



ON-DEMAND SERVICE SYSTEM USING SOA

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Abstract

The on-demand service system is built based on service-oriented architecture that is going to be a business model through which Normal people can connect with the domestic workers and provide features. Providing services to the people who are in seek for service. Providing jobs to the domestic workers. Allows the administrator to control the entire system with a web enabled back-end user interface. The System consist of two interfaces for the user the web enabled application and an android application for variable access. The On-demand is a system that connects the service providers and people who seek for service. It is based on SOA architecture and also have an advantage of location-based service. Implementation this application, there is no need of much expensive hardware and software, internet connection and a desktop with basic operating system and a browser will be sufficient. The entire system is built for an organization known as passhouse. This system was built in an intention to showcase the efficient utilization of the services which will be very useful for the developers to save time in doing CRUD operations in common language. This can be easily achieved by modifying the data model as per the requirements.

Introduction

Service the action of helping or doing work for someone. It is not as easy the way says. So, to enhance the efficiency service providing process and to reduce the efforts of human and to help them in getting services. we developed this application. It will be useful for medium and small scale business model as it utilizes service oriented architecture as its core of implementation.

In addition to it there was one problem in the pandemic situation is domestic workers like plumbers, carpenters, painters, construction workers were not able to get jobs regularly and the payment that they get is was not fixed and many people were also couldn't able to find a way to contact them as

there is no proper system to contact the domestic workers. As a solution for this some domestic workers started their market their work in social media like Facebook, Instagram, Twitter etc. This temporary solution helped a little but it was not efficient as it only focuses on only a particular individual and helped in the benefit of that individual only. In order to bring up all the domestic workers into one system and help them in getting regular jobs along with a fair salary for their work and also help the normal people to easily contact and get help from the home service providers we have created a business model system which utilizes all the functionality of service oriented architecture for its implementation.

Literature Survey

The following shows surveys done on home service systems and service-oriented architecture and also other related platforms.

Urban Company

Urban Company also known as Urban Clap is an app-based service marketplace that connects the users to service professionals. They aim to connect maximum people to their platform which will benefit many individuals. In this fast-paced life, Urban Company aims to deliver necessary services to the customers at their doorsteps with a single mouse click. The company has also introduced contact less payment method where the customer can pay through online payment gateways. Urban Company was founded in 2014. Urban Company is currently operating in 30 major cities in India including Pune, Bangalore, Chennai, Delhi NCR, etc.

An App Based System for Construction Related Home Services in Urban Areas.

The online home services are very useful for everyone who are all very busy with their official work. Nowadays finding a suitable person for providing home services such as cleaning, plumbing, electronic maintenance and repair, gas range repairing, cooking and baby care are much difficult and also is a burden for the busy person. By taking this into consideration, in this paper, we have proposed an APP based system for performing construction related services such as plumbing, cleaning, painting and colouring, and other house maintenance related services.

SOA and Web Service

This tutorial presents the foundational knowledge for the researchers and practitioners on Service-Oriented Architecture (SOA) and Web services. The traditional “triangle” SOA and variations that better support SOA services and solutions will be examined. Critical Web services infrastructures will be covered, such as WSDL, BPEL, WSRF, Discovery, Composition, Registry, and Web services invocation and relationship binding. How Web and SOA can benefit with each other will also be explored. An IEEE

SOA Solution Reference Architecture standardization initiative will be introduced in this tutorial to illustrate how different pieces of technology components can be used to build reusable, flexible, and extensible SOA solutions. Finally, the presenter will depict research and development challenges and directions in the field of SOA and Web services. The target audiences are all-level researchers, practitioners, and students. This tutorial material is created for the IEEE Body of Knowledge initiative on Services Computing, which is sponsored by the IEEE Computer Society Technical Committee on Services Computing.

System Design

The system design is a Service oriented architecture in which services provide reusable business functionality and applications or other service consumers are built using functionality from available services with most used technologies that made us feel quite easy to solve our doubts while developing this entire system.

