ISSN: 2454-9940

INTERNATIONAL JOURNAL OF APPLIED SCIENCE ENGINEERING AND MANAGEMENT

E-Mail :
editor.ijasem@gmail.com
editor@ijasem.org

www.ijasem.org

INTERNATIONAL JOURNAL OF APPLIED SCIENCE ENGINEERING AND MANAGEMENT

ISSN2454-9940

www.ijasem.org

https://doi.org/10.5281/zenodo.11545291

Vol 18, Issue 2, 2024

INTEGRATED PUBLIC HEALTH AND DONATION MANAGEMENT SYSTEM: ENHANCING HEALTHCARE AND HUMANITARIAN AID

Mohammad Abdul Samiuddin [1], Mohd Viqar Ullah Kaif [2], Mohammed Aman Uddin [3] Abdul Ahad Afroz [4]

[1,2,3] B.E Student, Dept. of Information Technology, ISL Engineering College

[4]Assistant Professor (PhD), Dept. of Information Technology, ISL Engineering College

ABSTRACT

With any luck, the "LIFE SAVER" programme will be able to facilitate the timely acquisition of vital organs, therefore preventing needless deaths. As expected of a mobile app, it is built on the Android platform. The hospital may input the recipient's and donor's details into the application. The main goal in developing this Android app was to make people's lives easier by doing away with the necessity to type in details about recipients and contributors. Multiple life-threatening complications develop when accidents result in organ damage and blood loss. Priority number one must be ensuring the safety of those in risk. For this reason, we recommend an organ donation app. For efficient data collecting, Android is our platform of choice. Applications for Android manage tasks such as SMS and calls. Individuals seeking to donate organs are required to go through several registration and validation procedures. Following registration, the data is stored on the server. In case of an emergency, the authorized donor will be notified of the patient's name and the details of their admittance. In terms of ease of use, our proposed solution surpassed rival apps. Organ donation, cardiac transplantation, Android app, patient, healthcare facility, and provider

Patients now have easier access to their medical data and other healthcare services via e-health portals, which are available over the Internet. Using standardized methods for offering, discovering, interacting with, and using capabilities, Service-Oriented Architecture (SOA) helps accomplish objectives in line with measurable needs and expectations. We design and implement a public-focused, individual-centered health care system that can effectively include a broad variety of supplementary medical services. An enormous challenge in developing such a system is ensuring critical security requirements including healthcare service availability, diagnostic result integrity, and patient data confidentiality. This thesis approaches the topic from the perspective of access control. People who are interested in publicly accessible personalized healthcare may create and maintain a profile that only includes the data they find important. As an example, a patient may

would be content to just see the cardiology newsfeed. The gateway must be compatible with automated, store-and-forward, or real-time medical services. The need for public health and medical service systems is considerable under the new computer paradigm. Through the establishment and integration of personalized medical information management and services, members of the public may get access to many personalized services, such as health consultations, real-time monitoring, diagnosis, health care education derived from individual health data, and much more besides.

INTRODUCTION

Patients now have easier access to their medical data and other healthcare services via e-health portals, which are available over the Internet. Using standardized methods for offering, discovering, interacting with, and using capabilities, Service-Oriented Architecture (SOA) helps accomplish objectives in line with measurable needs and expectations. We design and implement a public-focused, individual-centered health care system that can effectively include a broad variety of supplementary medical services. Important security requirements that provide a substantial challenge to the design of such a system are the accessibility of healthcare services, the privacy of patient data, and the reliability of diagnostic results. An approach to the topic is taken by this thesis, which focuses on access control.

Individuals may create and maintain their own customized website with just the information that piques their interest in a public-oriented personalized healthcare system. For example, a patient undergoing cardiac procedures may request that just the newsfeed be shown to them. Medical services that function in

INTERNATIONAL JOURNAL OF APPLIED SCIENCE ENGINEERING AND MANAGEMENT

ISSN2454-9940

www.ijasem.org

https://doi.org/10.5281/zenodo.11545291

Vol 18, Issue 2, 2024

real-time, automate, or store-and-forward modes should all be compatible with the gateway. The new computer paradigm has a strong need for infrastructures related to public health and medical care systems. Health care education based on individual health records, remote health consultations, real-time monitoring, diagnosis, and more might be made available to the public via the configuration and integration of personalized medical information management and services.

