Mediclaim Processing System For Policy Holders Using Swipe Card

U.Suba[1], S.Vinitha[2], Mrs.R.Karthiyayini[3]
[1, 2] Dept of Computer Application
[3]Assistant Professor, Dept of Computer Application
[1, 2, 3] Anna University, BIT-Campus, Trichy – India.

Abstract- *In today's civilized society, the people are betrayed with proper healthcare facilities. In order to minimize the cost and complexity involved in processing traditional billing system, this paper proposed a thought to develop a medical claim processing system for a company. P2P is a company which is having employee strength of at least 1500. In the organization code of ethics all the employees in the organization compulsory enroll their medical policy in the company and after completion of two years policy the company provides swipe card to all the policy members. All the employees are provided medical reimbursement facility which means that the expenditure occurred by the employee or treatment is reimbursed by the company. For reimbursement, the employee needs to fill in a form detailing the treatment undertaken which includes the name and cost of medicine, laboratory tests, surgery. The form is duly signed by the employee and it well be sent to the concerned Claims Processing Department (CPD) by the messenger for processing or another option is employee's family members scanning medical policy claim send to CPD. Claim processing department provide the OTP number then the employee family member enter the OTP number and the medical expenditure amount. By using the swipe card the employee's family members can reimburse the amount. The scope of this paper is to facilitate the employees for medical reimbursement without any complexities. We also describe interesting research problems in this domain as well as design choices made to make the system easily deployable across health insurance companies.*

Keywords- CPD, Employee, OTP number, Cost of medicine

I. INTRODUCTION

Employee and family members can fill the form medical claim policy company and can submit the necessary document for claim processing department through online. This website will permit to enter new claim, track the claim status and maintaining master information. Customers are the main users of this system and management can approve or reject the claim requests sent by employee .A medical claims processing system is an intelligent piece of software that helps to automate the process of claims submission. It helps to simplify the process - the task of coding becomes simpler, readily available data entry form, error handing and many more features. The systems aim at simplifying the life of healthcare professionals as well as patients. There are many government and private medical policy providers rendered their services to their policy holders,

Government Insurance

- LIC(Life Insurance Of Corporation)
- NHP(Natural Health Portal)
- SBI Life Insurance

Private Insurance

- Star Health Insurance
- Adithya Birla health insurance company
- Reliance General Insurance Company Limited
- ICICI Lombard General Insurance C .Ltd

II. LITERATURE SURVEY

[1] [**Latanya Sweeney] suggested that** Many fraud detection systems used either supervised or unsupervised learning algorithms. Implemented Supervised learning algorithms are Support Vector Machine, Neural networks, Logistic regression. But no single algorithm among them gave satisfactory results. Supervised learning algorithms are failed to detect unexceptional conditions which can be handled if unsupervised learning algorithm is conducted. While some fraud detection systems are implemented only unsupervised learning algorithms like Outlier detection, evolving Clustering method. But because of lack of direction, sometimes no interesting knowledge can be discovered with only unsupervised algorithm.

[2] Vanitha T et al proposed that Electronic health records (EHR) and electronic billing systems have been proposed as mechanisms to curb the rising costs of healthcare and also helps to detect the fraudulent practices in the traditional healthcare system. Many healthcare professionals, hospitals and insurance agencies maintains the paper-based records, billing of the patients which is been converted later

into computer-based billing and records which can be abused, modified or lost for malpractice done by frauds either for money or grudge. Hence the personal information of the patients is revealed, bogus information are entered and misused in traditional Healthcare system. Moreover Traditional healthcare system depends on the centralized server which is unreliable, insecure in accessing, storing medical data regardless of time, cost and location. Hence it is more complex and lack privacy and cost involved in integrating medical information is expensive .

[3] **Latanya et al discussed that** Health insurance costs across the world have increased alarmingly in recent years. A major cause of this increase are payment errors made by the insurance companies while processing claims. These errors often result in extra administrative effort to re-process (or rework) the claim which accounts for up to 30% of the administrative staff in a typical health insurer. Authors described a system that helps reduce these errors using machine learning techniques by predicting claims that will need to be reworked, generating explanations to help the auditors correct these claims, and experiment with feature selection, concept drift, and active learning to collect feedback from the auditors to improve over time.

