**PURBANCHAL UNIVERSITY**

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**DEPARTMENT OF COMPUTER ENGINEERING**

**KHWOPA ENGINEERING COLLEGE  
LIBALI-8, BHAKTAPUR**

**A PROJECT PROPOSAL**

**ON**

**“E-Blood Bank”**

A project proposal submitted for the partial fulfillment of requirements for the degree of Bachelor of Engineering in Computer Engineering (Eighth Semester)

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**ABSTRACT**

We have seen and gone through the many cases such as accidents where the urgency of specific blood type and the unavailability of that blood group have been the major problem. With comparison to the ratio of requirement of the blood, very less amount of people donate the blood that gives rise to the shortage of blood. Usually, Blood banks suffer frequent shortage of blood and hence, advertisements are frequently seen on social networks urging healthy individuals to donate blood for patients who urgently require blood transfusion. So, in order to reduce this problem in case of emergencies, we have proposed this project titled “E-Blood Bank” which is an Android application that allows the users to search and notify donors of specific blood group based on their location, in a short period of time. This application will not only display the list of donors but also facilitated with tracking the location of the nearby donors. In order to donate blood through the app, one has to register himself by providing all the required details. These details must be valid and true so that they can be tracked at the time of emergency. When all the information is accepted by the Admin, the donor will be further to the list of registered donors. GPS module is included in order to locate the donors. Thus, only registered members, who want to donate blood, are able to access the service.

Keywords: *E-Blood Bank, GPS, Android Application*

**CHAPTER 1**

**INTRDOUCTION**

* 1. **Background**

Blood Donation is one of the most significant contributions towards the society. Millions of people need blood transfusions each year. Some may need blood during surgery and others depend on it after an accident or because they have a disease that requires blood components. Currently, the world depends on technology and everyone from the young to the old seem to be deeply involved. Due to rapid development of technology, it play a significant role in the modern life of people and it’s an important elements in today’s society. One of the current technology is location tracking. A tracking system is a well-established technology in this era which is reliable technology. It detects the current geo-location of a target, which may be anything from a vehicle to an item in a manufacturing plant to a person. Using GPS enabled smartphones to collect route data is relatively new technologies, but rapidly advancing technique used in research. Smartphone GPS tracking (SGT) has been employed mainly in transportation and mobility studies. This study is aim to develop and evaluate the impact of tracking system in the blood shortage situation which is the urgent requirement of the fresh blood.

* 1. **Motivation**

In this era of modernity, we have found that the greatest predicament that exists is the cost of living and saving lives has become higher, and unfortunately life itself has lost its worth to us. Similarly, Manual systems and organizing blood donation campaigns are time consuming, laborious, and costly as compared to Computer Based Information Systems (CBIS). Organizers need to go to the nearest blood bank to inform and get necessary things to organize blood donation campaigns which is more time consuming and difficult task. Hence in order to convert this laborious and time consuming task to easy and user friendly one, we thought of this system which is an android application that allows the users to search donors of specific blood group based on their location, in a short period of time.

* 1. **Statement of Problems**
* Unavailability of blood during emergency
* Even willing donor can’t reach to the place where blood is needed due to lack of communication or information
* Blood donation announcement in social media has not been too effective
  1. **Objectives**

The objective of this project is:

* To bridge the communication/information gap between blood banks, hospitals, donors and needy people using GPS service.
  1. **Our Approach**

Our approach is to develop an android application that allows the users; Recipient: to search or locate the donors of specific blood group and Donors: to find the place where there is need of his/her blood group, based on their location with the help of GPS module.

* 1. **Scope**
* Real-time availability of donor as per blood group.
* Willing person can donate where needed which fulfills any shortage in blood bank.
* Blood donation campaign or any other related social awareness information can notified to all the registered users with ease.
* This system will build maintain a proper communication between donor and recipients including blood banks, hospitals and health centers.