Android is a free and open-source software platform for smart phones. An OS built on the Linux kernel that supports several threads at once. Android extends much beyond its role as an OS for mobile devices. Develop your own handheld gaps, music player, digital video recorder, etchant operating system, middleware, and core applications make up Android, a software stack for mobile devices. The Android Software Development Kit (SDK) provides the necessary tools and APIs for Java programmers to begin creating Android applications.

LITERATURE SURVEY

Over the last fifty years, the world's population has grown at an astounding rate. But even industrialized countries are seeing the effects of the ageing trend. There is an already acute shortage of medical experts and facilities, and these circumstances make it much worse. There is a growing gap between the public's need for healthcare and the amount of money available to pay for it per individual. Therefore, the issue of how to construct new systems of medical services while making the most efficient use of the few medical resources must be addressed immediately and without delay.

Worldwide, people are still facing the same old problems with health care and medicine: an ageing population, an increase in the number of chronically sick patients, rising medical expenses, and inadequate access to high-quality medical treatment. Using IT in this industry is the only way to fix these problems. In recent years, medical information systems have become more important in supporting healthcare practitioners, improving the treatment of long-term diseases, lowering costs, and elevating service standards. As a result, medical informatization has gained traction in several countries. It was in the early 1960s when American scientists began investigating HIS. With 80% utilizing computers and 25% having a properly integrated HIS, the vast majority of American hospitals depended on computers to manage financial costs in 1985. By 2004, 20% of US hospitals had completed EMR and PACS experimentation. The initial stages for constructing the country's health information infrastructure were laid out in a 2001 strategy study [37] by the National Committee on Vital and Health Statistics of the United States, which approached the matter from three perspectives: the health of individuals, healthcare institutions, and the general population. On January 20, 2004, President George W. Bush proposed EHRs with the aim of rolling them out statewide within ten years. Four of the world's most prominent information technology companies were hired by the National Health Information Network of the United States the following year to serve as system integrators in creating a model of the network's design in four different test locations in anticipation of the plan's implementation. In 1998, the Blair government's objective was to make sure that Britons could get healthcare from the best in the world.

OBJECTIVE

Creating a public, state-of-the-art platform for health care information services is the overarching objective of this endeavor. By combining Web services with SOAP technologies, we want to build a robust healthcare platform that will provide the general public easy access to vital health records. Overall, community health will improve, more individuals will have access to accurate healthcare information, and more people will be able to make informed choices because of this platform.

EXISTING SYSTEM

It is very challenging for humans to manually examine and develop a composition strategy for web services since they are developed and modified in real-time. Because of this, creating composite services with the use of automated or semi-automated processes is crucial. The seamless integration of new services should not interfere with the current operations of the services provided by the same site. Reducing downtime is crucial because patients' lives or health depend on the continuous provision of medical services. Moreover, support. It is believed that providers would be able to independently create their services and incorporate them into the platform with ease.

LIMITATIONS

- FlexibleAuthorizationFramework
- The client sends a plaintext
- Two-Tier Access Control
- Store-and-forward mode

INTERNATIONAL JOURNAL OF APPLIED SCIENCE ENGINEERING AND MANAGEMENT

ISSN2454-9940

www.ijasem.org

https://doi.org/10.5281/zenodo.11545291

Vol 18, Issue 2, 2024

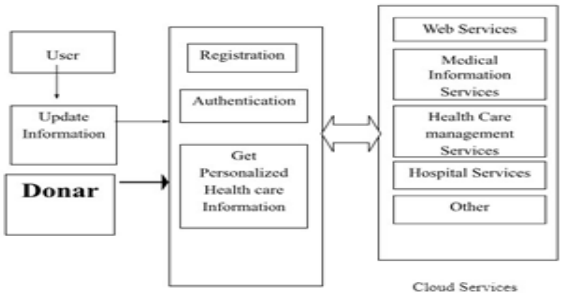
PROPOSED SYSTEM

The system may be easily linked with pre-existing medical applications, systems, and services. Additionally shown are the design and execution of several medical services, as well as the access control engine. Government-run database for medical records that uses such technologies. Many duties relating to healthcare may be made easier by it, and it can even offer assisting with fundamental forms of remote healthcare and guardianship, and offering customers an array of personalized, intelligent services. With the advent of new communication and information technologies as well as changes in healthcare delivery models, there has been a fad toward the creation of various public-oriented health care service systems.