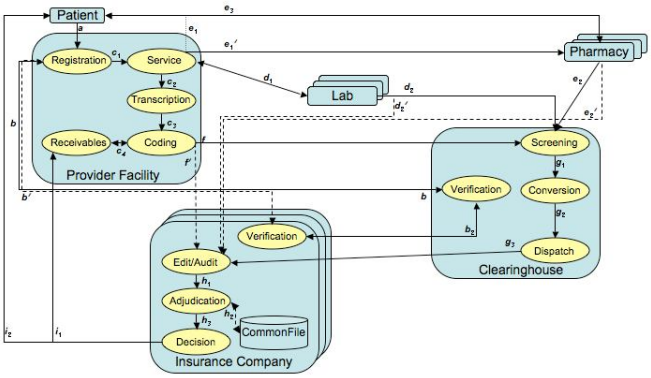
Authors described a framework, problem formulation, evaluation metrics, and experimental results on claims data from a large US health insurer. They showed that the system results in an order of magnitude better precision (hit rate) over existing approaches which is accurate enough to potentially result in over $15-25 million in savings for a typical insurer.

Electronic health records (EHR) and electronic billing systems have been proposed as mechanisms to help curb the rising costs of healthcare and also helps to detect the fraudulent practices in healthcare system.

[4] Sandra described that The introduction of Cloud computing concept in electronic healthcare systems is the solution for better utilization of healthcare facilities. It uses open-source cloud computing technologies as the mechanism to build an affordable, secure, and scalable platform that supports billing as well as EHR operations. This platform is called as “Med Book” which is a cloud solution that provides patients, healthcare providers, and healthcare payers a platform for exchange of information about EHR, billing activities, and benefits inquiries. Med Book serves as an integration point between the various participants in the healthcare delivery system. This paper presents the architecture and implementation status of this system. The developed system has been evaluated using the Jelastic cloud service.Med Book is a Software-as-a-Service application built on top of open source cloud technologies and running on an Infrastructure-as-a-Service platform. The client applications are mobile apps run from Google’s Android enabled devices. Keywords - Cloud Computing, EHR, Mobile apps, Open source Cloud, REST-based API, SaaS I. INTRODUCTION Electronic health records (EHR) and electronic billing systems have been proposed as mechanisms

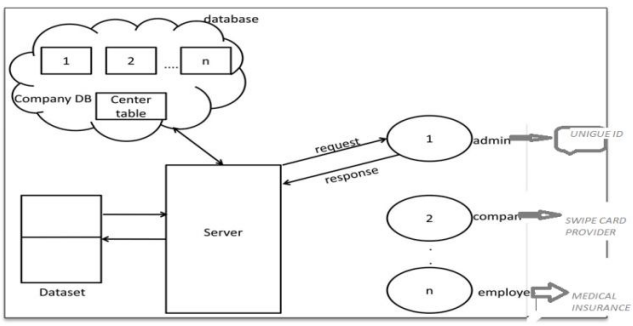
III. EXISTING SYSTEM

The System design has done after the intensive study. The main study is to produce very fast and eliminate errors and give flexible to user. To enter the data, extensions are needed. The need of new system has risen, due to inconsistency of the existing system.



IV. PROPOSED SYSTEM

The new proposed system has so many good features that will increase performance. The proposed system the number of user accessing the medical claim policy application is the application performance. Here we implement the new methodology to over come existing problems. The proposed system has to clear all the drawbacks of the existing system and it has so many additional features



This project has been done using the dot net framework. This clearly shows the main advantage (i.e.) the

system performance and effective user interaction. Implementing simple methodology instead of Web service description language in web service, the response from the services is independent to the load of the web services. So the Messaging between web services through the proposed system get faster.

