Blood Bank Management System

BOLD- PK
Italics- FK

Receipent

r_id
user_id
identification_na
r_name
r_gender
r_age
r_addr
r_phone
blood_type
type_rh

Inventory

bloodbag_id
b_id
blood_type
blood_volume
blood_recorder
blood_rexpire_date
blood_receive_date
blood_status
expire_status
type_rh

Withdraw

withdraw_id
h_id
bloodbag_id
request_id
withdraw_date
withdraw_status

Donor

d_id
user_id
identification_na
d_name
d_gender
d_age
d_addr
d_phone
blood_type
type_rh

Blood donation

b_id
user_id
d_id
r_id
h_id
blood_qty
donate_date
result_date
blood_type
syphilis
hepatitis_B_virus
hepatitis_C_virus
hepatitis_E_virus
cytomegalovirus
human_immunodeficiency_virus
HIV

Request

request_id
h_id
blood_type
type_rh
request_amount
request_date
request_status
request_email_status
request_senddate_date

Hospital

h_id
request_id
h_name
h_addr
h_phone
h_email

User

user_id
b_id
username
auth_key
password
password_reset_token
create_at
updated_at
role

Insurance

i_id
user_id
insurance_comp_name
insurance_start_date
insurance_expiry_date
billing_id

Billig

billing_id
request_id
r_id
billig_date
withdraw_id
billing_amount
i_id
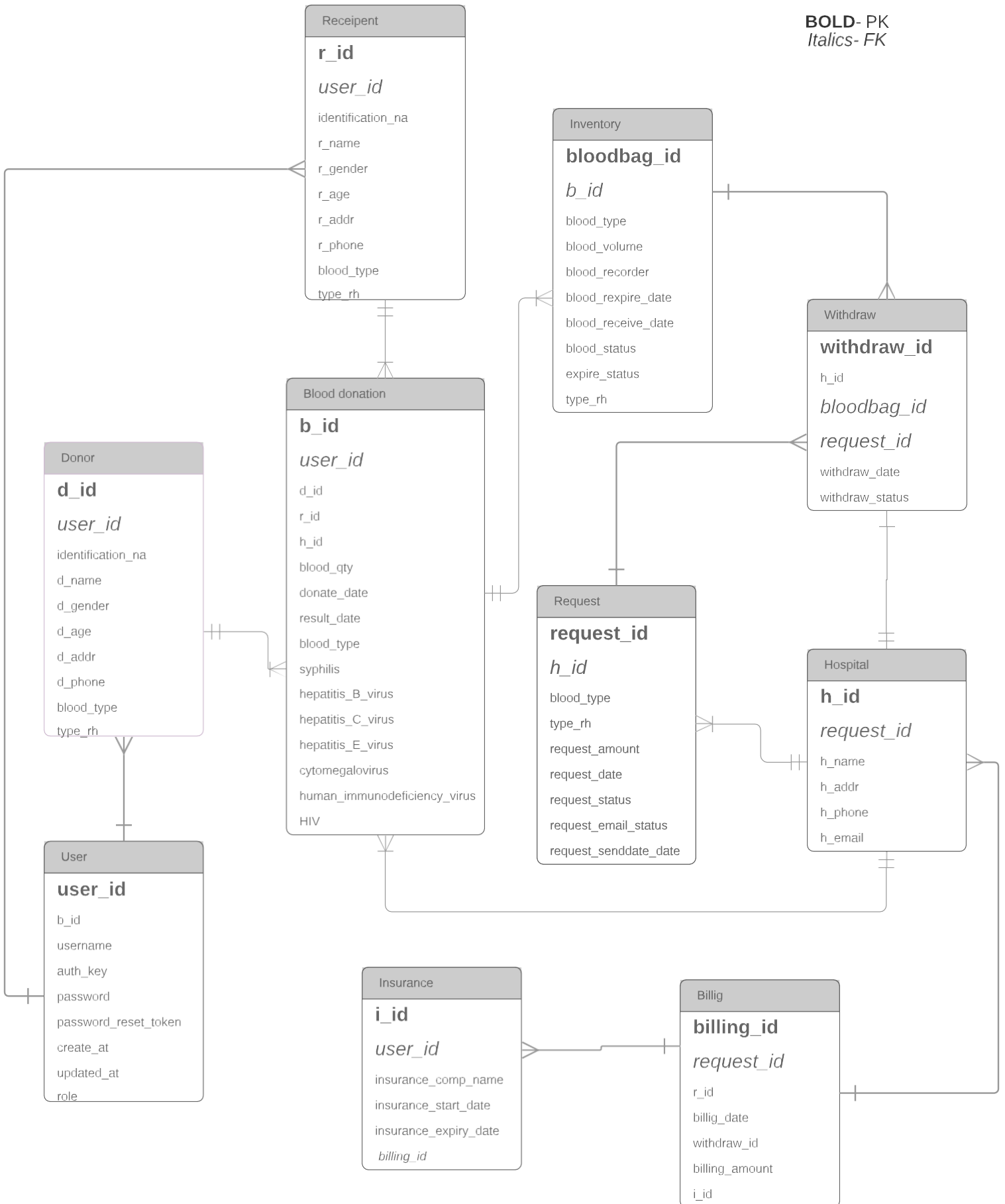
Business Rules

- Preliminary Filter for Donor
1. Age > 18 and Age <65
2. Weight > 50
3. No illness from list : HIV positive, cardiac arrest, hypertension, blood pressure, cancer, epilepsy, kidney ailments and diabetes
- Expire_date = collection_date + 21
- Blood type belongs to only from A+, A-, B+, B-, AB+, AB-, O+ , O-

		Plasma Choice			
		#1	#2	#3	#4
Recipient	O	O	A	B	AB
	A	A	AB		
	B	B	AB		
	AB	AB			

- State can only be Massachusetts

Privacy Setting

There are two users in this system.

1. Donor

- Able to view their donation records, including where and when they made donations, and the blood results for each, to learn of their donated blood quality and schedule their next donations.
- Able to view and update their personal information, including name, contact address, and phone number, to keep their donor's information record upto-date with the blood bank.
- To be notified of the blood results of their previous donation by e-mail, to know the success of their donation.

2. Recipient

- Able to view their donation records, including where and when the donations of blood was made, and the blood results for each, to learn of their receiving blood quality.
- Able to view and update their personal information, including name, contact address, and phone number, to keep their information record upto-date with the blood bank.

3. Administrator

- Able to create, update, delete, and query donor's records in order to manage donor information.
- Able to create, update, delete, and retrieve donation records to manage information about donations made.
- Able to deposit donated blood into inventory when donations are made.
- Able to withdraw blood from the inventory and keep a record of blood stocks to always keep count of the blood bags.
- Able to create, update, delete, and retrieve request records from hospitals to manage hospital requests for blood.
- Able to create, update, delete, and query hospital's records in order to manage hospital information.
- Able to send e-mails to donors for their user account and blood results through the system.
- Able to send e-mail responding to hospitals for their blood requests through the system.