ADVANTAGES

- Supports personal health information management.
- Personal health risk assessment and guidance.
- Active recommendation of personalized medical treatment.
- Dynamic personal health monitoring and real-time early warning.

SYSTEM ARCHITECTURE



HARDWARE AND SOFTWARE SPECIFICATION SOFTWARE

- Windows7 32 bit
- Java,JSP,Servlet
- WSDL
- MySQLServer5.0

HARDWARE

- Processor :IntelProcessor
- MainMemory RAM : 512 MB
- Harddisk : 80 GB

SYSTEM DESIGN

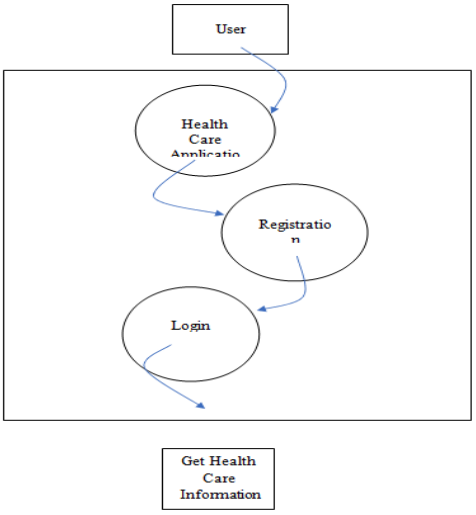


Figure 1.1Level1-DFD

1. Usecase Diagram

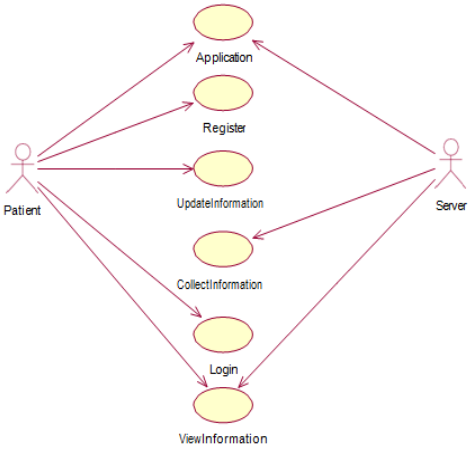


Figure 2.Use-CaseDiagram

RESULTS

There will be distinct inputs and outputs at each stage of development. After the project's start date has been established, the following steps may be taken to organize the project's development:

i. Software requirement sphase.
ii. Software Design.
iii. Implementation.
iv. Testing.
v. Maintenance.

Testing takes up the most time during the whole development process. Although the testing step is sometimes overlooked, the majority of developers

INTERNATIONAL JOURNAL OF APPLIED SCIENCE ENGINEERING AND MANAGEMENT

ISSN2454-9940

www.ijasem.org

https://doi.org/10.5281/zenodo.11545291

Vol 18, Issue 2, 2024

choose to manage that. This leads to the release of flawed software. It is important to incorporate the testing team from the requirements stage forward.