Module Description

Medical Insurance Swipe Card System(MISCS) which is web based so that the employee can fill the form online and submit it so that the form is sent to CPD through internet. At CPD, the forms needs to be checked automatically by a program which will be compute the amount that needs to be reimbursed to the employee for the treatment of undertaken. Any excess amount claimed by the employee is ignored by the software. The amount computed will be routed to the e-mail account of the employee as well as to the Bank which holds the account of the employees of the company. The bank will credit the amount to the account of the employee based on the mail**.** To do this, it has following modules:

- Admin
- Employee
- Medical claim policy
- Swipe card

Employee Details

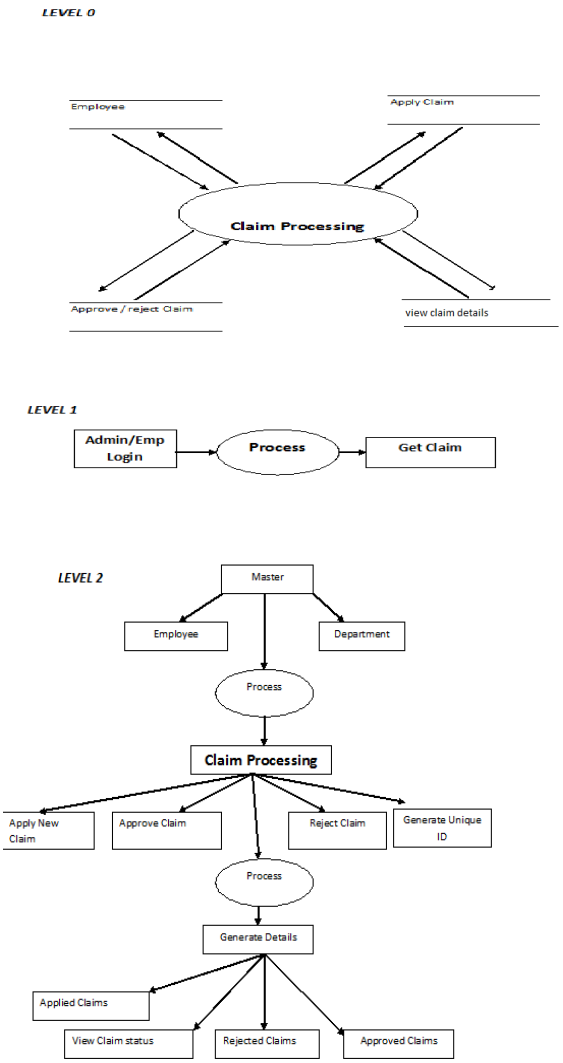
Employee module has the information needed to complete the claim process. It contains the following details:

- Log in
- Apply claim
- View Claim Status
- Download Documents

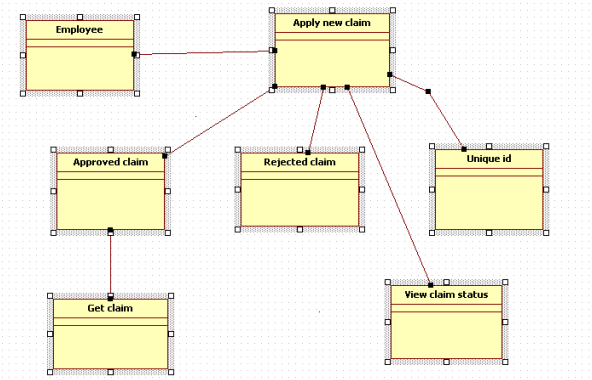
The apply claim module is used to employee applying for new claim it has the following information: claim id, employee id, claim amount, claim type, Hospital name, Admitted date, Discharge date, Surgery type, Treatment details, Date of apply. In this module, the Employee enter the details of above information and submit to the CPD. Then the employee will view the status of the claim process. If the employee wants to view the status of claim then the employee will provide id number in the specified column. Then the status will show to the employee. .

