**AMAZORGAN**

Management of organ donation.

**Definition:**

Our app is used to connect organ donors and organ receptors.

Medical staff will be able to upload patients (donors and receptors) to the data base.

AmazOrgan’s main job will be to match the receptors and donors by specific parameters. Donors will also be able to register into the database even before they are in the situation of donating.

**Things that must be considered before using AmazOrgan:**

In our application, we are assuming the following points:

* Receptors can only make one request (only ask for one organ).
* A person **cannot be a donor and a receptor at the same time.**
* Only **donors** can be **deleted** from the database, in the case they are **alive**, and they do not want to donate their organs anymore.
* Donors can register into the database whenever they want, they **must** insert their dni, date of birth and organs (type of organ). However, their **organs** can only be donated **when** they have **passed away**.
* **More** than **one organ** can be **donated** from the same donor.
* The **doctor** can only register a **donor** if he is dead.
* Only the **doctors** and **donors** are considered as **users**.
* If a donor registers itself, he will be **alive** and the organs that he wants to donate **won’t be available** until his death.
* **Only** the **doctor** will be able to introduce the rest of the **info** in the donor.
* The application provides a **match** between the **organs** from a **donor** and **receptor**.
* Things that **cannot be changed**:
  + Blood type
  + Antigens
  + Antibodies
  + Location
  + Date of birth
  + The request of an organ

**How the match works:**

**For the matching function**, we are creating a list with two conditions:

* Needing that organ.
* Being the same blood type (not true in real life).

After this list is created, we compare the **antigens** and **antibodies** of both the donor and receptor. The urgency of receptors is also considered.

The **match function is triggered** each time a donor (not alive) or a receptor is uploaded into the data base.

Once the **match is done**, the organ is directly assigned to the receptor (the receptor cannot decline the offer of an organ).