**Project Name – PEXCHANGE**

**Team Name – Quad Kone**

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**Members:**

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**1. Introduction**

**1.1. Purpose**

The purpose of this document is to provide an overview of the software product that we aim to develop and its requirements i.e. hardware, software specifications and intended audience. The document has been formatted in such a way that the deliverables are divided into smaller components thereby, describing the functions, goals and tasks that the system can perform. The product aims to help local artisans digitalize and upscale their business. The document helps the developers to understand what functionality needs to be worked upon and in which order along with understanding the boundaries within which they need to work.

**1.2. Intended Audience and Reading Suggestions**

The audience that the software product being developed targets:

* Artisans who are willing to sell their products online but do not have adequate knowledge or background for it.
* Customers who want to buy goods from local sellers in online mode.
* The stakeholders who can review orders and stock inventory.

**1.3. Project Scope**

With the introduction of online shopping platforms, people have shifted to buying online due to convenience. However, it harms businesses that cannot sell their products since most prefer online shopping over in-person shopping. It has led to decreasing sales and affected those who cannot understand the complex system of these platforms.

Our project aims to digitalize the selling of products for small craftsmen and artisans who do not have any knowledge about the online world.

We will enable them to sell their products online without worrying about the process. The project will help them upscale their business and reach a broader customer segment who want to buy handmade or local goods but cannot find them online. With our project, we aim to promote the use of local and handmade goods by making them convenient to both buy and sell.

We will contact various artisans interested in selling their products online and list them on our platform, but they do not have enough knowledge. Through our project, they will be able to get orders for products. Our project offers customers a shopping platform to order products online as per availability or reach the seller if they want to buy them in person. We will be the point of contact for artisans to list their products on our website.

**2. REQUIREMENT ANALYSIS**

**2.1 User Interaction with the website:**

The following are the actions that users can take on our web application:

* Searching for products on the home page or throughout the website, and how or on what basis. Products can be found by searching for them by product name, category, brand, and so on.
* Users will be able to maintain a cart, they can add their products, remove their products and can also be able to see their total payment of products in their cart, then can proceed to checkout with payment.
* Adding products to a wish-list. This can help users to add their basic requirements that they want to buy and also add some products that they found of their like or interest.
* Creating an account with their personal details is mandatory for buying products. The user must be logged in to place orders, while creating an account they have to give their personal details such as their address, phone number etc.
* The customers will be provided with the option to rate the products they buy, so that it can help others while

**2.2 Admin Console**

The aspects that admin can control from the backend and included the following:

* Product Management - All product metadata, such as its images, descriptions, seller information, and prices. The administrator should be able to control this data, such as adding, removing, and editing products.
* Content management — The front-end design of the website, i.e. the static pages that a user views. To attract and keep traffic, it's critical to design an appealing and successful website.
* Master Management — In addition to product data, other masters must be controlled on the back end. Country, state, and city masters, as well as seller masters, are some examples. When a user provides a pin code while entering a shipping address, for example, pin code masters assist in extracting a city.

**2.3 Checkout and Payment for Users**

* Before placing an order, users must first create an account and register, as they will be requested to fill out their personal information.
* There are a variety of payment alternatives available, including cash on delivery, e-wallets, and third-party payment gateways. Vendors are chosen based on the needs of the company.
* The costs and techniques of shipping, these can either be kept up to date in the backend or set static.

**3. SOFTWARE REQUIREMENT**

**3.1 Front end:**

1. **HTML** - HTML is the code that is used to structure a web page and its content. It can be assisted by technologies such as Cascading Style Sheets and scripting languages such as JavaScript
2. **CSS** - CSS is the language we use to style an HTML document. CSS describes how HTML elements should be displayed.
3. **JavaScript** - JavaScript is a programming language that is one of the core technologies of the World Wide Web, alongside HTML and CSS. It can power features like interactive images, carousels, and forms.
4. **React** - React is a free and open-source front-end JavaScript library for building user interfaces based on UI components.
5. **Redux** - Redux is an open-source JavaScript library for managing and centralising application state. It is most commonly used with libraries such as React for building user interfaces.

**3.2 Back end:**

1. **NodeJS** - Node.js is an open-source, cross-platform, back-end JavaScript runtime environment that runs on the V8 engine and executes JavaScript code outside a web browser. It is used for traditional web sites and back-end API services.
2. **ExpressJS** - Express.js, or simply Express, is a back end web application framework for Node.js. The primary use of Express is to provide server-side logic for web and mobile applications, and as such it's used all over the place.
3. **MongoDB** - MongoDB is a source-available cross-platform document-oriented database program. It provides different ways to perform aggregation operations on the data like aggregation pipeline, map reduce or single objective aggregation commands.

**4. External Interface Requirements**

* 1. **User Interfaces**
* The Attendance Management System shall provide details of students in the class to aid in taking attendance.
* These details can be clicked with a mouse in order to view a particular student’s attendance
* record.
* All modifications to the database will be done through a keyboard.
* Application will be accessed through a Browser Interface. The interface would be viewed best using 1920 x 1080 pixels resolution setting.
* The program will provide a page that produces current statistics on class attendance.
  1. **Hardware Interfaces (recommended)**

**Server Side:**

* Windows Server 2016 or Windows 8, or later versions of either.
* Processor: Intel i5 9th gen or higher
* Processors that support AVX2
* RAM: 4 Gb or more
* Hard Drive: 100 GB or more

**Client side:**

* Operating System: Windows 7 or above, Mac or UNIX.
* Processor: Intel i3 10th gen or higher
* Processors that support AVX2
* RAM: 4 Gb or more