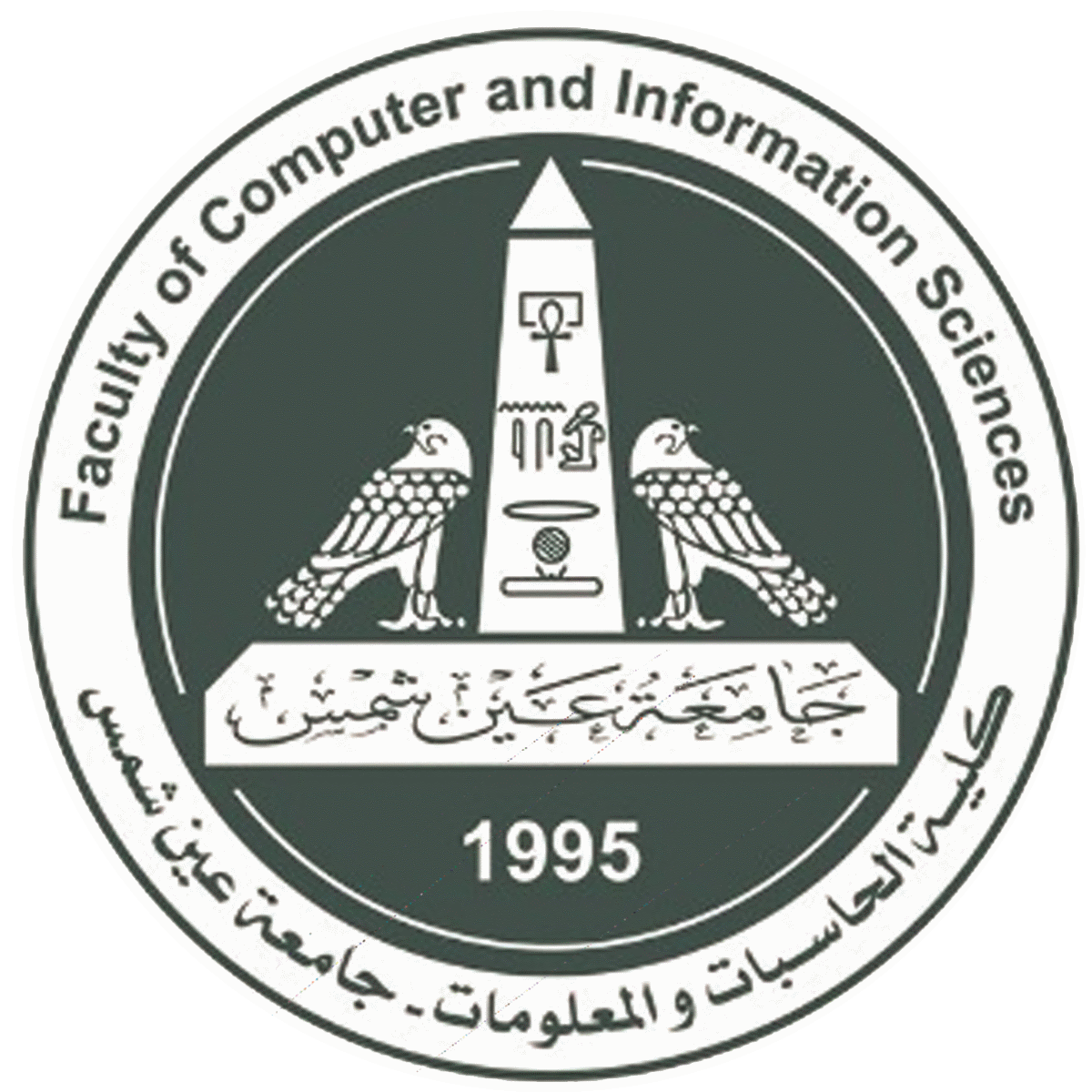
**Blood Donation Mobile Application**



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Donate Blood, Save Life Logo, icon

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# Introduction:

## Motivation:

In the past few years, the number of voluntary donors has increased compared to blood donors that are being paid. Because of lack of information about blood donation, many people are not being able to donate blood. Hospitals always need the personal & health information of blood donors to be able accepting their donation request. No one can donate blood without knowing his health history whether someone have any blood issues as high blood pressure, is diabetic or any other disease.

