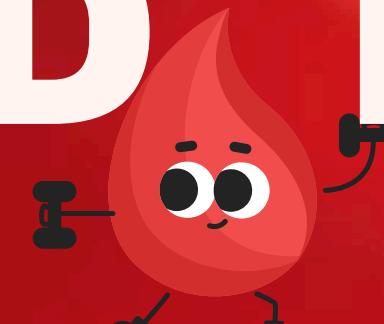


Team B

# BLOOD BANK



## Management System

Using SQL

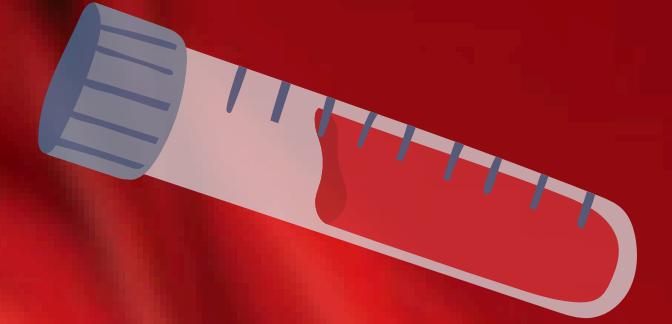
By

Deenadhayaalan M

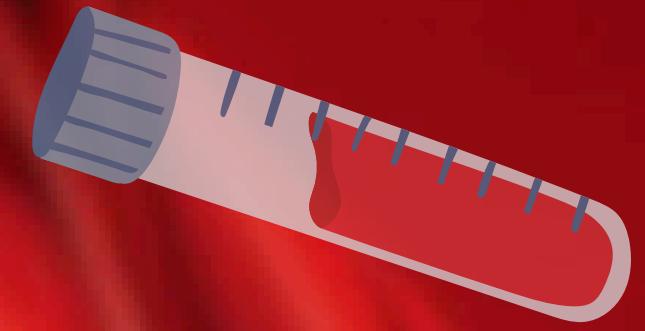


# Agenda

- Project Overview
- Objectives
- Database Design
- Key SQL Queries
- Results and Reports
- Challenges
- Future Scope
- Conclusion
- Q&A



# Introduction



**The Blood Group Management System is a database-driven solution designed to efficiently handle the donation, request, and storage of blood units.**

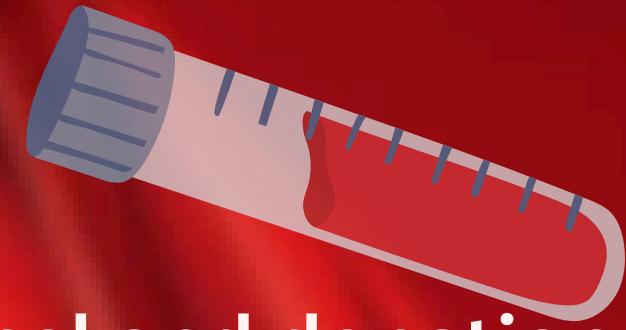
**Blood is a critical resource in healthcare, and managing its availability in real-time is vital for saving lives during emergencies, surgeries, and routine treatments.**

**This system helps maintain accurate records of donors, donation history, blood stock levels, and patient requests. By automating these processes, the system improves operational efficiency and ensures timely availability of different blood groups when needed.**

