Organ Donation Application

*The Gift of Life.*

A picture containing clock

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**Problem Statement:**

The Organ Donation Application, as the name indicates is an app to make organ donation, transport and transplant more efficient. Every day a total of 20 patients die because they can’t find an organ donor for their disabilities. This is due to the lack of a donor-patient network where a patient can find the Organ he needs and a donor can register for donating organs, specific or full body. The Application will check compatibility between the donor and receiver by checking the important features like blood type, Body size, how sick the patient is, distance between the two, Tissue type and the time on the list. Normally, to register or pledge as an orgon donor an individual has to go to a hospital or healthcare organization and pledge for the same, this app makes it much more convenient and helps spread awareness about the issue, hopefully increasing the number of organ donors and saving more lives.

**Application Key Functionalities:**

Our system will follow JAVA Swing framework using the combination of Singleton and Factory Design Patterns. There will be 1 network, 2 Enterprise and 5 organizations. At first, the patient will be registered in the application and a doctor will be take vital signs for that patient. Vital signs like blood type, body size, ailment history and tissue type will be submitted by the doctor. The person who is willing to donate organs must register in the system and give correct information. The same vital signs will be recorded and sent to the laboratory to match with the patients. The patient who is at top on the stack in the list of matched patients will be considered for the organ transplant. Donor’s location and distance from the patient or hospital will be displayed and a transport request will be sent. A driver will transport the organ. When patient is selected the status of transplant will be pending or in progress. As soon as the transplant will be done, it will be changed to completed successfully by the doctor.

**Proposed Entities:**

* Hospital enterprise
* Lab enterprise
* Doctor Organization
* Transportation Organization
* Person Directory
* User Account Directory
* Donor
* Recipient
* Doctor
* Lab assistance
* System Admin
* Admin
* Driver

**Ecosystem Architecture Diagram:**

A screenshot of a social media post

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