With the rapid usage of a smartphone with series of features and faster computation process blood bank search activity can be integrated on the mobile phones for easy search of available blood from blood banks or blood donors in nearby areas in cases on emergencies without any delay. Implementing a blood donation application using a runtime updated can be more powerful to help others saving their lives.

## Why This Project Idea is Chosen:

The process of donating blood can be very frustrating, and it could take a lot of time to find the required type for the patients so, we wanted to improve the donation process and make everything easier for both patients and donors by presenting the solution in a smart way.

## Objectives:

We would like the donors to connect with the hospitals to make the process easier than the regular ways by getting donors enough information about the blood donation, contact the hospital by email to reserve an appointment, save a lot of time and effort that were required to accomplish this process. Also, donors can save their data through the application and waiting the hospitals to request them. The main objective is to help hospitals and donors to connect using an easy platform.

# Problem Statement:

We -the team build the solution- found that a patient needs blood, he/she must contact a blood bank or a compatible blood group of a donor in their circle, family, and friends. However, it is difficult to find a suitable donor within a limited group of people each time. In addition, there is no guarantee that blood banks will have a compatible blood group in stock. So, it is now easier for hospitals to contact donors without making this process an overhead on the patient’s relatives.

# Project Design:

## UMLs:

### ERD:

Diagram

Description automatically generated

### Database Schema:

Table

Description automatically generated with low confidence

### Use case Diagram:

Diagram

Description automatically generated

## Components used:

# Activity:

We used the activities “public class Activity”, to interact with the user through an interface. Activity class takes care of creating a window for you in which you can place your UI with [setContentView(View)](https://developer.android.com/reference/android/app/Activity#setContentView(android.view.View)).

Activities in the system are managed as [activity stacks](https://developer.android.com/guide/components/activities/tasks-and-back-stack). When a new activity is started, it is usually placed on the top of the current stack and becomes the running activity -- the previous activity always remains below it in the stack and will not come to the foreground again until the new activity exits. There can be one or multiple activity stacks visible on screen.

There are two methods almost all subclasses of Activity will implement:

* [onCreate(Bundle)](https://developer.android.com/reference/android/app/Activity#onCreate(android.os.Bundle)) is where you initialize your activity. Most importantly, here you will usually call [setContentView(int)](https://developer.android.com/reference/android/app/Activity#setContentView(int)) with a layout resource defining your UI, and using [findViewById(int)](https://developer.android.com/reference/android/app/Activity#findViewById(int)) to retrieve the widgets in that UI that you need to interact with programmatically.
* [onPause()](https://developer.android.com/reference/android/app/Activity#onPause()) is where you deal with the user pausing active interaction with the activity. Any changes made by the user should at this point be committed (usually to the [ContentProvider](https://developer.android.com/reference/android/content/ContentProvider) holding the data). In this state the activity is still visible on screen.

# Content Provider:

A content provider presents data to external applications as one or more tables that are similar to the tables found in a relational database. A row represents an instance of some type of data the provider collects, and each column in the row represents an individual piece of data collected for an instance.

# URI: Location

We used this uri to set a location search to Ain Shams University Specialized Hospital official location where donors can find the hospital.

# URI: Link (Website)

We used this uri to set a default search about more of information about blood donation on Wikipedia.

# URI: Dial (Calls)

We used this uri to give the hospitals the easier to click on the donors where the application could navigate them to the dial and write the donor’s phone number so hospital could connect easier and faster to with the donors.

# Email

We used this uri to help donors sent emails to Ain Shams University Specialized Hospital official contact email so, donors can ask and contact the hospital easier and faster.

# Calendar Provider

We used this uri to help donors save the appointment details if any where it navigates them to the calendar application where they can save the details easier and faster.

# How we divided the Project:

|  |  |
| --- | --- |
| Task Name | Team Member Name |
| Donor Table DB | All Team Members |
| Hospital Table DB | All Team Members |
| Hospital Login | Ahmed Adel |
| Hospital Registration | Ahmed Adel |
| View All Donors | Mohamed AbdelFatah |
| Filter Donors | Omar Hossam |
| Donor Registration | Antony Samir |
| Donor Information Page | Bashnona Gamal |

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