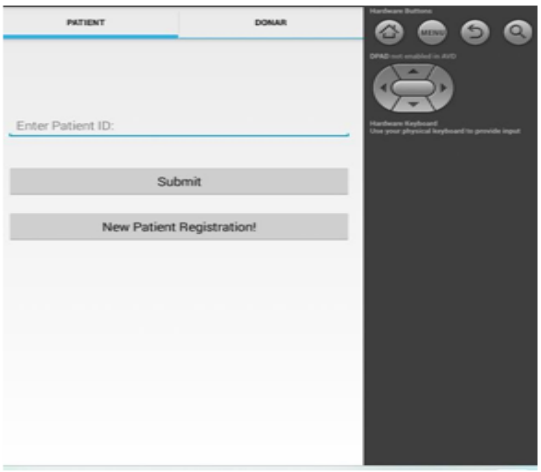


Figure 3 Android Application Interface

Figure 4 Patient Registration

Figure 5 Donar Registration

Figure 6 Patient's Interface

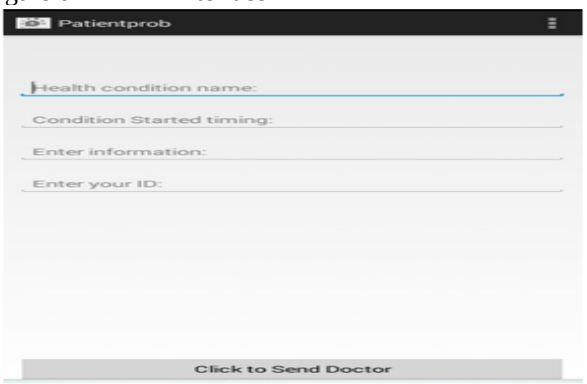


Figure 7 Send Health Condition

Figure 8 Organ Details

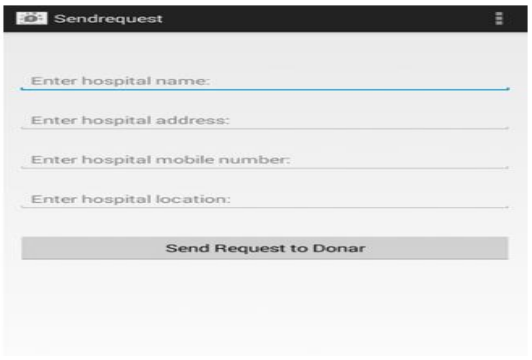


Figure 9 Send Request to Donar

INTERNATIONAL JOURNAL OF APPLIED SCIENCE ENGINEERING AND MANAGEMENT

ISSN2454-9940

www.ijasem.org

https://doi.org/10.5281/zenodo.11545291

Vol 18, Issue 2, 2024

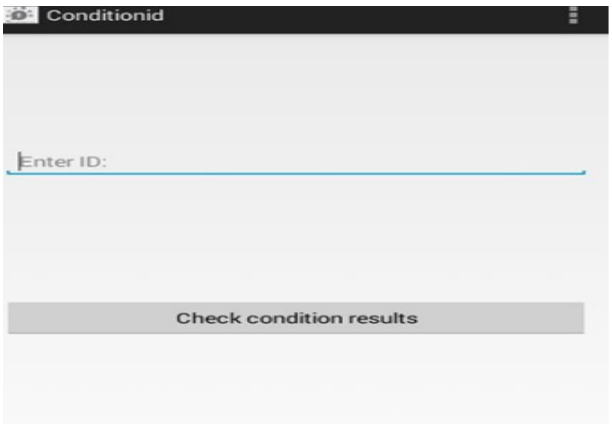


Figure 10 Responseon Health Condition

Figure 11 Doctor Patient Portal

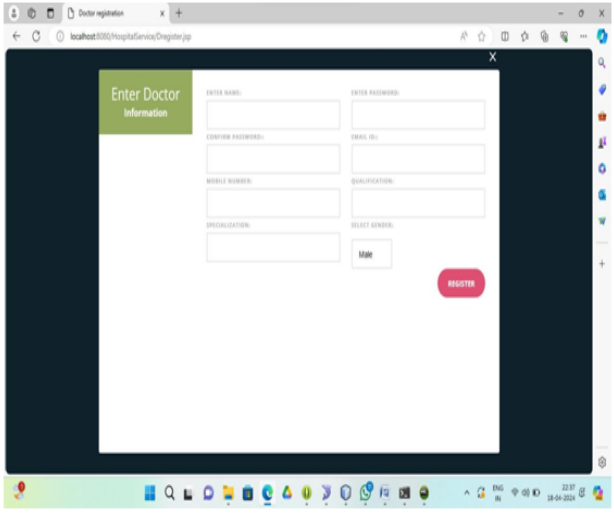


Figure 12 Doctor Registration

Figure 13 Doctor Login

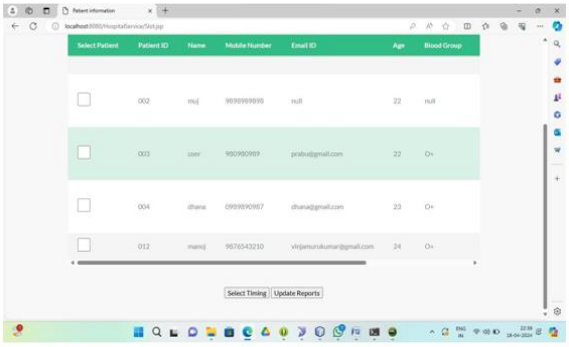


Figure 14 Patient Slot

