Integration of Supply Management

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Abstract: Web services are included in today's web technology which is being widely presented to provide universal services. Service-oriented computing is usually published by service providers on the internet in the form of a web API. The web industry at this point is getting more and more aggressive to implement the concept of web services that provide message interoperability and data exchange interfaces. This project consists of a service-oriented web application which integrates the local suppliers of automobile parts and the local repair and service garage owners with the users (the customers) under a single roof.

Keywords: Web application, OTP authentication, Automobile supply and service integration.

INTRODUCTION:

This project consists of a service-oriented web application which integrates the local suppliers of automobile parts and the local repair and service garage owners with the users (the customers) under a single roof.

This is done by first registering the user with proper details and then registering the parts and services related to the same. Then, the user can be both Customer or Supplier. When each time a customer wants to avail the same, user login will be required and the same goes for registering new part or a service for supplier login. An OTP authentication system is also added to the login process. This project aims at integrating the parts of automobiles as products and their service using current concept of web services.

REVIEW OF LITERATURE:

1. *To cite this article - Indra Gunawan et al 2021, Integration of Supply Management System in Auto Parts Company Using Web Services.*

The web industry at this point is getting more and more aggressive to implement the concept of web services that provide message interoperability and data exchange interfaces. This is very useful in managing data from various web sites where data integration might occur. The case study of this research was carried out on managing auto parts supply, using research methods collecting and analysing data structures, architectural design data, building web service, building APIs, testing, and measurement. Background and research objectives can be formulated how to combine data from various information system applications, into a supply management system that is designed using web service technology by managing API data on the REST server so that it can be used by REST clients. This paper results in the creation of a web service through a testing phase with 4 trials with a total data received 18.31KB and a total response time of under 2000ms.

This research presents integrated information and data that can be operated by other platforms based on the RESTful web service architecture. Web service serves as an effective and important service used for industry needs, because these services can integrate their data and develop their products collaboratively in responding quickly to customer requirements, with the use of RESTful web service technology from the data API, it can make the system more structured in the HTTP method, so that it can be accessed by clients easily using different platforms. The problem handled by web services in the case study of this research is integrating distributor data with the workshop to be able to provide fast services according to the information needs of users. The solution to this problem is realized and implemented in a REST client software that has shareability, reusability, and interoperability by adopting the JavaScript Object Notation (JSON) format and RESTful web service technology.

2. *Developing an E-Commerce Website - Syed Emdad Ullah, Tania Alauddin and Hasan U. Zaman*
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In this era of internet, e-commerce is growing by leaps and bounds keeping the growth of brick-and-mortar businesses in the dust. In many cases, brick-and-mortar businesses are resorting to having a counterpart which is internet or e-commerce driven. People in the developed world and a growing number of people in the developing world now use ecommerce websites daily to make their everyday purchases. Still the proliferation of e-commerce in the underdeveloped world is not that great and there is a lot to desire for.

E-Commerce has changed our life styles entirely because we do not have to spend time and money travelling to the market. One can pick up the pace of his online business with the help of e-commerce application development and web development solutions.

It is one of the cheapest means of doing business as it is e-commerce development that has made it possible to reduce cost of promotion of products and services.

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Available online 6 November 2003 - Information systems in supply chain integration and management

Supply chain management (SCM) is the 21st century global operations strategy for achieving organizational competitiveness. Companies are attempting to find ways to improve their flexibility and responsiveness and in turn competitiveness by changing their operations strategy, methods and technologies that include the implementation of SCM paradigm and information technology (IT). However, a thorough and critical review of literature is yet to be carried out with the objective of bringing out pertinent factors and useful insights into the role and implications of IT in SCM. In this paper, the literature available on IT in SCM have been classified using suitable criteria and then critically reviewed to develop a framework for studying the applications of IT in SCM. Based on this review and analysis, recommendations have been made regarding the application of IT in SCM and some future research directions are indicated.

It has been demonstrated that IT is an essential ingredient for business survival and improves the competitiveness of firms. As a result of the literature review, we can see that IT has a tremendous influence on achieving an effective SCM.

