

*Table 1: Domain Constraints of Entities*

Entity	Attribute	Domain
Blood Donor	Blood_id	Unique numeric value
	Blood_type	String Value
	Name	String Value
	Date_of_birth	Numeric value in the format Month/Day/Year (MM/DD/YYYY)
	Sex	String Value
	Date_of_donation	Numeric value in the format Month/Day/Year (MM/DD/YYYY)
	Address	Variable length alphanumeric value. Contains a street num, street, name, city, state, zip code
	Phone	10-digit numeric value (includes area code)
Recipient	Receiptient_id	Unique numeric value
	Name	String value
	Date_of_birth	Numeric value in the format Month/Day/Year (MM/DD/YYYY)
	Sex	String value
	Blood_type	String value
	Date_of_rec	Numeric value in the format Month/Day/Year (MM/DD/YYYY)
Blood	Blood_bag_No	Unique numeric value
	Hemoglobin content	INT value
	Blood_amount	INT value
	Blood_type	INT value
	Cost	INT value
Blood Inventory	Blood_No	Unique numeric value
	Blood_type	String value
	Description	String Value: any additional information regarding a stored blood

	Order quality	INT value
Employee	emp_id	Unique numeric value
	name	String value
	date_of_birth	Numeric value in the format Month/Day/Year (MM/DD/YYYY)
	sex	String value
	phone	10-digit phone number
	address	Variable length alphanumeric value. Contains a street num, street, name, city, state, zip code
	salary	INT value

*Table 2: Domain Constraints for Relationships*

Relationship	Attribute	Domain
Donates	Blood_id (PK)	Unique numeric value
	Blood_bag_No (PK)	Unique numeric value
Receives	Recipient_id (PK) (PK)	Unique numeric value
	Blood_bag_No (PK)	Unique numeric value
Registers	emp_id (PK)	Unique numeric value
	Blood_id (PK)	Unique numeric value
Interacts	Receiptient_id (PK)	Unique numeric value
	emp_id (PK)	Unique numeric value
Manages	Blood_No (PK)	Unique numeric value
	emp_id (PK)	Unique numeric value

*Table 3: Relationship Functionality*

<b>Relationship</b>	<b>Functionality</b>	<b>Justification</b>
Donates	One-to-Many	One donor can donate blood many times
Receives	Many-to-One	Many patients can receive blood from same donor
Registers	Many-to-One	Many donors may register blood donation with a single receptionist.
Interacts	Many-to-Many	Many employees can interact with blood recipients and many blood donors can be interacted with by employees.
Manages	One-to-Many	One employee can manage many blood inventories.