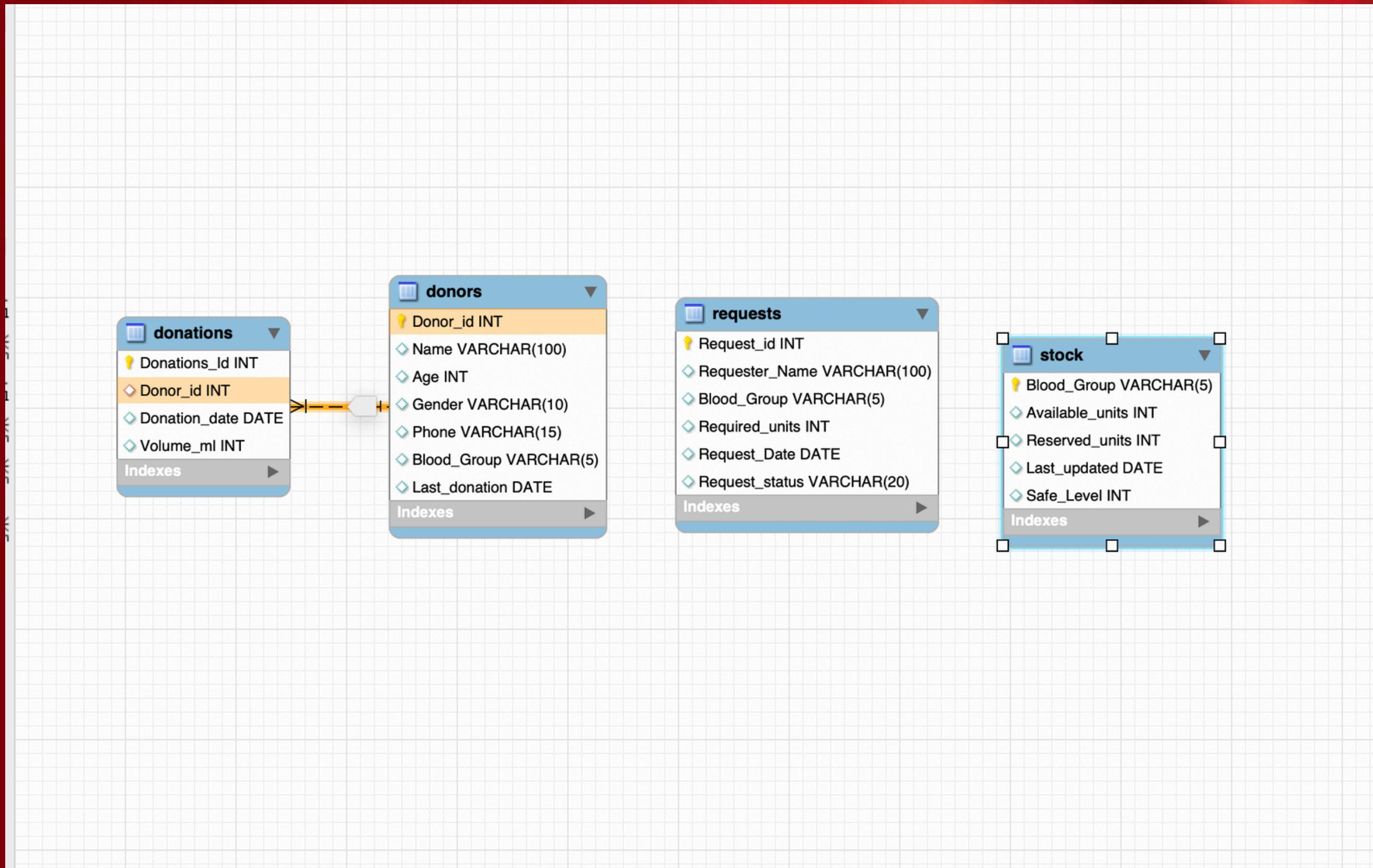


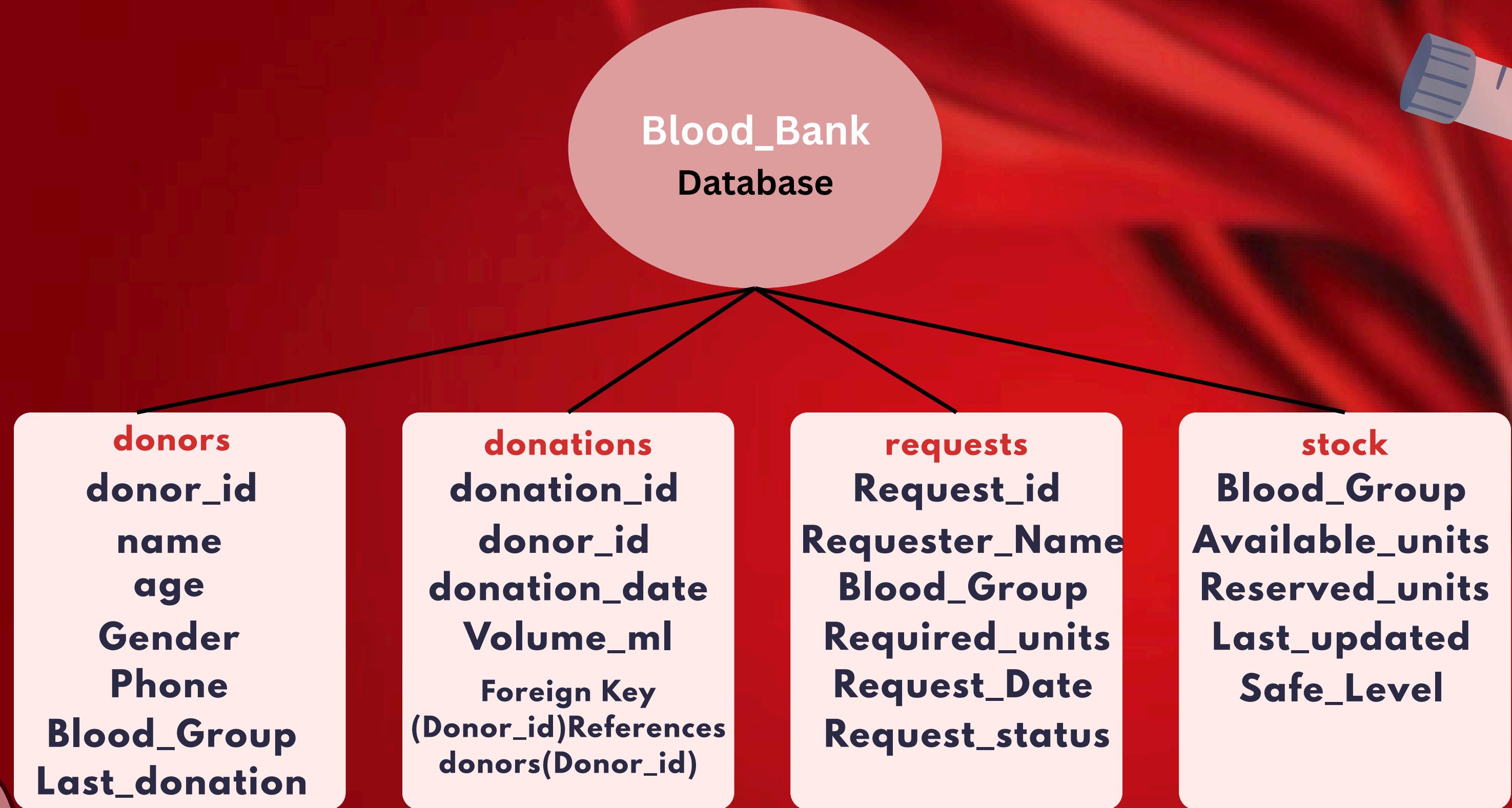
# Objectives

- To store and manage detailed information of blood donors, including personal and donation details.
- To track and record each blood donation, including the date and volume donated.
- To handle requests for blood units by hospitals or patients and update request status accordingly.
- To monitor and manage the blood stock, ensuring safe minimum levels are maintained for each blood group.
- To use SQL queries and functions for reporting, analysis, and decision-making.
- To identify gaps in supply, inactive donors, and generate insights using aggregated data.



# ER Diagram (Entity Relationship Diagram)





We worked on these tables

# Data Volume

- **Donors: 500 entries**
- **Donations: 600+ entries**
- **Requests: 300+ requests**
- **Stock (8 blood groups with updated units)**

## Donors

Donations_Id	Donor_id	Donation_date	Volume_ml
1	57	2024-06-23	350
2	181	2024-08-11	350
3	20	2024-08-13	350
4	432	2024-08-07	500
5	134	2024-01-29	350
6	230	2023-09-21	500
7	431	2024-07-06	350
8	203	2023-10-31	350
9	448	2024-12-25	500
10	380	2023-07-01	350

## Stock

Blood_Group	Available_units	Reserved_units	Last_updated	Safe_Level
A+	71	17	2024-10-16	20
A-	96	10	2024-09-15	20
B+	51	9	2025-02-09	20
B-	52	17	2023-11-12	20
AB+	88	7	2023-08-09	20
AB-	82	11	2024-03-03	20
O+	98	11	2024-04-21	20
O-	69	11	2024-12-04	20

