"Comparative Analysis of Various Blood Bank Management System for Its Working Strategies "

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Abstract- *This paper include the some technological working concept for Blood Bank Management system .Objective of this paper is identify the best management strategies for BBM using the computational approach .We are make comparative analysis and study of BBM based on the some existing solution. Various novel approaches are already proposed by the researcher since past year some of them we are include in this article .*

Keywords- Computational Technology , Data Mining , Cloud Computing , Blood Bank Management

I. INTRODUCTION

As we all very well know the working concept of BBM that is Blood Bank Management System . The major task of any Blood Bank System is to provide the Blood for the seeker at the time when person required . So for achieving this BBM are required the Good working concept and strategies . These are help the Blood Bank Management system to identified the required blood and its related information in a very short time. Finely for this work how Computational concept will help ? .

II. LITERATURE STUDY

This part of paper is include the various novel existing concept and policies for the above goal .

Ref[1]- In this paper researcher are used the concept of cloud for the work , in this paper author are utilize the facilities of cloud for the blood donor information. This paper provides a complimentary capability to the recent research. This paper introduces the, BCloud Blood Donor Contact Manager Web Services allows you to maintain a free, easy-to- organize database of contacts and their blood groups. With this convenient—and potentially lifesaving--app, you can quickly check your Android device for someone with a certain blood type and contact them immediately. The main objective of this paper is the optimization of a blood banking network system in this paper, researcher develop a multicriteria system-optimization framework for a regionalized. In Cloud Computing Environment a Blood Donor Contact Manager Web Services (SaaS) allows you to maintain a list of contacts and their blood groups.In this paper researcher are study so many paper related to blood bank management of various country , and conclude the so many author are introduce the so many technique for the same work these are optimization modle used , set covering , supply chain markov modle markvo dynamic program is used by the haijema van in 2007 .A new concept is used in this paper is Add blood donor , with out add this information your not able to used it information this is web based application.

Ref[2]- This paper focuses on the data mining concept and current trends associated with it in the same field of domain . This is a review paper , author are introduce the concept of data mining In data mining research projects recently including a introduction part of various data mining technique these technique like   classification, clustering, association, prediction and sequential patterns. In this paper author maintain the proper data set information of donor information is called the training data set and these training data set is apply to the future model or his coming article . Clustering technique is grouping of data, this is also a introductory part of clustering technique . With the help of this clustering technique author identify dense and sparse regions in object space. Association rules introduction are used for the if/then statements that help uncover relationships between seemingly unrelated data in a relational database or other information repository. The prediction technique introduction done by the author for   discovers relationship between independent variables and relationship between dependent and independent variables. prediction analysis technique can be used in blood donors to predict the behavior for the future if we consider donor is an independent variable, blood could be a dependent variable. Then based on the historical data, we can draw a fitted regression curve that is used for donor's behavior prediction. Regression technique can be adapted for predication. Regression analysis can be used to model the relationship between one or more independent variables and dependent variables. Sequential patterns analysis in one of data mining technique that seeks to discover similar patterns in data transaction over a business period.

Ref[3]-This is a blood bank information system , in this research work author are concentrate at on the security issue in the conventional blood bank system , in this research work author are introduce the secure blood bank information system . all the authorized blood bank officer used this information system , in this system they are login in the system by secure password and mange the information. This paper also include the some other module like search facilities, donor information , patients information etc.

Ref[4]- This paper is describe the mobile based blood bank and e- helth infromtion. This paper is a case study of Kenya National Blood Transfusion Services. This is a Computer based applications in the Kenyan health sector range from simple records management to the provision of electronic health and mobile based health services commonly referred to as e-health and m-health respectively. This paper focuses on the relevance of web based technologies in managing blood bank information. In this paper author discusses development and deployment of a system that achieves coordination of activities between the blood banks, health centers and donors having them interact with a central database. in this paper researcher are camper the conventional Indian blood bank system to Kenya National Blood bank system , the main comparison parameter are describe in this paper these are donor account , his/her health record , address , email id , doctor information , name of person who need the blood etc these all are the parameter is in MIS management information system of blood bank India , so based on mention parameter researcher proposed the e-blood bank in this author are used all the mention parameter , and register these all the thing in Ebloddonors.org web site . one extra thing in this paper is after successful registration donor get the confirmation form this site via SMS only . This system does not provide statistics on blood availability within blood banks, registered donors per area and does not link between hospitals and blood banks.