PROPOSED SYSTEM:

Stage 1. Getting to know a client

After the company gets a message from a lead, a sales manager and the lead discuss the needs (or the Scope of Work documentation if the lead already knows what (s)he wants). The sales manager briefs the lead about the desired outcome, the Definition of Done, timeline, budget, essential requirements, and possible bottlenecks. At this stage, the sales manager qualifies the lead and whether it fits the target audience of the company's services: if a prospect needs a website and a PWA and a particular company builds only mobile apps, it's definitely better to say farewells to each other.

Stage 2. Discovery and project research

Discovery includes a deep investigation of the lead's business requirements and the framing of a rough solution. What technology stack should be used? How an application will be scaled further and does this tech stack address further needs? Is there a match between our proposed solutions and the lead's vision? Does this solution fit a budget? If the rough solution and the budget are accepted, the sales manager passes available documentation and specifications to a lead developer for further, more detailed investigation and estimation. After several iterations, the sales manager and the lead together create a description of the scope of work. Here the sales manager takes off and the project manager or a lead developer steps in. The lead becomes a client.

Stage 3. Wireframes and prototypes creation

A wireframe is literally a draft or a schema of a future web page. It includes all the blocks that should be placed on the page and gives an impression of a page's grid. Having the wireframes in makes it possible to provide a more precise estimate and sweat the details of the functionality.

Stage 4. UI design

Once the wireframes are complete, we can move on to the design of a user interface and apply brand colors and elements. A designer works on design assets until final approval. The lead developer controls the design process as the outcome should be realizable within the client's budget.

Stage 5. Back-end development

In Drupal development which is our focus, initial installation and configuration go first. Then developers set up all necessary settings of modules. After the pages are built and coded, and front-end developers applied designs, Drupal back-end developers make sure every website page is approved, and the client has gone through demo versions of every feature on the website.

Stage 6. Front-end development

Depending on the project, the front-end and back-end development can go either in parallel or the back-end is followed by the front-end. A front-end developer implements all visual features and makes sure everything is pixel-perfect, and that a website is cross-browser compatible. Be attentive to the front end: its state impacts important website metrics, including Core Web Vitals, and, in the end, it impacts website's Google ranking as well.

Stage 7. Quality assurance

If you are the client, never ever omit the testing stage. There are no minor issues when it comes to website performance. Believe us, your website's visitors will notice every teeny-tiny bug. After the integration test, we move to the functional and UI tests and end up with manual smoke testing.

Stage 8. Launch

The bugs discovered at the QA stage are being fixed, the team finalizes everything and sets the final settings.

Stage 9. Post-launch QA and maintenance

Besides maintenance and support, the development team usually teaches the client how to use a website, manage it and add content, etc.