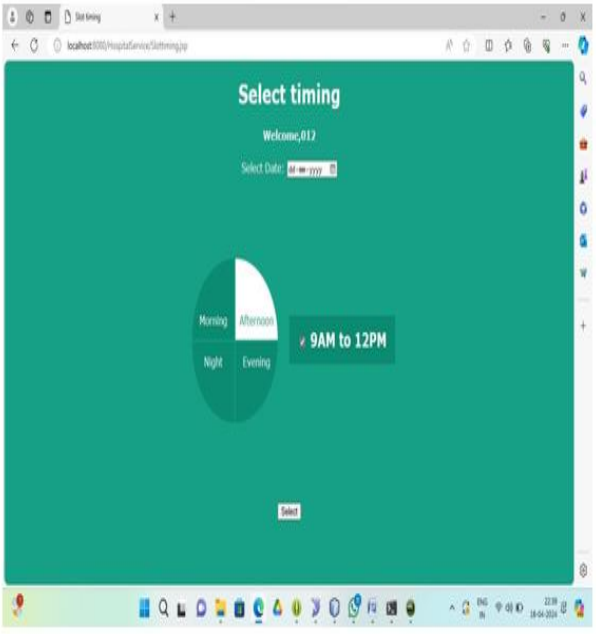


Figure 15 Scheduling

INTERNATIONAL JOURNAL OF APPLIED SCIENCE ENGINEERING AND MANAGEMENT

ISSN2454-9940

www.ijasem.org

https://doi.org/10.5281/zenodo.11545291

Vol 18, Issue 2, 2024

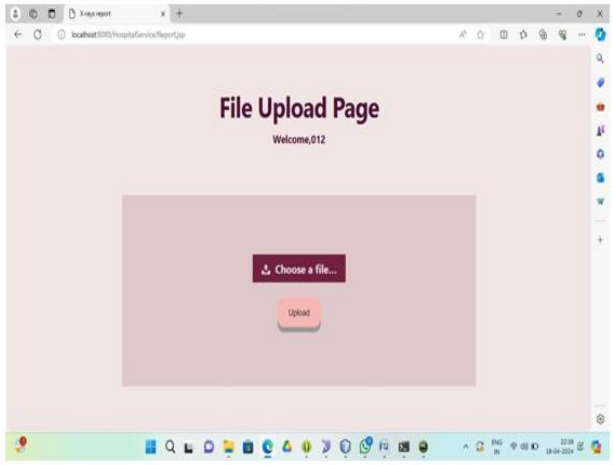


Figure 16 Report Upload

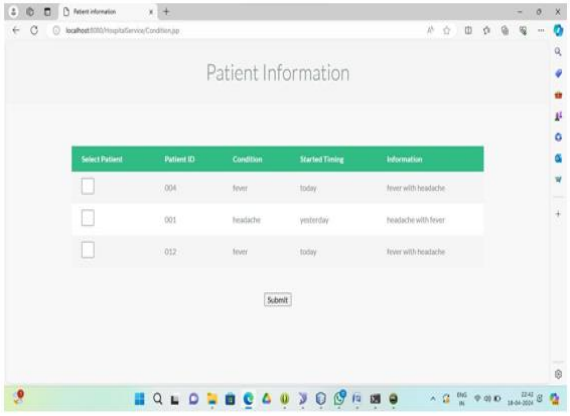


Figure 17 Patient Information

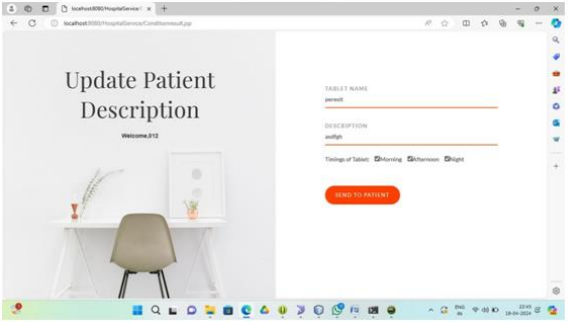


Figure 18 Doctor Prescription

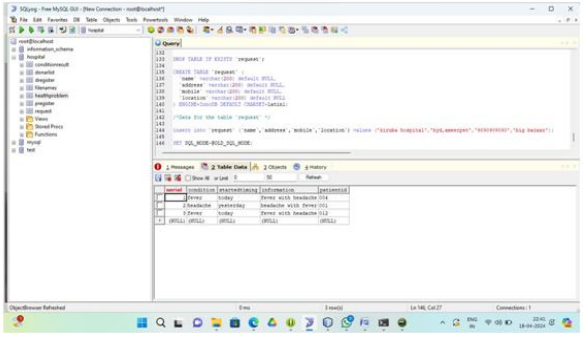


Figure 19 Database

FUTUREWORK

To have widespread commercial applicability, a lot more work is needed. In the future, we will investigate automated program synthesis, multi-agent planning and optimization, and methods to enhance and perfect the composition methodologies proposed for usage with branch and parallel structures.