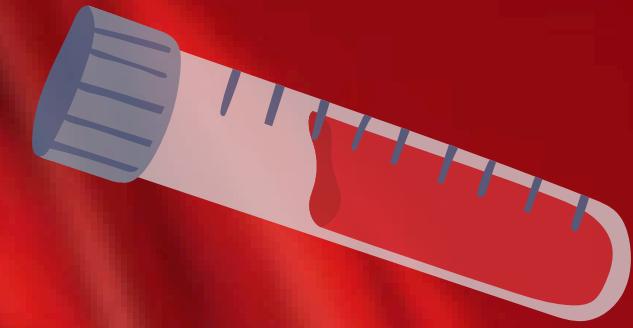
## Request

Request_id	Requester_Name	Blood_Group	Required_units	Request_Date	Request_Status
1	Indrajit Trivedi	AB+	5	2024-03-21	Fulfilled
2	Biju Choudhury	AB-	4	2025-03-05	Pending
3	Eva Kuruvilla	O-	5	2024-11-03	Rejected
4	Vihaan Anne	B+	4	2023-06-27	Pending
5	Eshani Batra	AB-	5	2025-01-01	Pending
6	Devansh Batta	B-	1	2024-08-11	Fulfilled
7	Dhanush Din	O+	5	2023-06-21	Fulfilled
8	Akarsh Mallick	AB-	5	2025-03-06	Rejected
9	Keya Tandon	O-	2	2024-03-12	Pending
10	Zara Seshadri	O-	2	2023-08-25	Pending

## Donations

Donor_id	Name	Age	Gender	Phone	Blood_Group	Last_donation
1	Vaibhav Chaudhry	43	Female	2332146881	B-	2023-09-03
2	Krish Kade	29	Male	9935632729	B-	2024-12-23
3	Dharmajan Sehgal	23	Female	1756048063	O+	2023-11-12
4	Hazel Baria	52	Male	08397052327	O-	2024-10-16
5	Damini Sahota	44	Male	+910102761612	AB-	2024-04-06
6	Miraya Agate	31	Male	05286303748	O-	2023-07-02
7	Tarini Bhatnagar	29	Female	07029296111	A-	2023-11-14
8	Ritvik Chahal	23	Female	+916238573415	AB-	2024-03-22
9	Parinaaz Bansal	20	Female	4090536656	A+	2024-02-28
10	Zeeshan Talwar	31	Female	08120567343	A-	2024-01-21

# SQL Queries



## 1. How many donors are there in each blood group

```
select Blood_Group,count(*)as Total_donors  
from Blood_Bank.donors group by Blood_Group;
```

A stylized illustration of a red blood bag with a white cross on it, connected to a drip line, located in the bottom left corner.

```
41      #How many donors are there in each blood group  
42 •   select Blood_Group,count(*)as Total_donors  
43     from Blood_Bank.donors  
44       group by Blood_Group;  
45
```

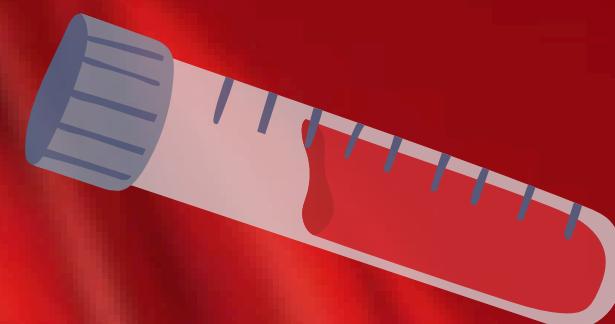
100% 22:44

Result Grid Filter Rows: Search Export:

Blood_Group	Total_dono...
B-	69
O+	52
O-	68
AB-	56
A-	56
A+	68
B+	68
AB+	63

## 2. How many donors belong to the A+ blood group

```
select Blood_Group,count(*) from Blood_Bank.donors  
where Blood_Group='A+';
```



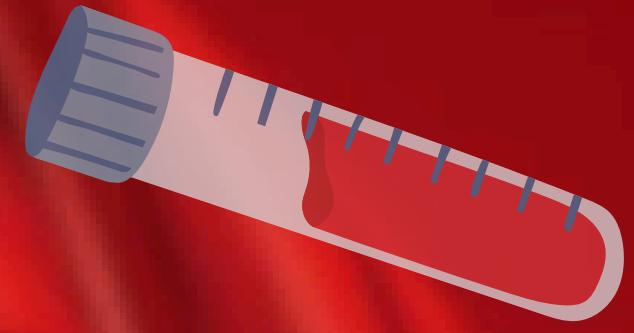
```
44      #How many donors belong to the A+ blood group  
45 •   select Blood_Group,count(*) from Blood_Bank.donors where Blood_Group='A+';  
46
```