PROJECT FLOWCHART:
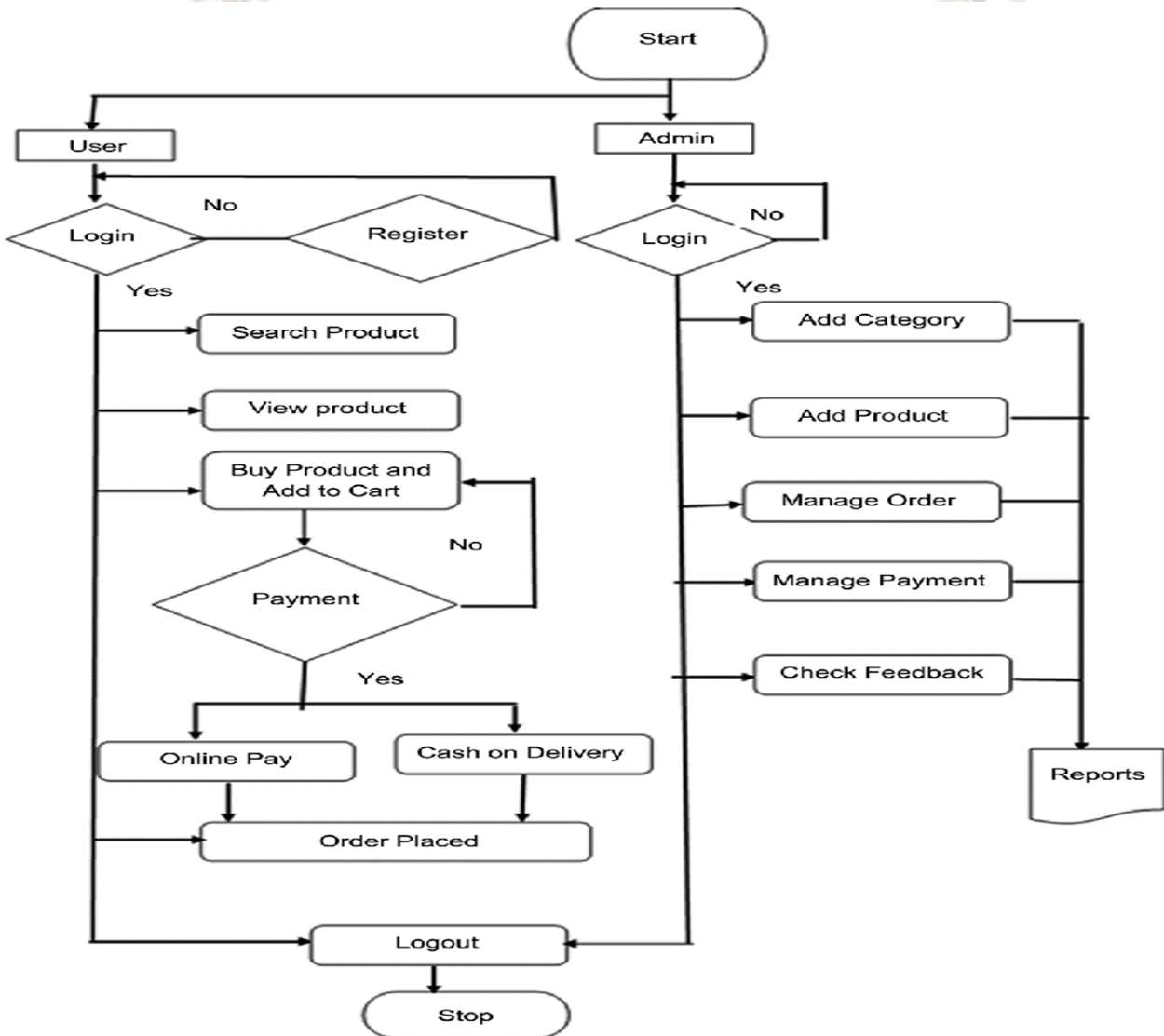
Figure No. 1. Theoretical page of application

RESULTS:

This project consists of a service-oriented web application which integrates the local suppliers of automobile parts and the local repair and service garage owners with the customers under a single roof and it worked successfully.
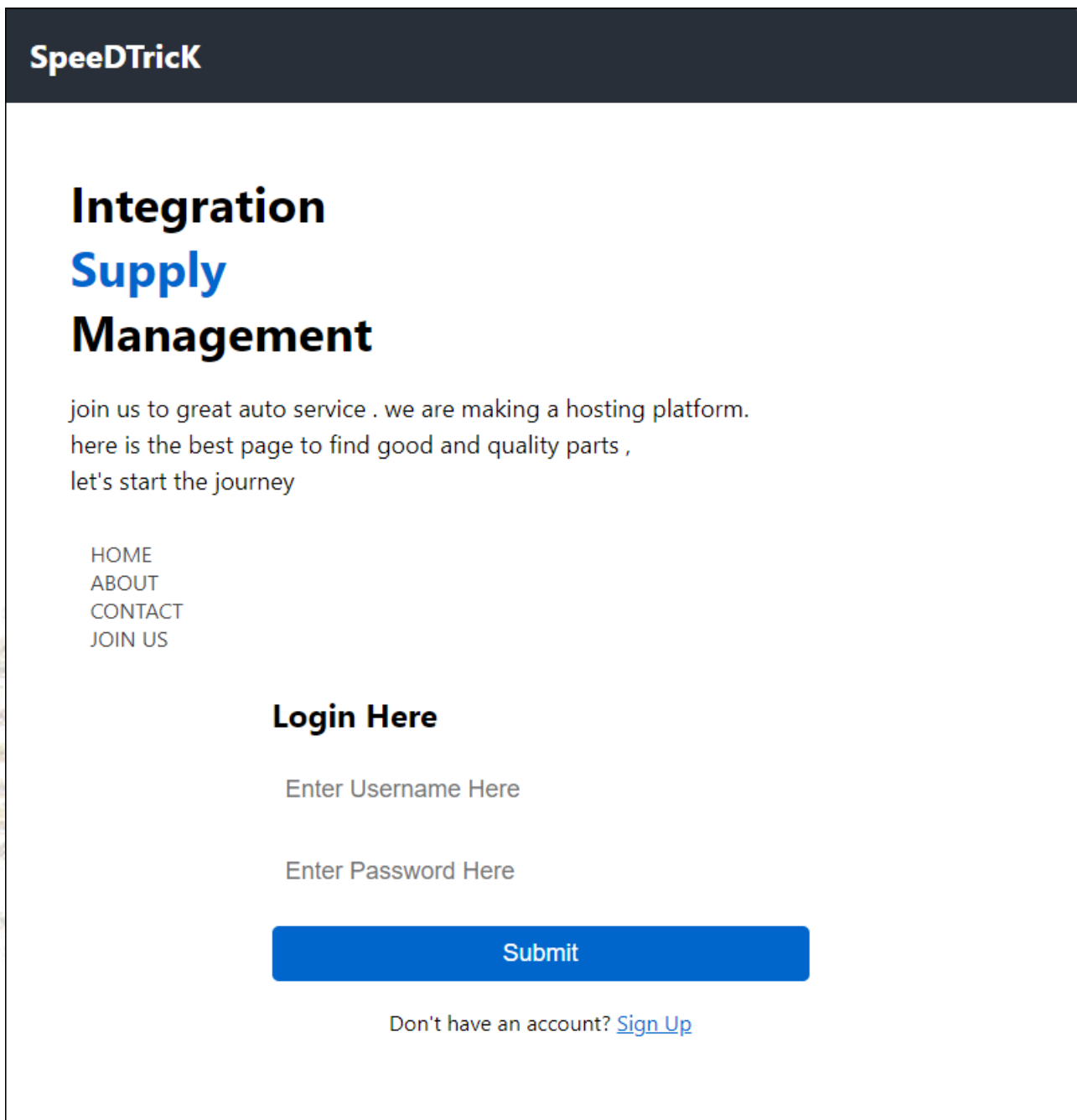

Figure No. 2. Home page of application

About

This project consists of a service-oriented web application which integrates the local suppliers of automobile parts and the local repair and service garage owners with the users (the customers) under a single roof. This is done by first registering the user with proper details and then registering the parts and services related to the same. Then, the user can be both Customer or Supplier. When each time a customer wants to avail the same, user login will be required and the same goes for registering new part or a service for supplier login. An OTP authentication system is also added to the login process.
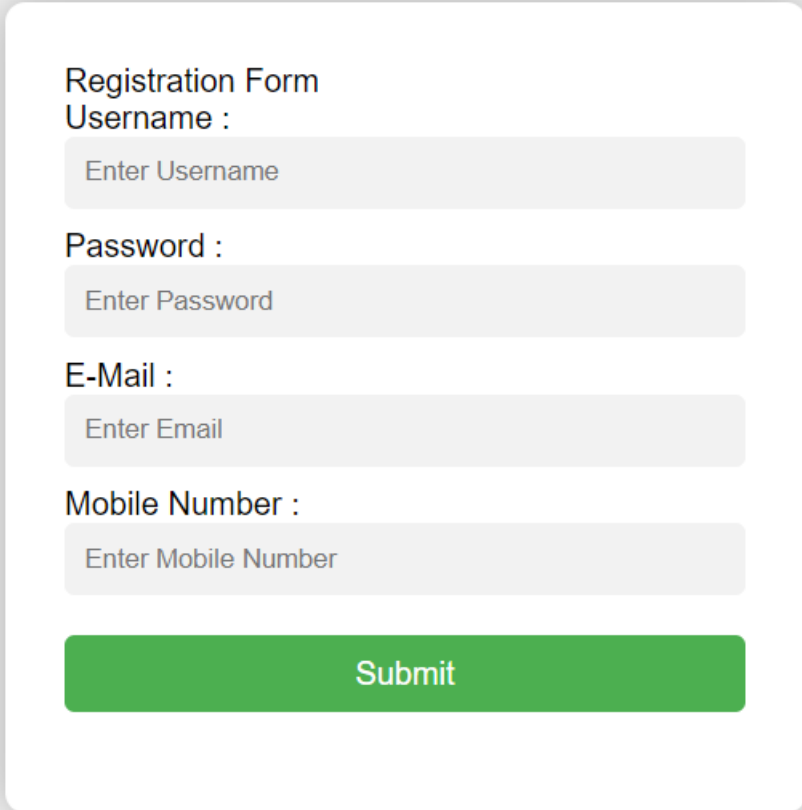
Back