V. SYSTEM DESIGN

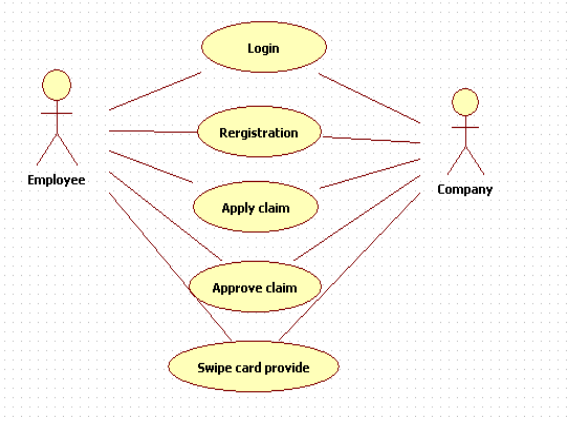
DATA FLOW DIAGRAM



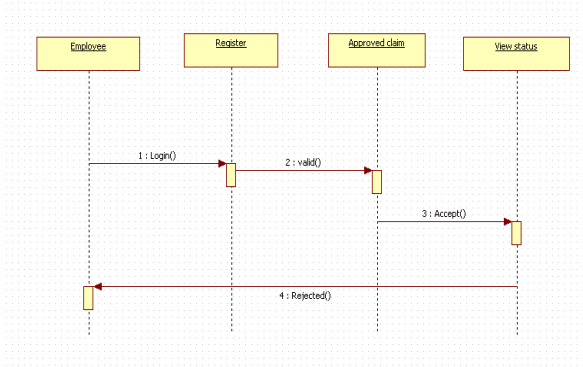
CLASS DIAGRAM



USECASE DIAGRAM

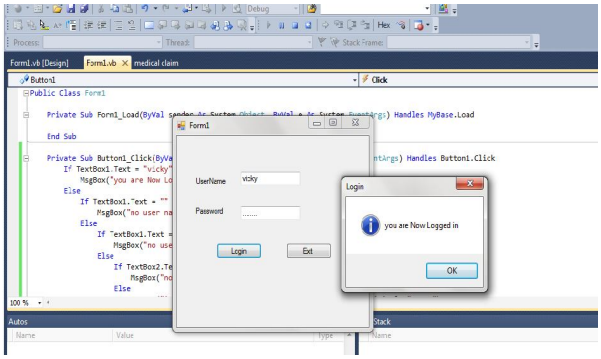


SEQUENCIAL DIAGRAM

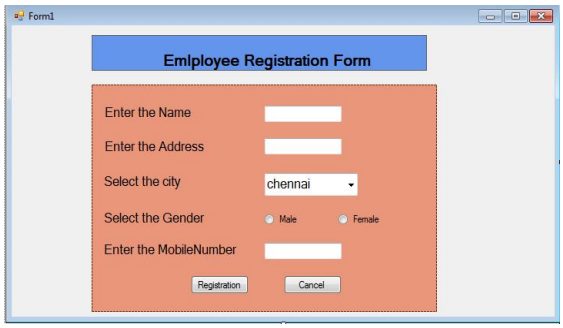


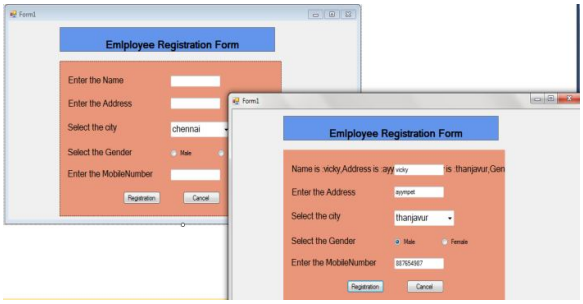
IMPLEMENTATION

Login form

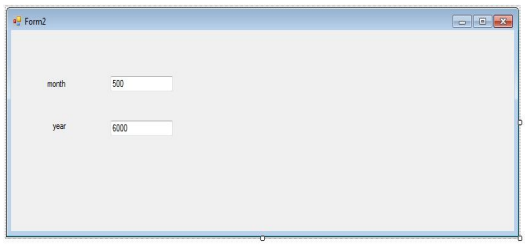


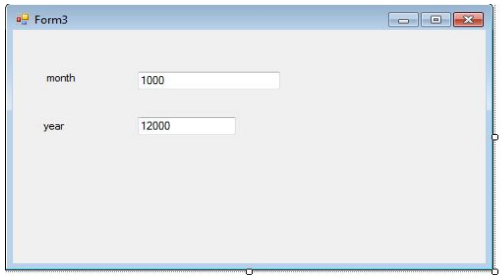
Registration form

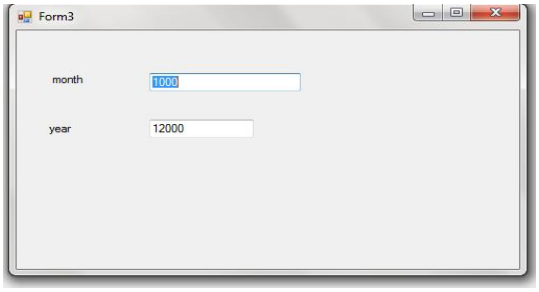




Insurance Policy







VI. CONCLUSION

At the end of our project, we are able to develop software to process claims (Apply and approve claims)of all the employees and family members. The system developed is able to meet all the basic requirements. It will provide the facility to the user so that they can record all the claims of the employee in more efficient and proper way. as it will automate the claim processing system which will reduce the workload. The security of the system is also one of the prime concerns. The important thing is that the system should be flexible enough for future modifications. Medical insurance swipe card System which is web based so that the employee medical swipe card can fill the form online and submit it so that the form is sent to OTP number through Internet.

VII. FUTURE ENHANCEMENT

Considering the change of future needs has developed this project. The users need may change from day to day, so this project development in such a way to easily enhance and satisfy the future needs. The project has the scope for future enhancement and development. The paper can be further enhanced by adding some transaction of accounts & adding more links to the related pages of this concern.

Menus and screens can be designed in more attractive and more appealing manner. Each option can be provided with icons of pictorial representations. Limitations faced by this project can be easily rectified in case a standard procedure is adapted. This can be implemented by minor changes in the appropriate areas. This system is very flexible so that the maintenance and further attachments based on the changing environment and requirements can be made easily. Any change that leads to the system failures is prevented with security measures.