100% 46:44

Result Grid Filter Rows: Search Export:

Blood_Group	count(*)
A+	68

### 3.List all donations made in the last 6 months.



```
select * from donations  
where Donation_date >= curdate() - interval 6 month ;
```

47    #List all donations made in the last 6 months.  
48 •    select \* from donations  
49    where Donation\_date >= curdate() - interval 6 month ;  
50

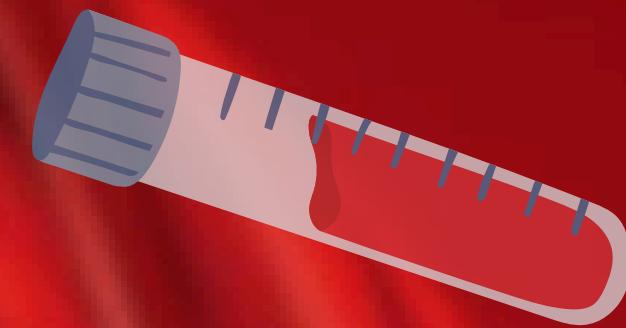
100% ◇ | 54:49 |

Result Grid   Filter Rows:  Search   Edit: Export:

	Donations_Id	Donor_id	Donation_date	Volume_ml	
9	448	2024-12-25	500		
12	84	2025-01-16	350		
17	27	2025-01-30	450		
23	483	2025-04-07	350		
29	275	2025-01-10	450		
31	246	2025-02-12	450		
32	49	2025-03-19	450		
52	456	2025-05-03	350		
53	114	2025-03-14	500		
57	282	2025-01-25	500		
65	221	2025-03-20	450		
67	5	2024-12-30	450		
73	183	2024-12-19	350		
74	450	2024-12-11	500		
80	309	2025-03-07	450		
86	139	2025-02-26	500		
87	284	2024-12-12	450		
89	122	2025-04-15	500		
90	109	2024-12-11	450		
98	116	2025-03-07	450		
102	91	2025-01-07	450		



## 4.Retrieve all pending blood requests.



**select \* from requests where Request\_status='Pending';**

```
51      #Retrieve all pending blood requests.  
52 •  select * from requests where Request_status='Pending';  
53  
100%  ◁ | 54:49 |  
  
Result Grid  Filter Rows: Search  Edit:  Export/Import  
  


| Request_id | Requester_Name   | Blood_Group | Required_units | Request_Date | Request_Status |
|------------|------------------|-------------|----------------|--------------|----------------|
| 2          | Biju Choudhury   | AB-         | 4              | 2025-03-05   | Pending        |
| 4          | Vihaan Anne      | B+          | 4              | 2023-06-27   | Pending        |
| 5          | Eshani Batra     | AB-         | 5              | 2025-01-01   | Pending        |
| 9          | Keya Tandon      | O-          | 2              | 2024-03-12   | Pending        |
| 10         | Zara Seshadri    | O-          | 2              | 2023-08-25   | Pending        |
| 14         | Nakul Sachdev    | A-          | 5              | 2023-10-12   | Pending        |
| 26         | Badal Ramaswamy  | A-          | 2              | 2025-01-30   | Pending        |
| 28         | Saanvi Lad       | AB-         | 5              | 2024-01-12   | Pending        |
| 35         | Onkar Brahmbhatt | AB-         | 5              | 2024-02-10   | Pending        |
| 36         | Jhanvi Karan     | O+          | 3              | 2024-07-07   | Pending        |
| 37         | Vardaniya Luthra | O-          | 1              | 2023-09-24   | Pending        |
| 41         | Stuvan Grover    | A-          | 3              | 2024-04-11   | Pending        |
| 48         | Rati Kala        | A-          | 4              | 2023-05-22   | Pending        |
| 50         | Raunak Upadhyay  | O-          | 5              | 2024-03-20   | Pending        |
| 56         | Trisha Chad      | A-          | 5              | 2024-10-20   | Pending        |
| 63         | Nirvaan Rama     | O+          | 5              | 2025-02-05   | Pending        |
| 64         | Aarush Manda     | B-          | 5              | 2023-08-27   | Pending        |
| 68         | Manikya De       | O+          | 2              | 2024-06-15   | Pending        |
| 79         | Jayant Grewal    | O+          | 3              | 2024-07-20   | Pending        |
| 81         | Keya Mahal       | O-          | 2              | 2024-05-15   | Pending        |
| 85         | Krish Gill       | B-          | 1              | 2023-08-21   | Pending        |

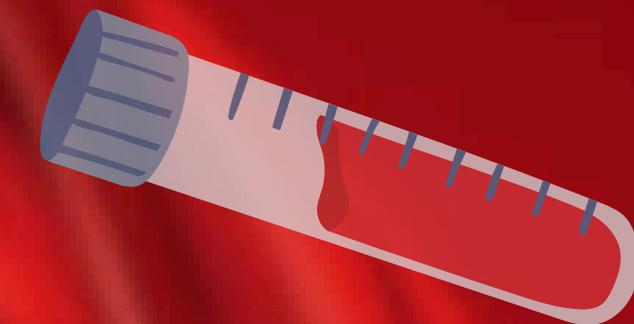


requests 4


