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ONLINE SCRAPYARD

Scrapyards play a vital role in the proper use of natural resources. With the renewed focus on green living, sustainable material usage, and renewable resources, scrap salvage yards are important in keeping landfills from filling up with materials that could otherwise be recycled.

**Current System: -**

At present the materials will be collected by the scrapyard or they have to take it to scrapyards. Every time when the materials are collected, they have to be taken care. All the collected items will be grouped or stacked in one place.  
 If anyone want any used materials then they have to search for that product in the large pool of items. This makes the searching process more complicate. Like this any recyclable products stuck in the pool of items are ignored. So, to overcome these issues we are providing an e-commerce platform to buy and sell scrap materials and recycled products.

**Our system: -**

Our platform provides interface for both buyer and sellers. If anyone interested in selling of any scrap materials, they have to create an account at our website, then they can upload their products or materials with all the information, photos, location, contact details. Anyone interested in that product can contact the seller and buy that product from them. In the same way anyone bought the product have recycled them can also sell the recycled product on our website.

**REQUIREMENTS**

* Every user should have an account otherwise they have to create an account
* User authentication with OTP verification
* Anyone wants to sell scrap material/recycled product can upload the product with details
* The product should be in the condition specified by the website
* The selling request will be accepted by the admin if it fulfils the prerequisites
* The buyer has to contact the seller if he wants to buy any product
* Search engine with location based, product based

nearby product search options

**LANGUAGES USED**

**HTML**

HTML is a *markup language* that defines the structure of our content. HTML consists of a series of elements, which we use to enclose, or wrap, different parts of the content to make it appear a certain way, or act a certain way. The enclosing tags can make a word or image hyperlink to somewhere else, can italicize words, can make the font bigger or smaller, and so on.

**CSS**

**C**ascading **S**tyle **S**heets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.

CSS handles the look and feel part of a web page. Using CSS, we can control the colour of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colours are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.

CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.

**JavaScript**

**JavaScript** (often shortened to **JS**) is a lightweight, interpreted, object-oriented language with first-class functions, and is best known as the scripting language for Web pages, but it's used in many non-browser environments as well. It is a prototype-based, multi-paradigm scripting language that is dynamic, and supports object-oriented, imperative, and functional programming styles.

JavaScript runs on the client side of the web, which can be used to design / program how the web pages behave on the occurrence of an event. JavaScript is an easy to learn and also powerful scripting language, widely used for controlling web page behaviour.

**Node.js**

* Node.js is an open-source server environment
* Node.js is free
* Node.js runs on various platforms (Windows, Linux, Unix, Mac OS X, etc.)
* Node.js uses JavaScript on the server

**Why Node.js?**

A common task for a web server can be to open a file on the server and return the content to the client.

Here is how PHP or ASP (asynchronous programming**)** handles a file request:

1. Sends the task to the computer's file system.
2. Waits while the file system opens and reads the file.
3. Returns the content to the client.
4. Ready to handle the next request.

Here is how Node.js handles a file request:

1. Sends the task to the computer's file system.
2. Ready to handle the next request.
3. When the file system has opened and read the file, the server returns the content to the client.

Node.js eliminates the waiting, and simply continues with the next request.

Node.js runs single-threaded, non-blocking, asynchronous programming, which is very memory efficient.

**MongoDB**

MongoDB is a non-relational document database that provides support for JSON-like storage. The MongoDB database has a flexible data model that enables you to store unstructured data, and it provides full indexing support, and replication with rich and intuitive APIs.

AWS enables you to set up the infrastructure to support MongoDB database deployments in a flexible, scalable, and cost-effective manner on the AWS Cloud. AWS also enables you to run MongoDB-compatible workloads with Amazon Document DB (with MongoDB compatibility), a fast, scalable, and fully managed non-relational database service. With Amazon Document DB you don’t have to worry about operational hassle including hardware provisioning, backups, upgrades, durability, patching, high availability, and more. As a cloud-native database, Amazon Document DB enables you to build applications that can quickly and easily scale with your workload.

Mongoose is an Object Data Modelling (ODM) library for MongoDB and Node.js. It manages relationships between data, provides schema validation, and is used to translate between objects in code and the representation of those objects in MongoDB. MongoDB is a schema-less NoSQL document database

**Why MongoDB over MySQL?**

MongoDB is faster than MySQL due to its ability to handle large amounts of unstructured data when it comes to speed. It uses slave replication, master replication to process vast amounts of unstructured data and offers the freedom to use multiple data types that are better than the rigidity of MySQL

HARDWARES REQUIRED

**1.   Desktop/Laptop Computer**

Everyone has one these days and it is crucial for any business who wants to grow and thrive to have a designated computer system. Make sure to invest in the equipment that will last and that is reputable for businesses. Finding a computer or laptop won’t be hard due to the fact that they are sold everywhere, along with much technical equipment.

**2**.**External Hard Drive**

Given that most things are done online these days it’s important to have some kind of hard drive to store information in. External hard drives keep your business organized and your information in a secure place. You must invest in this type of equipment to maintain a successful running business online and physically.

**3.   Network Server**

Network servers are highly important for fast and easy speeds and databases. You will have access to more storage capacity and higher security. For your business, you want to stay away from using your computers network server and get one that is specifically dedicated to your business only.