Role class
- role_id : int
- role_tittle : string
- role_description : string
+ addRole()
+ editRole()
+ deleteRole()
+ searchRole()
+ assignRole()

Permission class
- id : int
- role_id : int
- title : str
- module : str
- description : str
+ addPermission()
+ editPermission()
+ deletePermission()
+ searchPermission()

Patient class
- id : int
- name : str
- mobile : str
- address : str
- email : str
- username : str
- password : str
+ addPatient()
+ editPatient()
+ deletePatient()
+ searchPatient()

User class
- user_id : int
- user_role_id : int
- user_name : string
- user_email : string
- user_dob : date
- user_address : string
+ addeUser()
+ editUser()
+ deleteUser()
+ searchUser()

Stock class
- id : int
- blood : str
- type : str
- description : str
- number : str
+ addStock()
+ editStock()
+ deleteStock()
+ searchStock()

Blood class
- blood_id : int
- blood_doner_id : int
- blood_type : str
- blood_bank : str
- bloos_descrpition : str
- blood_cells : str
- blood_patient_id : str
+ addBlood()
+ editBlood()
+ deleteBlood()
+ searchBlood()

Donar class
- id : int
- name : str
- mobile : str
- email : str
- address : str
- username : str
- password : str
+ addDonor()
+ editDonor()
+ deleteDonor()
+ searchDonor()

Order class
- id : int
- type : str
- description : str
- customer_id : int
+ addOrder()
+ deleteOrder()
+ editOrder()
+ searchOrder()

Diagram: class diagram Page 1

: forgot password   **: login page**   **: verfication**   **: database**   **: authentic page**

: admin   : login pages   : forgot pwd   : verify   : DB   : authentic pages

login to page

forgot password

check authority for access

check login details

valid login details   provide authorization for access

check security question and answer   create sesion in and store in database   allow user to access the internal pages on base of user token and session

send email to user to rest password

invalid login details

allow user to access the pages

logout from application

detroy session and tokens from database

login successfully

admin login id and password

invalid lodin/password

login to the system succesfully

set userlevel and permissions

access the internal functionalities according to permission

```
                    ●
                    │
                    ▼
                  ┌─────┐
                  │ id  │
                  └─────┘
                    │
                    ▼
          ┌──────────────────────┐
          │  donor registration  │
          └──────────────────────┘
                    │
                    ▼
          ┌──────────────────────┐
          │   donor checking     │
          └──────────────────────┘
                    │
                    ▼
      ┌──────────────────────────────┐
      │ take blood & update database │
      └──────────────────────────────┘
                    │
                    ▼
    ┌──────────────────────────────────┐        ┌────────────────────────┐
    │ receipient request for availability│─────▶│  display not available │
    └──────────────────────────────────┘        └────────────────────────┘
                    │                                        │
                    ▼                                        │
    ┌──────────────────────────────────┐                    │
    │ tetchthe information from database│                    │
    └──────────────────────────────────┘                    │
                    │                                        │
                    ▼                                        │
          ┌──────────────────────┐ ◀──────────────────────┘
          │ verfiy the information│
          └──────────────────────┘
                    │
                    ▼
      ┌──────────────────────────────┐
      │ display requested information│
      └──────────────────────────────┘
                    │
                    ▼
                    ◉
```

1:Enter all details

: Student

m3

3:Provide Member id

: Administrator

4:Update   m1

m4

2:Check Details

: Database

Manage Doners info and Status

Manage Recipients info and Status

Monito Blood Lettings Records and info

Record All Transaction

admin

donor

recipient

Blood

Blood group

Security

Blood Bank system

Blood cells

Persistance

Donor

Database

Patient

Blood Group

Blood

Blood Bank System

Patient

Blood Cells

Donor