**Project Name:**

(Revenue Generation Project)

Online Tractor Booking Platform

**Software Requirements Specification**

**Courses Code:-**

INT 219, INT 220

**Courses Name:-**

FRONT END WEB DEVELOPER,

SERVER SIDE SCRIPTING

**Student Names and Registration Numbers**

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Prepared for

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# 1. Introduction

The introduction to the Software Requirement Specification (SRS) document should provide an overview of the complete SRS document. While writing this document please remember that this document should contain all of the information needed by a software engineer to adequately design and implement the software product described by the requirements listed in this document. (Note: the following subsection annotates are largely taken from the IEEE Guide to SRS).

## 1.1 Purpose

*This document provides the Software Requirements Specification (SRS) for* ***Namdev Tractors****, a web-based platform that streamlines tractor browsing, booking, and dealership communication for local users and dealers. It serves as a reference for developers, stakeholders, and testers to ensure proper implementation.*

## 1.2 Scope

NamdevTractors is a lightweight web solution for local tractor dealerships currently operating offline. It allows customers to:

* View listings of available tractors.
* Browse tractor specifications.
* Book tractors for pickup.
* Contact the dealership for queries.

The platform includes an admin-friendly backend powered by PHP and PDO for managing tractor listings and handling customer requests. Integrated email communication via **Resend** allows real-time booking confirmations and dealer alerts.

## 1.3 Definitions, Acronyms, and Abbreviations

|  | | | | | |  | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| UI – User Interface |  | | | | | | | | |
| DB - Database |  | | |
| PDO - PHP Data Objects | | | | | |  |
| SRS - Software Requirements Specification | |  | | | | | | | | | | |
| HTML - HyperText Markup Language | | |  | | | | | | | |
| CSS - Cascading Style Sheets | |  | | | | | | |
| JS - JavaScript |  | | | |
| API - Application Programming Interface | |  | | | | | | | | | |

### *1.4 References*

* IEEE Guide to Software Requirements Specifications
* HTML/CSS/JS/TailwindCSS Documentation
* PHP PDO Documentation
* Resend Email API Documentation

### 1.5 Overview

This document covers:

* Overall system description and objectives
* Specific functional and non-functional requirements
* External interfaces and constraints

## ****2. General Description****

### 2.1 Product Perspective

NamdevTractors is a standalone website with client-server architecture. It connects local tractor dealers with online customers via a database-driven PHP backend and dynamic frontend interface.

### 2.2 Product Functions

The system performs the following major functions:

* Display tractors dynamically fetched from the database.
* Provide individual tractor detail pages.
* Handle booking and contact form submissions.
* Send confirmation and alert emails using the Resend API.

### 2.3 User Characteristics

* **Dealers/Admins**: Basic tech knowledge, handle queries and bookings.
* **Customers**: General users with internet access, primarily mobile or desktop browser users.

### 2.4 General Constraints

* Backend: PHP with PDO (no frameworks)
* Deployment: Web-hosted, no mobile app
* Emails via Resend API only
* Limited to local dealership network

### 2.5 Assumptions and Dependencies

* Internet access is available for users and dealers.
* PHP and MySQL/MariaDB hosting is configured.
* Resend API key is valid and available.

## ****3. Specific Requirements****

### 3.1 External Interface Requirements

#### 3.1.1 User Interfaces

* **Landing Page**: Hero, About, and Featured Tractors (with JS effects)
* **Navigation Bar**: Common across all pages
* **Tractor Listing Page**: Grid of tractors fetched from DB
* **Single Tractor Page**: Detailed specs fetched via tractor ID
* **Booking Form**: Name, contact, tractor selected, pickup date
* **Contact Form**: Name, email, message

#### 3.1.2 Hardware Interfaces

* Standard web server hosting (LAMP stack)
* No specialized hardware required

#### 3.1.3 Software Interfaces

* MySQL Database
* Resend Email API
* PDO for DB interaction

#### 3.1.4 Communications Interfaces

* HTTP/HTTPS for web requests
* SMTP over API via Resend for emails

### 3.2 Functional Requirements

#### 3.2.1 Browse Tractors

* **Inputs**: None
* **Processing**: Fetch list from DB
* **Outputs**: Dynamic list with image, model, price
* **Error Handling**: Show message if DB connection fails

#### 3.2.2 View Tractor Details

* **Inputs**: Tractor ID in URL
* **Processing**: Fetch details using PDO
* **Outputs**: Title, image, specs, price
* **Error Handling**: Redirect to error page if ID not found

