

**Project and Professionalism**

**(6CS007)**

**Online Blood Bank and Donor Management System**

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# Introduction

The main purpose of making this website is to save people's lives and donating blood is a way to transfer blood from a healthy person to someone in need. Blood is a "gift of life" from a healthy person to other people who are sick and really need blood. Blood donation is an important medical service and blood is a unique and valuable asset because it can be obtained only from blood donors. The whole idea of ​​this study is to create a Web-based Blood Bank that will deal with donor records and people in need of blood and manage and donate to the system. (Aljojo, 2014) This system gives a basic and faster association among different blood groups person are connected or familiar with the system. The main goal to develop a web-based system is managing the donor information, search fast for acceptor, easy to register the system, and donate the blood and providing user friendly and interaction via contact service. (Dept. of CSE, 2020)

# Social impact

Social issues are those that cause difficulties in a large group of people (the Organization, society) and have negative effects on those people. Definitions of social impact are usually used by sociologists themselves. The society of the people who make up what sociologists, and the general public, describe as social problems. Society often sees a social problem as any dangerous situation in society, but the matter is not so simple. Social conditions that some people see as problems harm certain parts of society but benefit others. (HAROLD R. KERBO, 2018)

In 2015, 3,288 cases were informed for the genuine danger of blood transfusion (SHOT).Human factor has become the major issue for 77.7% of the mistake out of which 10% was only preventable as it was allergic/febrile reactions. Total death cases reported was 26 and morbidities cases was 166. Affected hemolytic transfusion, transfusion-related blood transfusion (TACO), and transfusion-related infections, transfusion-related injury (TRALI), non-ABO transfusion transfusions, and improper blood transfusion implantation.(Abja Sapkota , Sabitra Poudel, Arun Sedhain, and Niru Khatiwada, 2018). In order to solve this problem this web application is developed. This system helps blood accepters to direct contact with blood donors so, that human errors will be minimized and helps to create positive impact on society.

Blood being a major component to survive a traumatic injury and not getting suitable blood group as well as donor can result threat in someone’s life. This system as describe above, stores information about the donors so it became easy to get required blood group on time. This system provide a reliable platform to connect blood donors and acceptors and create a communication between them so that both became useful to each other’s. Donating blood can provide a sense of belonging and reduce isolation to donors and from acceptors point of view they can sense the feeling about the need of society. People can have their free health checkup as only fresh and healthy blood are used for donating, this can help people to keep update to date about their health condition too.

#### Blood donation is also beneficial for the one who donates the bloods. It helps to reduce risk of hemochromatosis (Health condition arise due to excess absorption of iron). It also helps in lowering the risk of cancer. Iron overload can also cause heart and liver problems. So, blood donation helps to reduce such problem by lowering the iron rate in body. It also helps in reducing the weight of the donors. And also helps to produce new blood cell of donor. Blood donation is helpful for individual to obtain good health.

# Ethical issue

Ethical issues in business are situations where ethical conflicts emerge and ought to be tended to. At the end of the day, it is when moral guidelines are addressed. Ethical issues arise when a particular choice, situation, or action triggers a conflict with social norms. These two individuals and organizations are likely to be involved in these conflicts on the grounds that any of their exercises may be subject to a code of conduct. People rely on these issues in their interactions with others or in their organizations and organizations and the equality of associations. (myaccountingcourse, 2021)

Most of the time donors have good health, have the aim to help a patient. When they visit to donor center they may not been able to help the patient. As their hemoglobin level may be below the lower limit .So, donor might be frustrated and return home thinking they are not eligible for helping the patient.

Donors with a previous history of diseases such as cardiovascular disease or trauma may be treated, they have no symptoms, but in most cases they will be postponed. However, these donors often feel better, they may almost forget their illness, and they are now facing medical delays. Although the doctor or nurse is trying to alleviate the frustrated donor, a number of donors have recovered from their illness.