**CHAPTER 2**

**LITERATURE REVIEW**

Currently the world depends on technology and everyone from the young to the old seem to be deeply involved. Due to the rapid development of technology, it play a significant role in the modern life of people and it important elements in today’s society. One of the current technology is location tracking. A tracking system is a well-established technology in this era which is reliable technology. It detects the current geo-location of a target, which may be anything from a vehicle to an item in a manufacturing plant to a person. Using GPS enabled smartphones to collect route data is relatively new technologies, but rapidly advancing technique used in research. Smartphone GPS tracking (SGT) has been employed mainly in transportation and mobility studies [1]. This study is aim to develop and evaluate the impact of tracking system in the blood shortage situation which is the urgent requirement of the fresh blood. Blood donation is one of the most significant contributions towards the society. Millions of people need blood transfusions each year. Some may need blood during surgery. Others depend on it after an accident or because they have a disease that requires blood components. According to World Health Organization, stated that in order to full filled the blood demand, 4.6% out of the population should come forward as a donor but only 2.25% who altruistically be as a donors [2]. Almost every hospital in Malaysia has the similar function of blood transfusion center. Although the government has this kind of facility, the government also took another extra initiative to attract more and more people to become blood donor. Therefore, the government came out with the idea of mobile blood transfusion service center. This mobile service center can be used during their blood donation campaign tournament nationwide [3]. It provides alert on donation eligibility and blood donation sites location navigation. Moreover it also provides information on the upcoming events that will take place in National Blood Center through push messages and event notification. Lastly this study is aim to develop and evaluate the impact of tracking system in the blood shortage situation which is the urgent requirement of the fresh blood and to improve the communication between the hospital and donor. This system will locate the nearest blood donor in cases of emergencies in fastest and easiest way using GPS. Blood donation awareness is still low, in year 2015 with only 660,000 people or just 2.25 percent of the entire Malaysian population donating blood. About 2,000 pints of blood is needed daily to treat 1,000 patient and shortage of blood is expected to occur if there is no awareness to donate blood. The National Blood Centre is calling on more Malaysians to donate blood, especially ahead of the festive season and school holidays, blood supply at hospitals nationwide would drop to below the safe limit of 3,000 blood bags a day. According to National Blood Center director Dr Noryati Abu Amin , ensuring an adequate blood supply in health facilities is a very challenging task because they has to be prepared for unpredictable, emergency cases. At the same time, the huge blood supply cannot be keep because it has a shelf life [4].In existing system is time consuming to provide request with the blood when in need and it just alert on donation eligibility and blood donation sites location navigation. The existing system also provides information on the upcoming events that will take place in National Blood Center through push messages and event notification. This give pries the need of such system which is available to everyone and can be used for blood management. The proposed system is a way to handle blood management and provide to hospital with blood in emergency in shortest time possible. This system will locate the nearest blood donor in cases of emergencies and in fastest way. At the same time, the admin (user) of the system analyze the blood donor details such as type of blood will notify the blood donor. The proposed system is a way to handle blood management and provide blood in emergency in shortest time possible. Blood is one of the most important elements of human body, it can be defined as fluid in the body that carry oxygen from lungs to the rest part of the body. We have 4 to 6 liters of blood in our adult body depend on size. This system is proposed to locate the nearest blood donor in cases of emergencies and in fastest way. This research also is solve the blood management’s problem where the blood can’t be keep for a long time and cause blood bank require blood anytime. A tracking system is used for the observing of persons or objects on the move and an ideal system constantly updates the target’s location, elevation, and range. Example of tracker is GPS tracking unit is a navigation device normally carried by a moving vehicle or person that uses the Global Positioning System (GPS) to track the device's movements and determine its location.

**CHAPTER 3**

**PROJECT MANAGEMENT**

In order to design this E-Blood Bank, first we will design the conceptual concept. We will draw the flow of program on the basis of the so generated concept. And we will design the program on the basis of these concepts.

**CHAPTER 4**

**METHODOLOGY**

Methodology should describe how your project will be carried out. So, required system block diagrams or generic models along with flowchart and algorithms should be mentioned here.

Preliminary process modeling, data modeling, database design, forms, reports and interface design can be included within this chapter.

Similarly, if you are going to verify your project or system then write down the different **performance parameters** to be measured .And also mention how testing will be carried out in future.

**CHAPTER 5**

**Expected Outcomes**

Write few lines on expected project outcomes or results.

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