Figure No. 3. About page

Contact Info

This project is made by : 1. Aniruddha Patil :- mobile number - 9136268840 mail id - patilaniruddha@kccemsr.edu.in 2. Sangharaj Sasane :- mobile number - 7777091570 mail id - sangharajsasane@kccemsr.edu.in
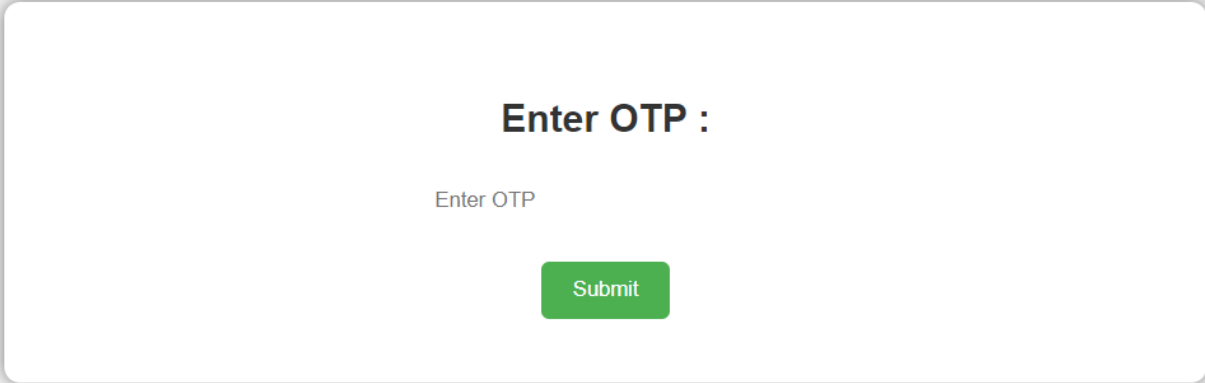
Back