CONCLUSION

Most health care and medical treatment informatization initiatives focus on hospitals and other similar facilities. Projects, studies, software, and standards all fall under this category. The major focus of these endeavors is not on patients, their families, or other end users. As a result of changes in medical and health care service models and the rapid development of information and communication technologies, it has been trendy to establish various public-oriented health care service systems. This post introduces PHISP, our health care platform. Management of individual health records, risk assessment and advice, dynamic monitoring of health status with real-time early warning, proactive recommendation of tailored medical treatment, proactive warning of seasonal illnesses, and many more ways it could bolster people's access to health care are all within its purview. Furthermore, for certain medical issues, PHISP provides remote medical and care services. Our deployed platform has a number of features and services that may need some improvement. For example, out of all the illnesses mentioned in this article, we have only built a few of basic data analysis models and decision-making systems. Additionally, our recently established healthcare and focused site is essentially a trial run.

REFERENCES

1. D.ArdagnaandB.Pernici,“Adaptiveservice compositioninflexible processes,” IEEETrans.Softw.Eng.,vol.33,no.6,pp.369–384,Jun.2007.

2. M.Armbrust,A.Fox,R.Griffith,A.D.Joseph,R.Katz,A.Konwinski, G.Lee,D.Patterson,A.Rabkin,I.Stoica,and M.Zaharia,“Abovethe clouds:ABerkeley view of cloud computing,” EECS Department, Univ. California, Berkeley, CA, Tech. Rep. UCB/EECS-2009-28, Feb. 2009.

3. R.Balzer,"A15yearperspectiveonautomaticprogramming,"IEEE Trans. Softw. Eng., vol. SE-11, no. 11, pp. 1257–1268, Nov. 1985.

4. D.Basin,Y.Deville,P.Flener,A.Hamfelt,andJ.F.Nilsson,"Synthesis of programs in computationa llogic,"in Program Development in Computational Logic, vol. 3049, LNCS, M. Bruynooghe and K.-K. Lau, Eds. NewYork:Springer-Verlag,2004,pp.30–65.

5. D.Berardi,D.Calvanese,G.DeGiacomo, M.Lenzerini,andM.Mecella,"Automaticcompositionofe-servicesthatexporttheirbehavior,"inProc. ICSOC, 2003, pp. 43–58.

6. D.Berardi,D.Calvanese,G.DeGiacomo,M. Lenzerini,andM.Mecella, "Synthesis of underspecified composite e-services based on automated reasoning," in Proc. ICSOC, 2004, pp. 105–114.

7. D.Berardi,D.Calvanese,G.DeGiacomo,M. Lenzerini,andM.Mecella, "Automatic service composition based on behavioral descriptions," Int. J.Coop. Inf. Syst., vol. 14, no. 4, pp. 333–376, 2005. 956IEEETRANSACTIONSONSYSTEMS,MAN,ANDCYBERNETICS:SYSTEMS, VOL. 43, NO. 4, JULY 2013.

8. R. Buyya, C. S.Yeo, S.Venugopal, J. Broberg, and I. Brandic, "Cloud computingandemergingITplatforms:Vision,hype,andrealityfordelivering computing as the 5th utility," Future Gener. Comput. Syst., vol. 25,no. 6, pp. 599–616, Jun. 2009.

9. G.Canfora,A.R.Fasolino,G.Frattolillo,and P.Tramontana,"Migrating interactive legacy system to Web services," in Proc. CSMR, 2006,pp. 24–36.

10. G.Canfora,A.R.Fasolino,G.Frattolillo,and P.Tramontana,"Awrapping approach for migrating legacy system interactive functionalities to service oriented architectures,"J.Syst.Softw.,vol.81,no.4,pp.463–480, Apr. 2008.