**PES University**

**Subject :- Software engineering**

***Topic :-Blood Bank Management***

Introuction:-

This document gives detailed functional and nonfunctional

requirements for the bank management system. This product will

support online banking transaction. The purpose of this document is

that the requirements mentioned in it should be utilized by software

developer to implement the system.

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The process first starts with an offline Blood Donation Camp. On

the day following a blood donation, the Blood Bank Testing Unit tests all blood for blood type and potential viral agents. They send the results of these tests to the Blood Inventory (another unit of the Centre). For each tested blood unit, if the tests indicate that the blood may be contaminated with a viral agent, the blood unit is destroyed. This

is indicated on the test form. Blood units have a limited shelf life. The Blood Bank receives a list every day of those units which have exceeded their shelf life.

These are discarded and the list of blood units is updated.

The Blood Bank also distributes blood to various hospitals requesting blood. Requests usually come in for specific blood types. The Blood Bank

prepares refrigerated containers of these units and distributes them to the hospital when they place the order. The Blood Bank receives a listing for each hospital and the specific units of blood to supply to the hospital from the Blood Inventory. When the order is filled, the Blood Bank Manager signs the order and returns a copy to the Blood Inventory. A copy of it travels with the blood to the requesting hospital. The final copy is kept in the Blood Bank records but discarded after one year.

2. Requirements

2.1 Functional Requirements

1. Access Website:

User should be able to access webapplication through either an application browser or similar service on the mobile phone or computer.

There should not be any limitation to access webapplication.

2. User Registration:

Given that user has accessed webapplication, then the user should be able to register through the web application. The donor user must provide first name, gender, blood group, location, contact , username

and password.

3. New Releases:

When a new/update version of the webapplication is released, the appearance will be automatically appears when the user access the web

application.

4. User log-in:

Given that the user has registered, then the user should be able to login to the webapplication. The login information will be stored on the database for future use.

5. Search result in a list view:

Search result can be viewed in a list. Each element in the list represents a specific donor. Each element should include first name, gender, blood

Group location, contact according to the user position. There should be maximum of ten result display.

6. Request Blood:

User(Hospital) should be able to request for blood at emergency situation, user need to define blood group, location, required date, contact. The order requested will be sent to blood bank and

then to the Inventory to check the availability. If available, the

requested blood will be sent to the requested donor(Hospital).

7. View Request:

The Blood Bank should be able to view received request and then respond to them and can search requests by selecting two options select

blood group and provision.

8. Search Blood Bank Stock:

Receiving the order from Hospital , the blood stock in the Blood Bank Inventory will be searched to match the requested order. Thus matched blood units will be sent to the Hospital.

9. View Order Details:

The Hospital, Blood Bank should be able to view the OrderId, time of the order placed, name of the hospital, location and the address of the

hospital. In addition to this an additional feature of

tracking the delivery person which includes his location

and the checkpoints passed.

4. Interface Requirements

4.1 GUI

This is interface must be highly intuitive or interactive because there

will not be an assistance for the user who is operating the System. At

most of the places help desk should be provided for users convenience.

The screens appearing should be designed in such a manner that it can

draw User attaraction towards the new plans for the customers.

Also the pin and password confidentiality should be maintained,

This can be done by using asterisks at the password panel.

Proper security messages should be displayed at most of the places.

4.2 Hardware Interface

Various interfaces for the product could be

1. Touch screen/Monitor

2. Keypad

3. Continuous battery backup

4. Printer which can produce the hard copy.

5. Interface that connects the device to bank’s computer.

6. An interface that can count currency notes.

4.3 Software Interface

1. Any windows operating system.

2. The PHP must be installed. For the database

handling MYSQL must be installed. These products are open source products.

3. The final application must be packaged in a set up program, so that

the products can be easily installed on machines.

This application must be networked to corresponding banks.

5. Performance Requirements

The system should be compatible enough to hold the general traffic .

It should not get hang or show some other problems arising out due to

large no of concurrent users . The system should be

fast enough to meet the customer The high and low temperature

should not affect the performance of the device. An uninterrupted

transaction must be performed.

6.Constraints

\* The information of all the users must be stored in a database that is

accessible by the Online Banking System.

\* The Online Banking System is connected to the

computer and is running all 24hours a day.

\* The users access the Online Banking System from any computer

that has Internet browsing capabilities and an

Internet connection.

\*The users must have their correct usernames and passwords to enter

into the Online Banking System. Design Constraints:

\* Software Language Used

The languages that shall be used for coding Online

Banking System are c , c++ , java , and HTML. For working on the

coding phase of the Online job portal System Web Sphere Application

Server/WebSphere

Application Server CE Server needs to be installed.

\*Database design

In our database design, we give names to data flows, processes and

data stores. Although the names are descriptive of data, they do not

give details .So following DFD, our interest is to build some details of the

contents of data flows, processes and data store. A data dictionary is a

structured repository of data about data .It is a set of rigorous

definitions of all DFD data elements and data structures .

3.2 Non-functional Requirements

1. Availability :

The system including the offline and online components should be available 24/7.

2. Reliability:

If there is extensive damage to a wide portion of the

database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage (typically tape) and reconstructs a more current state

by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.

3. Security:-Security systems need database storage just like

many other applications. However, the special requirements of the security market mean that vendors must choose their database partner

carefully.

4. Correctness:

The Blood Unit sent by the Blood Bank should be matched with the requested Blood Unit by the Hospital, which should reach the correct destination(Requested Hospital).

5. Maintainability:

The Blood Inventory Manager should maintain correct records of the Blood Inventory Stock.

6. Usability:

The cost of the Blood Units are standardized.

7. Extensibility:

Requirements for website extensibility in case there is a need to add new functional requirements.

3.3 Logical Database Design

1. Donor Database

The receptionist at the Blood Donation Camp will maintain the donor database which will contain all the information of the donors.

2. Staff Database

This database will contain all the information of the staff involved in every unit of the database

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