```



## 5. Show blood groups where the available stock is below or equal to 70 units.



**select \* from stock where Available\_units <=70;**

```
57      #Show blood groups where the available stock is below or equal to 70 units.  
58 •   select * from stock where Available_units <=70;  
59  
100%  48:58 |
```

The screenshot shows a database query interface. At the top, there is a code editor with the following content:

```
57      #Show blood groups where the available stock is below or equal to 70 units.  
58 •   select * from stock where Available_units <=70;  
59
```

The line 58 is highlighted with a blue background and a cursor is visible at the end of the line. Below the code editor is a toolbar with the following buttons:

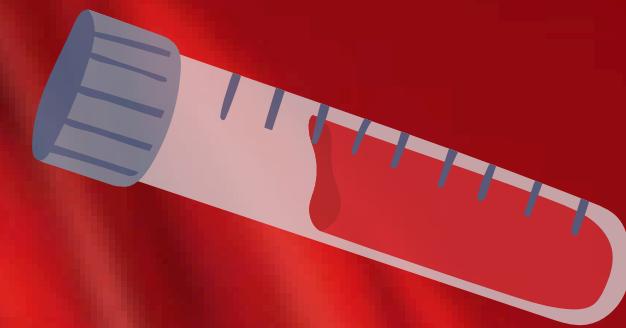
- Result Grid
- Filter Rows:
- Search
- Edit:
- Export/Import:

Below the toolbar is a table with the following data:

Blood_Group	Available_units	Reserved_units	Last_updated	Safe_Level
B-	52	17	2023-11-12	20
B+	51	9	2025-02-09	20
O-	69	11	2024-12-04	20
NULL	NULL	NULL	NULL	NULL



## 6.What is the total volume of blood donated per blood group.



```
select d.Blood_Group , sum(n.Volume_ml)
as Total_volume from donors d
join donations n on d.Donor_id = n.Donor_id
group by d.Blood_Group;
```

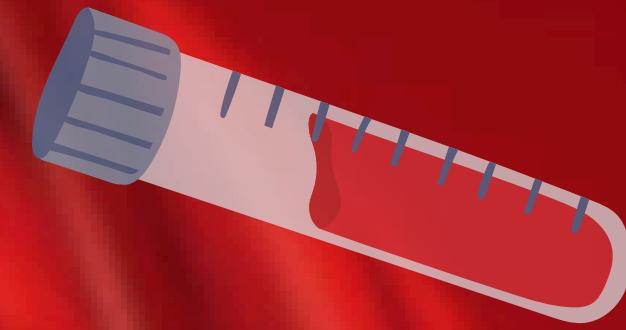


A screenshot of a database query interface. The code area shows a multi-line SQL query. The results grid shows a table with two columns: 'Blood\_Group' and 'Total\_volume'. The data is as follows:

Blood_Group	Total_volume
B+	28550
AB+	24800
O-	30150
B-	28250
O+	23850
A+	31400
AB-	26400
A-	23550

The interface includes a status bar showing '100%' and '48:58', and various navigation and search tools at the bottom.

