# SOFTWARE REQUIREMENT SPECIFICATION

## 1.1 Introduction

This Software Requirement Specification document provides a complete description of all the functionalities and the specifications of the “Solarexx” system. The following section provides an overview of the derived Software Requirements Specification (SRS) for the application. To begin with, the purpose of the document is presented**,** and its intended audience is outlined. Subsequently, the scope of the project specified by the document is given with a particular focus on what the resultant software will do and the relevant benefits associated with it. The nomenclature used throughout the SRS is also offered. To conclude, a complete document overview is provided to facilitate increased reader comprehension and navigation.

### 1.1.1 Purpose

This document is developed for the project “**Solarexx**” which is designed to provide a platform for customers to purchase solar products online. Here customers can search for different solar shops in the city, compare the prices of the product located in different shops, and then order the product online. The purpose of this document is to describe the external requirement of the project. The main purpose is to translate the ideas in the mind of the client into a formal document. A software requirements specification (SRS) minimizes the time and effort required by developers to achieve desired goals and also minimizes the development cost. A good SRS defines how an application will interact with system hardware, other programs, and human users in a wide variety of real-world situations. The SRS provides critical information about development operations, quality assurance, and maintenance to the developers.

**1.1.2 Scope**

The main objective of the project Solarexx system is to provide an online facility for customers to purchase solar products from different shops located in their city. Today is the era of computers. This software project solves all the problems experienced in the present system. The proposed system provides the following features:

* All the details related to solar products from different shops can be found in one place.
* It enables the customer to find the different shops in the city and compare the price, order the product online.
* It monitors the customer and solar product details easily.

**1.1.3 Definition, Acronyms, Abbreviations**

GUI - Graphical User Interface

DBMS - Database Management System

RDBMS - Relational Database Management System

SRS - Software Requirement Specification

ADMIN -The Administrator.

CPU -Central processing unit

PHP -Hypertext Preprocessor.

SQL -Structured Query Language.

HTML -Hyper Text Markup Language.

CSS -Cascading style sheet

### References

[www.w3schools.com](http://www.w3schools.com)

[www.tutorialsapoint.com](http://www.tutorialsapoint.com)

www.geeksforgeeks.com

www.javatpoint.com

### 1.1.5 Overview

## The project “Solarexx” is developed to search different solar shops in the city, compare the prices of the product located in different shops, and then order the product online. Shop owners can add the product details to the website and they can get the customer online. Here admin manages the application. Here customers can compare products and they can place orders.

## 2.2Overall Description

This section will give an overview of the whole system. The system will be explained in its context to show how the system interacts with other systems and introduce its basic functionality of it. It will also describe what type of users will use the system and what functionality is available for each type. At last, the constraints and assumptions for the system will be presented.

### Product Perspective

The Solarexx software is a fully independent product and not a part of any other system. The users of the system are categorized as admin, shop owner, and customer. The system gives online access to each separate user. This system provides an easy way for customers to buy solar products with the best quality and affordable price. This Project is self-contained. It provides a simple database rather than complex ones for high requirements and it provides a good and easy graphical user interface (GUI) to both new as well as experienced users of the system. This project mainly focuses on the solution regarding the existing system where the customers had to go to stores and buy solar products.

### Product Functions

* The project “Solarexx” is developed to provide an online platform for both customers as well as shop owners, where shop owners can add their products online and get the orders online and customers can find different types of solar products from different shops under one platform.
* It manages all the activities online.
* All the details related to solar products from different shops can be found in one place.
* It enables the customer to find the different shops in the city and compare the price, order the product online.
* It enables to maintain a huge collection of product details.
* It enables the customers to track their delivery easily.
* It provides an easy search of many solar products.
* It enables the shop owner to grow their business through online customers.
* It enlarges the flexibilities in the existing system with a web-based user-interactive interface.

### User Classes and Characteristics

The system has three user levels.

**Admin:**

The Admin can log in to the system using his/her unique credential. Here admin can manage the details of customers and shop owners.

* Login
* Manage customers.
* Manage shop owner.
* Manage shop details.
* Approve shop owner.

**Shop owner:**

The shop owners can log in by entering their username and password. The shop owner can add products, manage bookings and manage payment.

* Shop registration.
* Manage profile.
* Add product details.
* Manage bookings.
* Manage delivery.

**Customer:**

Customers can register through email-id and password. They can view the products, track the delivery and add them to the cart. They can also do the payment.

* Login
* Manage profile details.
* View shop/product details.
* Add to cart.
* Book products.
* Track the delivery.
* Payment.
  + 1. General Constraints:

General constraints include the following:

* This application requires an internet connection.
* Shop owners must register and get confirmation from the admin to access the website for the first time.
* Only shop owners manage the products.
* No one has the right to change the information of someone else account on this website.
* The end system should also allow for seamless recovery, without data loss, from individual device failure.