Figure No. 4. Contact page

Figure No. 5. SignUp page

Figure No. 6. OTP page

Figure No. 7. Main display page

Figure No. 8. Option page

SpeeDTrick

PRODUCTS	SERVICES
None	None
Tyre	None
None	Washing
Clutch	None

HOME

Add products Here

Enter Product Here | Submit

Add services Here

Enter Service Here | Submit
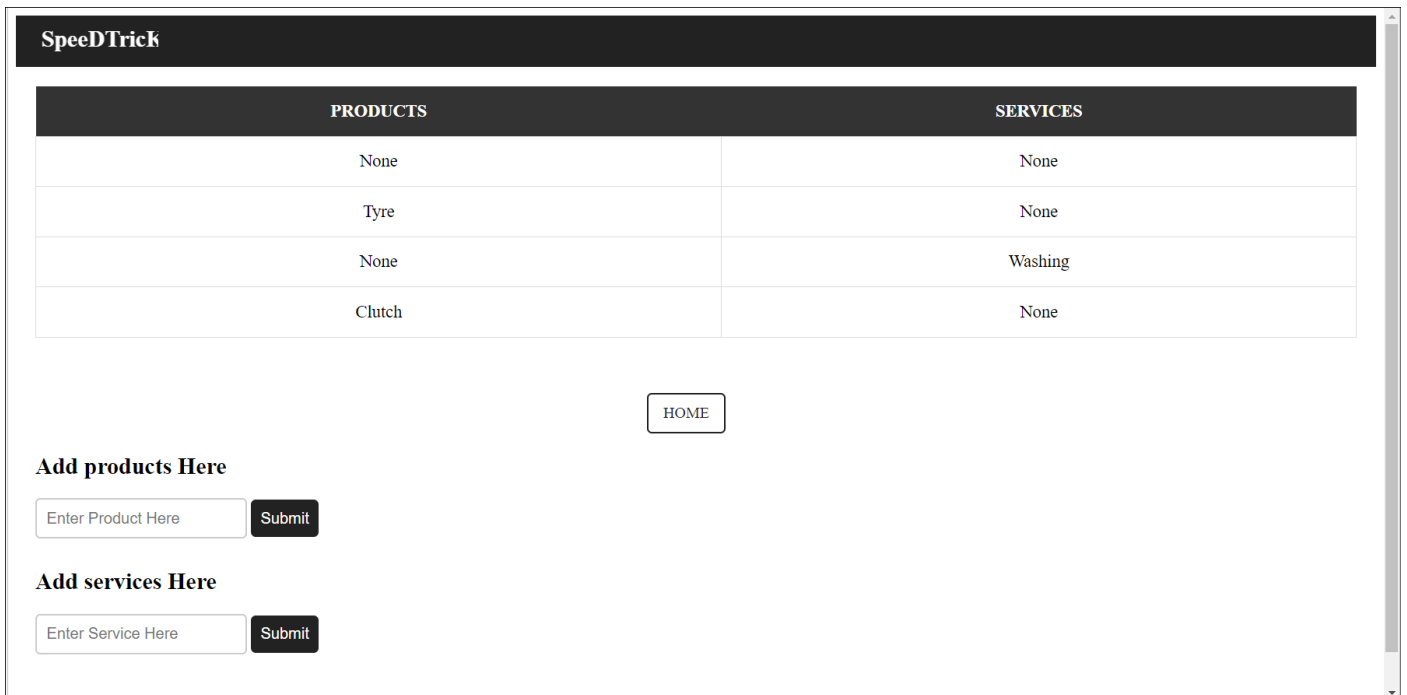
Figure No. 9. Supplier page

Choose product or service:

PRODUCTS	SERVICES
None	None
Tyre	None
None	Washing
Clutch	None

Show my products and services
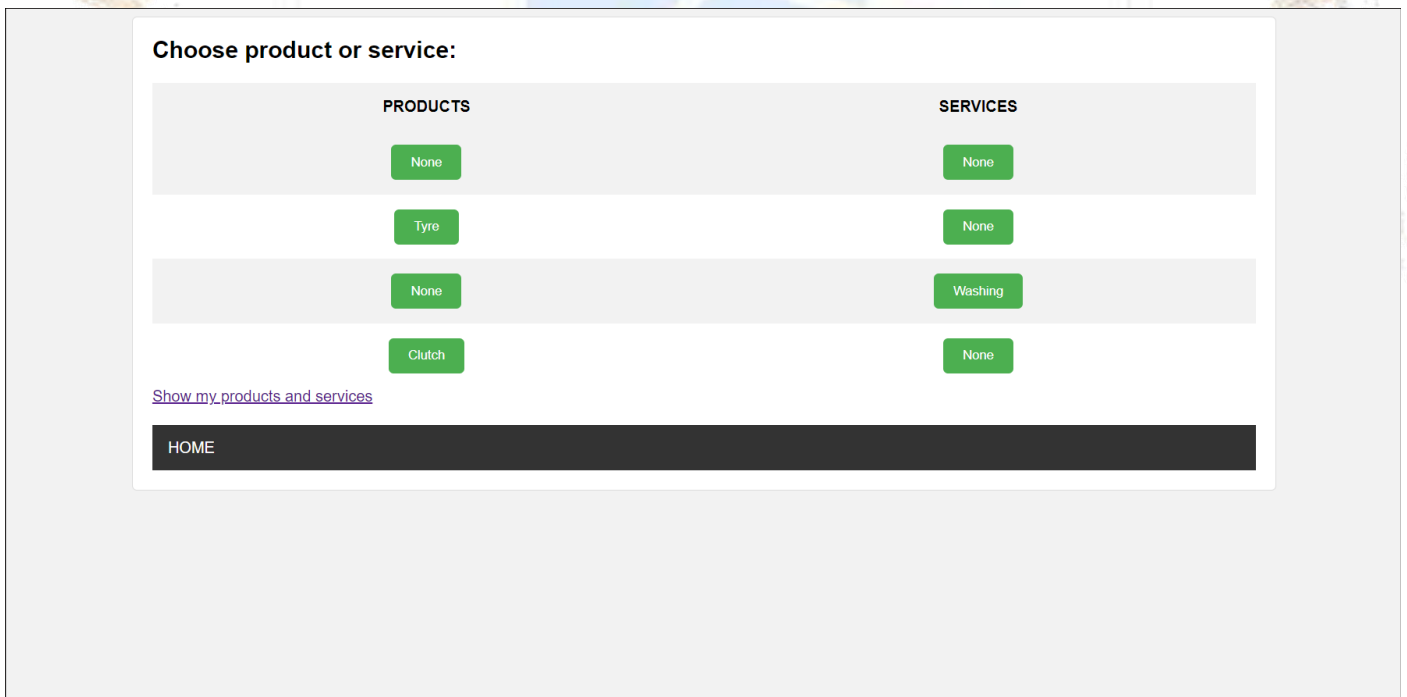
HOME

Figure No. 10. Customer page

My_Products		My_Services
None		None
Tyre		None
None		Washing
Clutch		None

HOME

Figure No. 11. Show page

Fig. No. 1. This is the flow chart of our project which shows the working of our project.

Fig. No. 2. This is the home page of our project which has login operation, "Sign Up" button which goes to sign up page, "Home" button which refreshes and returns home page, "About" button which goes to about page, "Contact" button which goes to contact page, and "Join Us" button which again goes to sign up page.

Fig. No. 3. This is the about page which gives the information about our project.

Fig. No. 4. This is the contact page which gives our i.e., project creators and support contact information.

Fig. No. 5. This is the sign up page where a user can sign him/herself up on our web application and then login through home page and sell and buy automobile products and services. He/She must give his/her email id and mobile number to register along with setting a username and password.

Fig. No. 6. This is the OTP verification page where after entering login details, the user must enter the OTP sent to his/her email id to complete the login process and proceed to use the application services.

Fig. No. 7. This is the main display page which comes after login, here also user can go check the about or contact page through "About" and "Contact" buttons respectively and "Home" button to refresh and return the main display page. But here the main part is the "Service" button through which user can either opt for supplier or customer services on option page, and a "Log out" button which again returns to the start home page.

Fig. No. 8. This is the option page through which user can select "Supplier" button for supplier service which goes to supplier page ,and "Customer" button for customer service which goes to customer page.

Fig. No. 9. This is the supplier page which gives two options to add a product or a service which is saved in supplier's database table and displayed on customer page. It also gives a "Home" button to return to main display page.

Fig. No. 10. This is the customer page which displays all the available products and services which user can select and it gets added to the customer database table, and provides the option "Show my products and services" button for customer to view their selected things which leads to show page, and provides a "Home" button which returns to main display page.

Fig. No. 11. This is the show page which shows all the products and services which the customer selected and provides a "Home" button to return to main display page.

CONCLUSION:

To conclude, in our project, under the experimental conditions studied, our project worked accurately and sufficed the need it was built for by thereby allowing the users to successfully register themselves as suppliers and customers with their products and services, and allowing the customers to select the products or services.

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