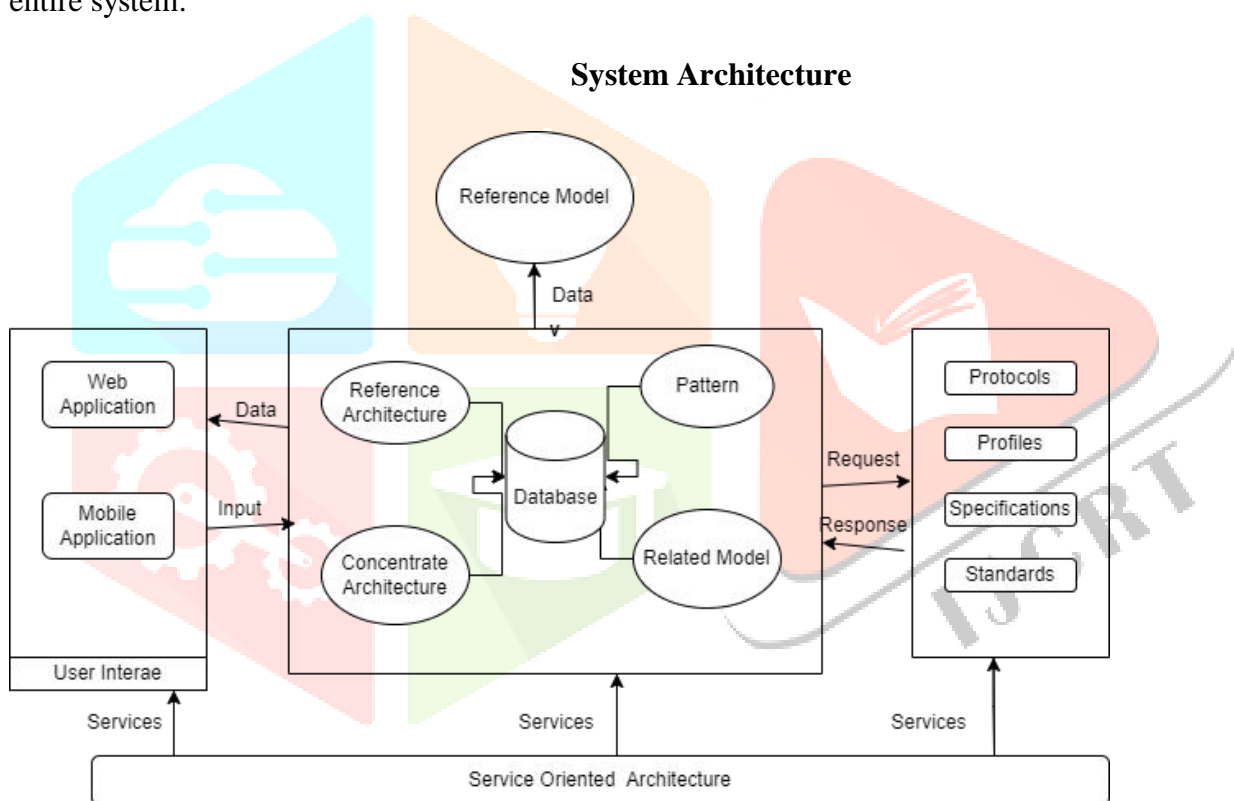


Fig 1: system architecture

List of Modules

The system has been implemented as different modules. The features of this system is divided into various modules .Those modules are explained below:

➤ Admin

- Provider & User Management
- Service Management
- Accounting Management
- User Interface Management
- Bookings Management
- Notifications & Email

➤ User

- Service Booking
- Payment
- Feedback
- Provider Selection

➤ Provider

- Service Enrollment
- Subscription
- Bookings Management
- Profile Management

➤ Location

- Polygon Formation using provider location
- Locating the nearest provider using map polygon



System Implementation

The implementation of the system is done using the following features and libraries.

Integrated Development Environment

It's a coding tool which allows us to write, test, and debug your code in an easier way, as they typically offer code completion or code insight by highlighting, resource management, and debugging tools. IDE's provide so many features because of all the features they are extremely useful for development.

- IDE enables us to design to write and manipulate source code.
- Maintains a smooth Development Cycle
- Increases efficiency and satisfaction
- Automatically checks for errors to ensure top quality code.

- Code completion capabilities improve programming workflow.
- Deliver top quality software on schedule.
- Provides IntelliJ which very helpful for developer and reduce development time.

Codeigniter

Mose Codeigniter is a php framework whereas php is server-side language which is commonly used bac-kend language in web development domain. This codeigniter is model, view, controller shortly known as MVC development methodology. This is an efficient method to reduce development time. This framework provides many helpful helper libraries within itself.

