

**Университет ИТМО
Факультет ФПИ и КТ**

**Отчет
по лабораторной работе №1**

Software Requirements Specification

Вариант 1406

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TransportSpb	Version: 1.0
Software Requirements Specification	Date: 08/03/2022
1406	

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Software Requirements Specification

1. Introduction

1.1 Purpose

*The purpose of establishing this website is to provide citizens and tourists with a website that can query real-time traffic information (traffic information includes but not limited to subways, buses, trains, cars, planes, real-time traffic information and fares). The implemented subsystems include login and registration functions, information query and retrieval functions, and map navigation functions. The non-functional requirements of the website include the stability of running 7*24 hours, the high concurrency feature that can be accessed by a large number of users at the same time, and the security against hacking, etc.*

1.2 Scope

This software requirements specification applies to the TransportSpb web application

1.3 Definitions, Acronyms, and Abbreviations

TransportSpb: Transport St. Petersburg.

1.4 References

Transportspb: <https://transportspb.com/>

2. Overall Description

This product provides travel and transportation assistance for all citizens living in the city. It should be able to provide citizens with information on all modes of transportation in the city, such as routes, transportation costs, recent news, and more. When logged in, users can save the information they need for easy access again. Information should be presented as simply and clearly as possible. The product should be able to be updated in the future according to market demand. For example, when a new type of vehicle appears in the future, the product can add information about the relevant vehicle.

3. Specific Requirements

3.1 Functionality

3.1.1 User Functions

3.1.1.1 User login registration System

Control user login and registration.

3.1.1.2 Function module system

Menu contains all implementations of the target functionality of the page. Users can choose what they want to serve (such as metro, airplane, bus, taxi and so on). In addition to being able to choose different main modules, it also includes some functions that are commonly used by users, such as route planning, news and so on.

3.1.1.3 User Management

Modify personal information, add or delete favorites

3.1.1.4 Maps and Navigation Systems

Provides maps for a variety of different vehicles, as well as navigation services for setting destinations and origins

3.1.1.5 information retrieval system

Get data like maps, timetables, etc. from database or third-party api

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- 3.1.2 Administrator Functions
 - 3.1.2.1 Administrator Management
 - Add, delete, modify and check user accounts
 - 3.1.2.2 Web Content Management
 - Publish, delete the content of web pages, such as news
 - 3.1.2.3 Web page function management
 - Delete functions that users do not like, update and optimize existing functions, and add new functions (pages) at the same time

3.2 Usability

Usability requirements include, easy-to-understand icons, eye-catching text titles and pictures, detailed introductions, internationalization

- 3.2.1 Easy-to-understand icons:
 - Easy-to-understand icons, after seeing the icon, users can immediately understand the function of the location of the icon
- 3.2.2 Eye-catching text titles and pictures:
 - Eye-catching text and pictures are easy to read for the elderly
- 3.2.3 Detailed introductions
 - Detailed introduction to facilitate users to understand the functions of the website or module.
- 3.2.4 Internationalization
 - Meet i18n requirements, convenient for foreign tourists.

3.3 Reliability

Reliability requirements include search accuracy, high server availability, mean time to repair, mean time between failures

- 3.3.1 Search accuracy
 - The accuracy of the search includes the accuracy of the search news, the accuracy of the search map and directions
- 3.3.2 High server availability
 - Server availability refers to a system that is specifically designed to reduce downtime while keeping its services highly available (always available).
- 3.3.3 Mean time to repair and Mean time between failures
 - the shorter the better.

3.4 Performance

Performance requirements include, response time, throughput, Database, etc.

- 3.4.1 Response Time
 - The response time of the website should be under 100ms in the St. Petersburg area.
- 3.4.2 Throughput
 - For a city with a population of 5 million in St. Petersburg, the throughput must meet at least 10,000 simultaneous visits
- 3.4.3 Database
 - The database can hold at least 5 million user data.

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3.5 Supportability

3.5.1 Coding Standard: UTF-8

3.6 Design Constraints

3.6.1 Software language: Java

3.6.2 Development tools: Maven

3.7 On-line User Documentation and Help System Requirements

robots protocol: <https://transportspb.com/robots.txt>

3.8 Licensing Requirements

Privacy License Agreement

3.9 Legal, Copyright, and Other Notices

Федеральный закон "О безопасности критической информационной инфраструктуры Российской Федерации" от 26.07.2017 N 187-ФЗ

3.10 Applicable Standards

i18n

IEEE830-1998

