BLOOD DONATION – DESIGN DECISIONS

The dApp is created to make the blood donation transparent and decentralised. It helps us to know whether the blood donated reaches the needed and also donate blood as per request so that there is no blood wastage and spoilage. ejs template is used to implement the frontend and ethereum solidity contract is used in the backend. ejs template is very similar to HTML which makes it easy to design the user interface and ethereum as a backend will make entire app decentralised and transparent.

1. Donor registration

   Here the donor register his details to an authority who is registered as superadmin through the contract deployed by the authority. The details enrolled into dApp are

   - Name
   - Age
   - Location
   - Blood group
   - Medical condition
   - Mobile number

   These details would be mapped to an address which is given to user. The function 'setDonor()' will write these details to the chain.

2. Requesting blood

   The member of the network/ hospital can request the blood by providing details such as:

   - Blood group
   - Location

   These details are written to chain by mapping the details to the address of requetee. Function ' setReq()' write these details to chain.

3. Accepting request

   The registered donor can accept the request. Function 'requestAccpt()' is used in order to accept the requests by the potential donors.

4. transfer of blood donor coin

   the accepted donor is rewarded with blood donor coins to promote and encourage future blood donations. Function 'transfer()' sends the bdc coins to the donors account.

5. Timer for blood donation

   In general, once blood is donated by a person is not allowed to donate again within the span of 3 months. It is recommended to wait for a 3 months gap for rejuvenating blood cells and other contents.
   So in this we had provided a timer of 30 seconds for demo purposes.

IMPROVEMENTS AND SUGGESTIONS

We could improve this app by including

- medical documentation
- blood results
- BMI
- medical alerts
- usage of bdc tokens in hospitals, gyms and medical stores.