Libraries

Proposed system involves set of Javascript, CSS libraries for various front-end and back-end activities. The libraries used here are as follows: Moment Js Datatables Js jQuery Owl carousel, Bootstrap, Animate css, Fontawesome, Google Maps, Whatsapp Business

Performance Analysis

The efficiency of the existing system are shown in the below graph

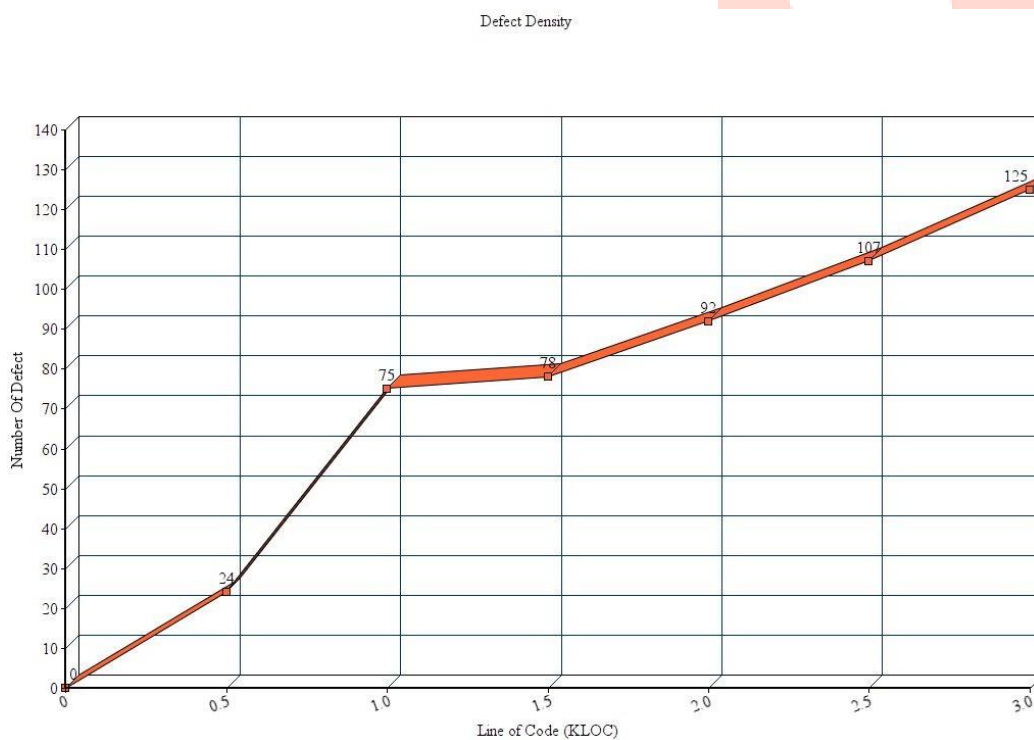


Fig 2: performance analysis

The efficiency of the proposed system are shown in the below graph

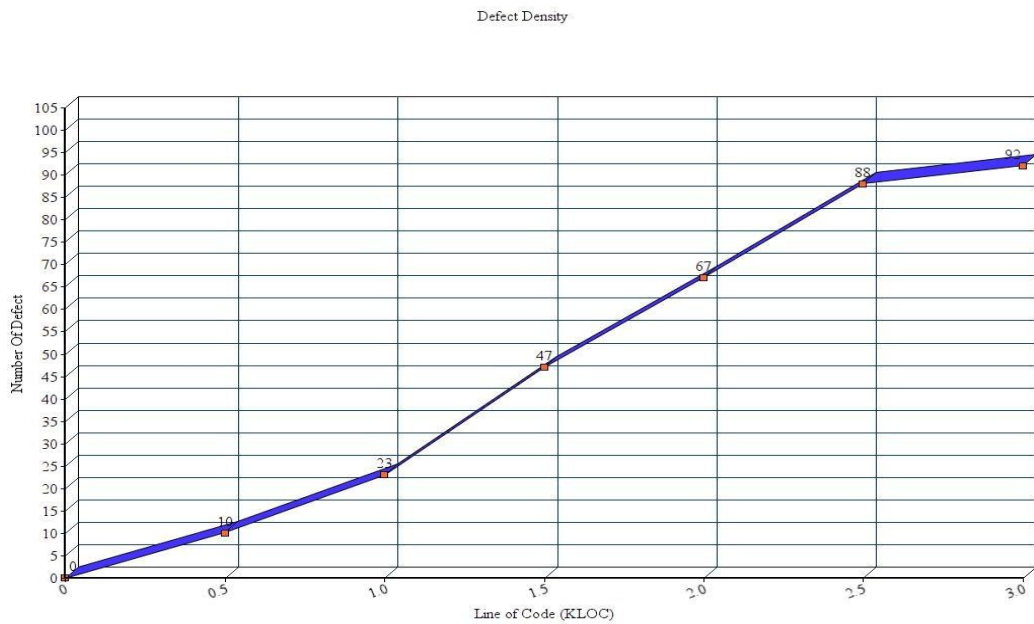


Fig 3: efficiency analysis

The comparison of the existing and proposed system are shown in the below graph