This paper is mainly supported for multi user environment. Therefore, in future we can change this application as multi-user environment in little bit of development work. The system developed should be secured and protected against all possible hazards**.**

REFERENCES

[1] viual Rawte st.Francis Iinstitute of technology, Mumbai-400103,india

[2] G.Anuradha st.institute of technology, Mumbai-400103,india

[3] National Committee on Vital and Health Statistics. *Assuring a Health Dimension for the National* Presented to the U.S. Department of Health and Human *Information Infrastructure: a concept paper*. Services Data Council. October 14, 1998. At http://www.ncvhs.hhs.gov/hii-nii.htm as of October 1, 2009.

[4] William W. Stead, MD, Brian J. Kelly, MD, and Robert M. Kolodner, MD, Achievable Steps Toward Building a National Health Information Infrastructure in the United States, *Journal of the American Informatics Association*, Vol. 12, No. 2, 2005.

[5] Glaser J., The Advent of RHIO 2.0, *Journal of Health Information Management* 21, no. 3 (2007): 7–9.

[6] American Recovery and Reinvestment Act of 2009 ("ARRA") Pub. L. 111-5.

[7] Office of the National Coordinator. *Funding Opportunity Announcement: Health Information Technology Extension Program: Regional Centers Cooperative Agreement Program*. At http://healthit.hhs.gov/portal/server.pt?open=512&objID=1335&parentname=CommunityPage&parentid=47&mode=2&in_hi_userid=11113&cached=true#3 as of October 1, 2009.

[8] Kohn, L. Corrigan, J., and Donaldson, M. (eds). *To Err is Human*. Committee on Quality of Health Care in

America. Institute of Medicine. National Academy Press. 2000

[9] Omair Shafiq, Srdjan Komazec titled "Semantic web services as foundation for enterprise interoperability.", 2008.

[10] M .A .Serhani, A.Hafid titled "A QoS broker based architecture for efficient Web services selection", 2005.

[11] Yogita Rani and Dr. Harish Rohil titled "A Study of Hierarchical Clustering Algorithm", 2013.