* + 1. Assumptions and Dependencies:
* It is assumed that this system has three types of users, i.e., admin, shop owner, and customer.
* The admin should be careful in approving the shop owner details.
* All the details related to customer and shop owner should be maintained properly.
* All the data entered will be correct and up to date.
* It is assumed that the needed changes, to collect and store the data, will be made within the current application and database.

**3 SPECIFIC REQUIREMENTS**

**3.1** **External Interface Requirements:**

**3.1.1 User Interface**

A user interface is a point of human interaction and communication with the system.

We have taken the following requirements during design,

* Textboxes to enter details.
* Buttons to add, delete, update and search.
* Labels to display the information.
* Checkboxes.
* Combo boxes and list boxes.
* Grid box to display the information.

**3.1.2 Software Requirements**

* Operating system: Windows.
* Text editor: Sublime Text 3
* Language: PHP
* Server: Apache
* User interface: HTML, CSS, JavaScript
* Database: MySQL
* Browser: Chrome, Mozilla Fire, fox, or any other browsing application.

**3.1.3 Hardware Requirements**

* Processor: Intel dual-core or above
* Processor Speed: 2GHz
* RAM – 1GB
* Hard Disk – Minimum 40 GB

**3.1.4 Communication Interface**

The communications function required by this product is HTTP protocol, and internet communication is through TCP/IP protocol.

* 1. Functional Requirements

**3.2.1 Functional Requirements**

**Admin:**

* Login: Admin will enter the website using username and password.
* Manage customer: In this module admin can manage the customer details who are registered to the system.
* Manage shop owner: In this module, the admin can manage the shop owner’s details.
* Manage shop details: Admin can also manage the different product details and the shop details.
* Approve shop owner: In this module, the admin can approve the request of the shop owners.

**Shop owner:**

* Register: The shop owner can register by giving his/her primary details.
* Manage profile: In this module, the shop owner can create or update the shop profile.
* Add product details: Shop owner will add the product details or the catalogs to this website.
* Manage bookings: In this module, the shop owner can view the bookings made by the customers.
* Manage delivery: In this module, the shop owner can manage the delivery information.

**Customer:**

* Register: Customer has to register by providing primary details before ordering.
* Manage profile details: In this module customers can update /her profile details.
* View shop/product details: In this module, customers can view the respective shop details, the product details including the product description and specification.
* Add to cart: Customer can add the selected items to cart.
* Book products: Customer can order for items added to the cart.
* Track the delivery: Once the booking is made the customer can track the product delivery.
* Payment: Customer can pay for the orders through an online or offline method.
  1. **Performance Requirements:**
* The server shall be capable of supporting an arbitrary number of active customer payments, that is, no payments shall be lost under any circumstances.
* Page load time should be less than 40 sec.
* Should have a good memory space.
* The server shall be capable of supporting an arbitrary number of active orders, that is, no orders shall be lost under any circumstances.
* Should be error-free.
* 1MB file should get uploaded in 60 sec.
  1. Design Constraints:
* While shop owners register to the system, mandatory fields must be checked for validation whether the shop owner has filled appropriate data in these mandatory fields. If not, a proper error message should be displayed, or else the data is to be stored in a database for later retrieval.
* All mandatory fields should be filled by the customers while buying the items from the cart.
* All mandatory fields should be filled by the customer while adding the profile details.
* The system must be designed in such a way that will be easy to use and visible on most browsers.

3.5 System Attributes

The Quality of the database is maintained in such a way that it can be very user-friendly to users of the database.

* Performance: The system should be able to handle all the users at a time using any of the web browsers.
* Reliability: good validation of user inputs will be done to avoid incorrect storage of records.
* **User-friendly Interfaces:** Self-explanatory or easy to use screen layouts are expected to make better quality in terms  
   of usage.
* Maintainability: Maintainability is the ability of the system to change with a degree of ease.
* Portability: This system shall be portable, and we can switch the server very easily.
* Flexibility: The system will keep on updating the data according to the transactions that take place.
* Timeliness: The system shall carry out all the operations with consumptions of very less time.

**3.6 Other Requirements**

**3.6.1 Safety Requirements:**

* There are three user levels in Solarexx, Access to the various subsystems will be protected by a user log-in screen that requires a username and password. This gives different views and accessible functions of user levels through the system.
* Email ID once registered to the system cannot be changed to make every user unique and easily identifiable
* Maintaining backups ensures the system database security. The system can be restored in any case of an emergency.

**3.6.2 Security Requirements:**

* The server on which the ‘Solarexx’ resides will have its security to prevent unauthorized write/delete access. There is no restriction on reading access.
* The proposed website will be secure. There are different categories of users they are admin, shop owner, and customer.
* Depending upon the category of using the access rights are decided.
* Admin has the maximum privilege to all subsystems.