# Legal implication

Legal issues assume a critical part in molding the construction of blood transfusion services in the country and ethical issues assume a vital part in deciding the quality of blood transfusion services. The legal implications of the law or consequences of being legally involved in something. A good example is marriage. As a result of marriage, all property is considered to belong to the owners as soon as it is acquired after marriage. Legal formalities can be either good or bad. (Luenendonk, 2016)

4.1 Cyber-attack

When blood transfusion service (BTS) is publicly launched in Nepal then it may suffer cases of cyber-attack such as make changes in source code, unauthorized authentication, changes in data, hacking, stealing e-documents, etc. In order to solve these problems, our government has made cyber laws. Cyber law is the law that is passed to settle the issues of the web and other telecom innovation. The legal issues of cyberspace are taken care of by cyber law. In our country, cyber law is known as the Electronic Transaction Act BS.2063 and which was affirmed by the public authority in 2004. Electronic Transaction Act (ETA) contains twelve sections and eighty clauses. This law cares for the organizations and cybercrimes of Nepal. On the off chance that anybody abuses this law and includes in cybercrime, at that point, he/she should pay at any rate a half year to the furthest reaches of three years in jail and needs to pay at any rate 50,000 to the furthest reaches of three lakhs as a discipline. (Aryal, 2017)

4.2 Copyright issue:

Let us suppose, if a user collects the details of the blood givers and gave information to blood receivers for his/her benefits then it triggers copyright issue. For ensuring the copyright issue government has passed the act as “The Copyright Act 2059 (2002)”. This act helps to prevent copying from owners. The person who breaks the law commits a crime and punishment is given according to section 25. An amount of ten thousand to one hundred thousand is fined for the person who violates the law. The copies are seized and have to pay compensation to the owner for the loss of the content. (goverment, 2002)

4.3 Equity act

The Equity represents an arrangement of equity that is coordinated in a specific court and the instrument of which must be clarified after a detailed understanding of the worth and standards whereupon the court acts. It was created and planned by the high court of chancery in England while practicing its astounding purview. Equity includes a collection of legal rules that qualities the English common law convention and enhancements intense standards where their application would complete actualized brutally and is to accomplish "regular equity". This report presents the historical explanations for the making of value as an arrangement of law and the distinctions that different equity and common law. Besides, the current winning relationship between equity and common law is also discussed.

The equity framework credits for huge commitment in the development law. These contributions are apparent in the regions of auxiliary, exclusive, and concurrent jurisdictions. The prior thought process of the development of the equity system was to address the inflexibility of the common law framework. Thusly, the framework was immensely viewed as being on the contrary side of common law. (Lawteacher.net, 2019)

# Security aspect

Electronic data and its transmission are threat prone to unauthorized access from people having vested interests. So, to shield data from such threats via legal and technical means has become crucial nowadays. A legal infrastructure has become imperative to protect data and information.

Data and programs on a sole computer or a network of computers can be ensured by a procedure called access control. This process permits only the authorized people to use the information possessed on the system. Numerous access control procedures are in place including physically examining the computer. Password protection demands users to come with a unique array of letters or digits so that the computer permits access to the information within. Also, there are some networks that have made use of software known as “firewall” which shields the network from unauthorized access. (Ankit Pandey, 2019)

* 1. Handling of personal data

Perform tests to ensure that you are processing your personal data legally. Take appropriate steps to protect the data and identify privacy risks. Consider whether the person who wants to collect his or her data needs to give his or her consent. Understand and respect the rights of the person collecting user data.

While storing the data of donors, only valid, useful and required information should be stored and use for distinct uses only. Donor's data should be processed securely, updated regularly, and limit data access as much as possible.

* 1. Encryption

Encryption is a brilliant decision for chose purposes, but it is not enough on its own. It may keep your email from being captured and read, but it cannot prevent your account from being hijacked for sensitive identity theft. Encrypted connections can keep hackers from entering, but they do not prevent you from downloading malware. Information encryption makes an interpretation of information into another structure, or code so that individuals who don't approach a private key or secret word can understand it. The encoded information is called cipher text, while scrambled information is called plaintext.

* 1. Wellbeing of your user

Better and more intricate passwords are quite possibly the most advantageous and viable approaches to shield unapproved access is by utilizing an impressively long secret key that is harder to guess. Moreover, implementing the same password in all accounts makes it easier for cybercriminals to get illegal access, hence avoid that. Utilizing a secret word admin can help limit the treachery of creating passwords and recollecting that them.

Utilize a safe network, in spite of the fact that it might appear to be no danger to interface with public Wi-Fi, it's consistently connected to associate with a safe network. The validity of a network before connecting is the key. If plausible, use VPN to permit you to course your exercises through a protected private network.

Update your program and working framework, despite the auto-update functions of most software, you should always confirm that working frameworks and programs are of the most recent versions. Cybercriminals are conspicuous in misusing the weaknesses found in the old programming or applications.

Use security programming primarily reflects the acquiring knowledge of the fundamentals of large security. Genuine security programming can reinforce your online security with more appropriate methods. (trendmicro, 2015)

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