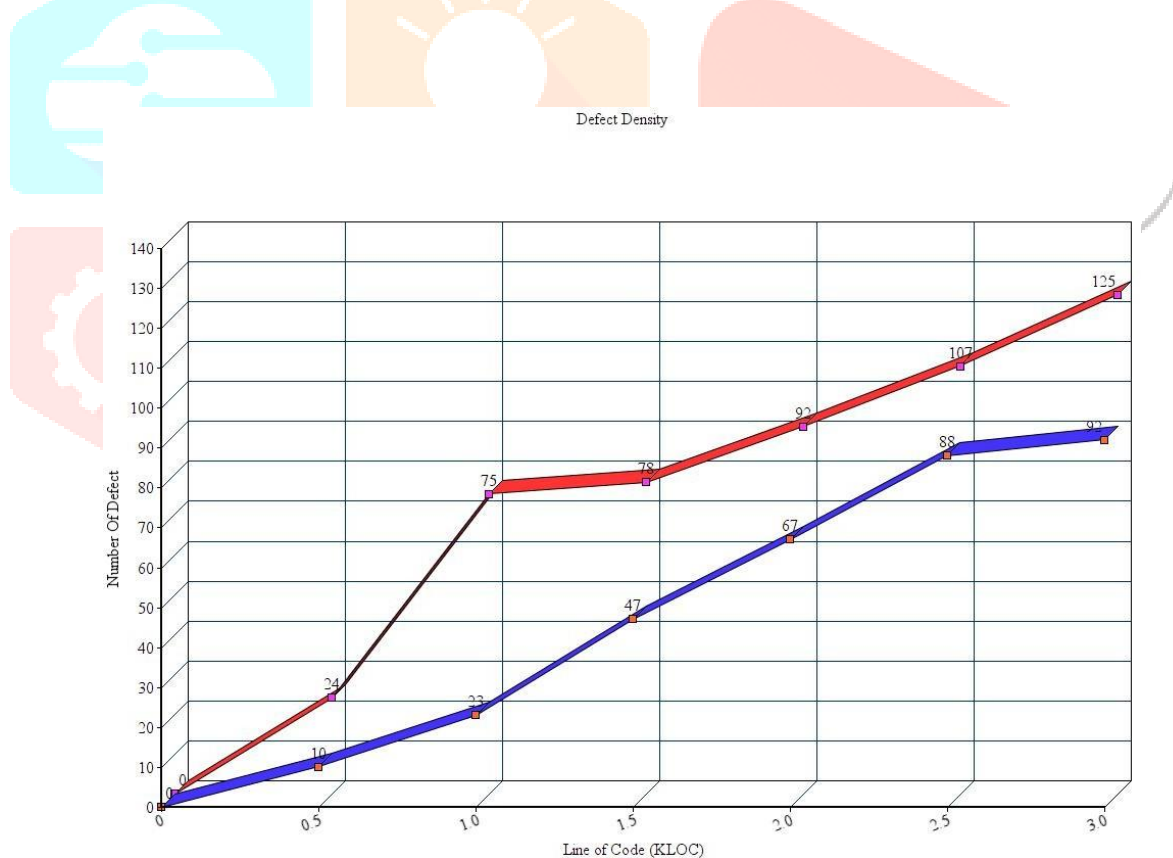


Fig 4: comparison analysis

Conclusion

In recent years, with the pace of technological development, people have become more and more demanding in terms of quality of life and indeed to satisfy their need with less wandering and time efficient this system might be the perfect option for home services. This system push off the boundary and connects the service provider to the people who seek for home service and thus helps providers in getting a regular and jobs with a fair salary and job satisfaction.

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