 |
| Software Requirements Specification | Date: 29/Apr/12 |
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Revision History

| Date | Version | Description | Author |
|-----------|---------|--|--------------|
| 12/Mar/12 | 1.0 | | Xingyu Wang |
| 29/Apr/12 | 1.1 | Updated with all use cases. Grammatical edits. | Jim Fletcher |
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Software Requirements Specification

Introduction

Purpose

This SRS describes the requirements and specifications of the JagTrack System. It explains the functional features of the system along with interface details, design constraints and related considerations.

Scope

The JagTrack application is designed to enable JagTran passengers to track buses and calculate arrival times both for buses and to their eventual destinations. It will also allow administrators to track usage and availability of buses, thus allowing for the most effective usage of JagTran resources.

Definitions, Acronyms, and Abbreviations

See the Glossary.

References

Glossary
Supplementary Specification

Overview

The rest of this document examines the specifications of the JagTrack System in detail. Section 2 presents general factors that affect JagTrack and its requirements, such as user characteristics and project constraints. Section 3 outlines the detailed, specific functional performance, system and other related requirements of JagTrack.

Overall Description

Product Perspective

JagTrack is an Android application that allows potential JagTran passengers to check bus routes, bus locations, arrival times and projected transit times. It will provide a real-time or near-real-time map with routes and bus locations overlaid. Administrators of the system will be able to track bus occupancy and bus location to make adjustments to guarantee the best possible quality of JagTran service.

Assumptions and Dependencies

The user's mobile device is assumed to have GPS and Internet connectivity.

The database will be configured in such a way as to allow quick, efficient access.

User Characteristics

There are two user classes for the JagTrack System: Passengers who want to get bus locations, route info and transit times and administrators who will track usage and oversee bus scheduling. The user needs to possess knowledge to use the interface for requesting information from the application. The administrator needs to have the skills necessary to analyze usage and adjust bus deployments.

Specific Requirements

Functionality

This section is organized by the processes and features encapsulated in the JagTrack System.

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Get Route

This functional feature allows the user to select line color and stop. Within 5 seconds the system will calculate when the last bus left that stop and when the next bus will arrive. The system will respond accurately at least 99.9% of the time.

Count Passengers

This functional feature allows the buses to maintain an accurate count of passengers for load balancing. As users board a bus the count is incremented. As users depart a bus the count is decremented.

Get Passenger Count

This functional feature allows the user to request from the system the number of passengers on the next bus coming to a specific stop. If geolocation is not possible, the system requires the user to enter the name of the stop.

Inquire Hours

This functional feature allows the user to request the operational hours of a given line of JagTran. The system requires the user to enter the color of the line. After the user specifies the color, the system displays the operation hours of the line.

Inquire Map

This functional feature allows the user to request the map of a specific line on JagTran. The system requires the user to choose a color for the line. After the user specifies the color, the system displays the map of the line.

Count Buses

This functional feature allows the user to request a count of active buses on a specific Jagtran line. The system asks the user to choose a color for the line. After the user specifies the color, the system displays the number of buses currently running on the line.

Count Waiting

This functional feature allows the user to request the count of passengers currently waiting at a stop. The system requires the user to enter the name of the stop. After name entry, the system displays the number of passengers currently waiting at that stop.

Get Route

This functional feature allows the user to submit a request from the system for a route between locations. The system will obtain the user's current location and the user must enter the desired destination. The system will display one or more available routes and estimated travel time to the user.

Inquire Frequency

This functional feature allows the user to request the frequency of buses on a specific JagTran line. The system requires the user to choose the line and a time interval. The system displays the frequency of buses on that line for the selected interval.

Inquire Disembarks

This functional feature allows the user to request the average number of passengers disembarking the JagTran at a specific stop. The user will enter the name of the stop and choose a time interval. The system will display the average number of passengers exiting JagTran at that stop during the selected interval.

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Supplementary Requirements

See the document named Supplementary Specification.

Supporting Information

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