Ref[5]- As in the above ref -11 this paper is also used the concept of data mining technique. As the Urgent need of blood is rapidly growing it is desire need to find the blood donor information properly andefficiently. It is becoming more and more difficult to extract the information using the conventional database techniques. So, in this paper we proposed the solution for properly mining the proper and required donor information from large amount of blood donor's database. So, in this paper we proposed the solution for properly mining the proper and required donor information from large amount of blood donor's database. For retrieving the proper information from large database related to the blood donor's data mining is used to analyze their availability, number of donors and all related information.. There are various different technique used and algorithms present in data mining like classification, clustering, association, etc. which suits better for desired task. Apply the K-means Clustering Algorithm for classifying the number of blood donors through the blood group, age, height, gender and location,

Ref[6]- In this paper author are introduce the importance of Blood Donation and Blood Transfusion Services (BTS) are crucial for saving people's lives. This work aims at developing a Blood Donation System (BDS) based on the cutting-edge information technologies of cloud computing and mobile computing. The proposed system facilitates communication between blood donors and blood donation centers and integrates the blood information dispersed among different blood donation centers and health organizations across a country. Stakeholders will be able to use the BDS as an application installed on their smart phones to help them complete the blood donation process with minimal effort and time. This application helps people receive notifications on urgent blood donation calls, know their eligibility to give blood, search for the nearest blood center, and reserve a convenient appointment using temporal and/or spatial information Cloud Computing (CC) platforms possess the ability to overcome these discrepancies with their scalable, highly available and resource pooling computing resources. The main idea behind CC is to offload data and computation to a remote resource provider (the Cloud or the Internet) which offers many interesting characteristics such as: on-demand self-service, broad network access, resource pooling, rapid elasticity, multitenancy, and scalability.

Ref[7]- This paper tells the role of software engineering in blood bank management information system. Any software development cannot be possible without software engineering. In this paper researcher discuss the various models used in the software engineering. Researcher has used the Linear Sequential Model for the development of the Management Information System of blood bank, this model is also known as waterfall model. Researcher also discuss the various phases used in the model and also the implementation of these phases in the development of blood bank management information system.

Ref[8]- This study uses data mining modeling techniques to examine the blood donor classification and extending this to facilitate the development of real time blood donor management using dashboards with blood profile and geo-location data. This enables decision makers the ability to manage and plan the blood donation activities based on key metrics. This capability provides the ability to plan effective targeted blood donation campaigns. The scoring algorithm implemented for the dashboard also helps in the optimized

deployment of budget resources and budget allocation determination for blood donation campaigns.

Ref[9]-   This paper is focused on Blood Donation Management System which is a web application with supporting mobile application aimed to serve as a communication tool between patients (who need blood) and blood donor. To become members of the system, donors need to create their profiles by providing fundamental information like name, blood group, email address, password, and exact location from "Google Map".In order to find out the exact location of a donor, Google Map is integrated with this application. Visitors can search blood donors from the home page by blood group and the place where blood is needed. Blood donors can also be searched from the mobile application, but this is only accessible for registered members. The goal of this paper is to reduce the complexity of the system to find blood donors in an emergency situation. We have used Visual Studio 2010 for doing the implementation of Blood Donation Management System. We have used Microsoft SQL Server 2008 as database server.

Ref [10] -In June 2009, the research work entitled on web based information system for blood donation, all the information regarding blood donation are available on world wide web i.e. online systems that communicate/interconnect all the blood donor societies in a country using LAN Technology.

Ref[11] -In the year 2010, the research is accomplished on application of CART algorithm in blood donor's classification. In this work, one of the popular data mining technique i.e. Classification is used and through the use of CART application, a model is created that determines the donor's behavior .

Ref[12]- In August 2011, the research work carried out on interactive knowledge discovery in blood transfusion data set, the work is done through conducting data mining experiments that help the health professionals in better management of blood bank facility.

Ref[13]- In year 2011, the work presented on rule extraction for blood donors with fuzzy sequential pattern mining, fuzzy sequential pattern algorithm is used to extract rules from blood transfusion service center data set that predicts the behavior of donor in the future.

Research Analysis Summary Table –

Reference	Objective of Paper	Information of Donor for Public	Applicable
Ref[1]	Cloud technology used for providing information of blood donor.	Yes with some condition.	Yes
Ref[2]	Data mining Technique used for blood bank field with KDD,	No for the public use	NO
Ref[3]	Provide security to conventional blood bank system	NO	NO
Ref[4]	Web based e – health blood bank system of Kenyan health sector ,	NO donor registration process only in the web site.	NO
Ref[5]	Analysis the large data set of blood bank using k means algorithm	NO	NO
Ref[6]	Cloud Technology used for providing the blood donor information form the blood donation center .BTS and BDS proposed .	Yes only for the stakeholders	NO
Ref[7]	Software roll introduction for the blood bank .	NO	NO
Ref[8]	Blood donor management system using Dash boads	Yes	NO
Ref[9]	Blood donor information management system based on web or online.	Yes	Yes
Ref[10]	To connect the more than one blood bank using Lan Technology .	Yes	NO
Ref[11]	CART algorithm in blood donor's classification	Yes for the BBMS	NO
Ref[12]	knowledge discovery in blood transfusion data set	Yes applicable for BBMS	NO
Ref[13]	fuzzy sequential pattern mining that able to find out the blood donor information	BBMS Yes	BBMS Yes

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