#### 3.2.3 Booking Form

* **Inputs**: User info, tractor ID, pickup date
* **Processing**: Validate + store in DB + send emails
* **Outputs**: Success confirmation
* **Error Handling**: Show form errors, email fallback

#### 3.2.4 Contact Form

* **Inputs**: Name, email, message
* **Processing**: Validate + send to dealership via Resend
* **Outputs**: Success alert
* **Error Handling**: Email send failure alert

### 3.5 Non-Functional Requirements

#### 3.5.1 Performance

* Page loads in < 2s on average internet
* Email delivery within 10 seconds

#### 3.5.2 Reliability

* Handles up to 100 concurrent users

#### 3.5.3 Availability

* 99% uptime expected

#### 3.5.4 Security

* Input sanitization to prevent SQL injection
* CAPTCHA or token-based form validation (optional upgrade)

#### 3.5.5 Maintainability

* Modular codebase (split into HTML/JS/PHP components)
* Reusable templates for header/footer

### 3.6 Design Constraints

* Pure PHP (no Laravel or framework)
* TailwindCSS for all styling
* Resend as the only mailing solution

### 3.7 Other Requirements

* Provide SQL migration file for easy deployment
* Document team contributions and code structure.

# A. Appendices

Appendices may be used to provide additional (and hopefully helpful) information. If present, the SRS should explicitly state whether the information contained within an appendix is to be considered as a part of the SRS’s overall set of requirements.

*Example Appendices could include (initial) conceptual documents for the software project, marketing materials, minutes of meetings with the customer(s), etc.*

## A.1 Appendix 1 - Team Roles

| Member | Contributions |
| --- | --- |
| Rimmi Goyal | Landing Page UI, Header/Footer, DB Schema |
| Yash Jee | Tractor Listing Page, Single Page View, PDO Integration |
| Ayush Kumar | Booking + Contact Forms, Resend Integration |

## A.2 Appendix 2 - SQL Migration Script

This appendix contains the SQL migration script used to initialize the database schema and populate it with sample data for local development or deploying the system on a new host. It includes table creation statements, necessary constraints, and initial records.

**CLIENT APPROVAL FORMAT (REVENUE GENERATION PROJECTS)**

|  |  |
| --- | --- |
| **STUDENT GROUP DETAILS** | |
| **Names** | Ayush Kumar Gupta, Rimmi Goyal, Yash Jee |
| **Roll Numbers** | 53, 66, 64 |
| **Registration Numbers** | 12318074, 12300916, 12319968 |
| **Emails** | [ayushkumargupta2908@gmail.com](mailto:ayushkumargupta2908@gmail.com), [goyalrimmi12@gmail.com](mailto:goyalrimmi12@gmail.com), [yashjee2003@gmail.com](mailto:yashjee2003@gmail.com) |
| **CLIENT DETAILS** | |
| **Name** | Satbir Singh |
| **Email (Official)** | [namdevtractors@gmail.com](mailto:namdevtractors@gmail.com) |
| **Contact Number (Official)** | 9991350043 |
| **Organization/Company Address** | Namdev Tractors, Opp. BSNL Exchange, Chautala Road, Mandi Dabwali (Sirsa) Harayana |
| **REQUIRED DOCUMENT DETAILS (Yes/No)** | |
| **GST No.** | GSTIN - 06GBJPS2371Q1ZT |
| **Email Acknowledgement** | [namdevtractors@gmail.com](mailto:namdevtractors@gmail.com) |
| **Client Organization location proof (Google Maps)** | Namdev Tractors, Opp. BSNL Exchange, Chautala Road, Mandi Dabwali (Sirsa) Harayana |
| **Transaction ID proof** | 841100767 |

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| --- | --- |
| **PROJECT SUMMARY** | |
| **Title and Description** | Online Tractor Selling Platform,  It is a web-based platform that enables local tractor dealerships to showcase and sell their tractors online. Customers can browse listings, view detailed information, book tractors for pickup, and contact dealers. The system includes email notifications via Resend and is built using HTML, Tailwind CSS, JavaScript, PHP (PDO), and a MySQL database. |
| **Revenue generated (Rs.)** | Rs 15,000.00 |
| **Deployed Link** | Our client has specifically stated to us that we do not deploy the code anywhere , we were simply told to design the working codebase. We have already informed our PHP subject HOD regarding this, Sorry for the inconvenience caused. |
| **GitHub link** | https://github.com/ayyush08/NamdevTractors.git |

|  |  |
| --- | --- |
| **ACCEPTANCE OF PROPOSAL** | |
| **Authorized Client Signature/ E-Signature** |  |