## 7.Count of pending requests for each blood group.



```
select Blood_group,count(*) from requests  
where Request_status='Pending' group by Blood_group;
```

```
66      #Count of pending requests for each blood group.  
67 •  select Blood_group,count(*) from requests  
68   where Request_status='Pending' group by Blood_group;  
100%  ◊ | 45:63
```

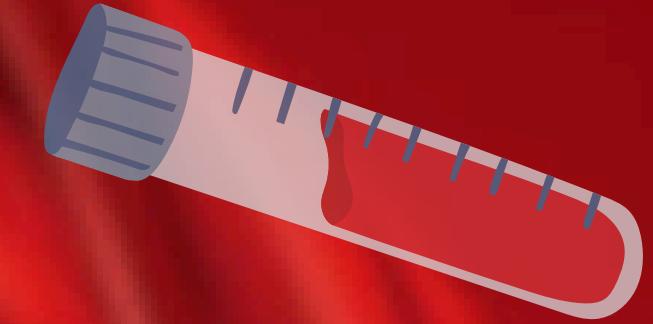
Result Grid   Filter Rows: Search   Export:

Blood_group	count(*)
AB-	21
B+	18
O-	27
A-	21
O+	22
B-	24
A+	11
AB+	25



## 8.Total required units per blood group in all requests, sorted by blood group (descending).

```
select Blood_group,sum(Required_units)
as Total_Required from requests
group by Blood_group order by Blood_group desc ;
```

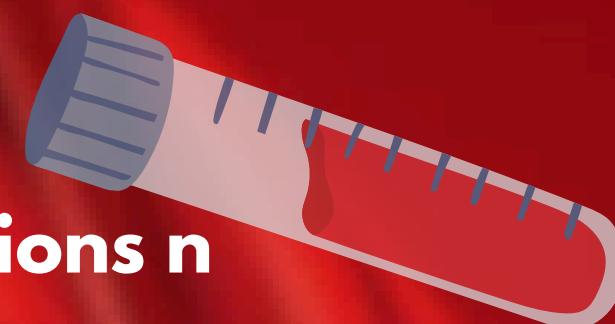


```
70      #Total required units per blood group in all requests,
71 •  select Blood_group,sum(Required_units)
72    as Total_Required from requests
73    group by Blood_group order by Blood_group desc ;
100%   ◊  43:67
```

Result Grid   Filter Rows:  Search   Export:

Blood_group	Total_Required
O+	147
O-	183
B+	174
B-	226
AB+	225
AB-	232
A+	121
A-	183

## 9.What is the average volume of donations.



```
select d.Blood_Group, avg(n.Volume_ml) as Average_Volume from donations n  
join donors d on d.Donor_id = n.Donor_id group by d.Blood_Group;
```

```
75      #What is the average volume of donations?  
76 •  select d.Blood_Group, avg(n.Volume_ml) as Average_Volume from donations n  
77    join donors d on d.Donor_id = n.Donor_id  
78    group by d.Blood_Group;  
79
```

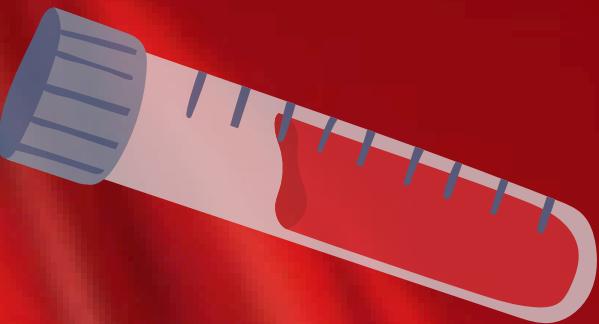
100% 24:78

Result Grid Filter Rows: Search Export:

Blood_Group	Average_Volume
B+	432.5758
AB+	442.8571
O-	424.6479
B-	428.0303
O+	433.6364
A+	418.6667
AB-	455.1724
A-	444.3396



## 10.What is the date of the latest donation



```
select max(donation_date) as Latest_Donation from donations;
```

81 #What is the date of the latest donation  
82 • select max(donation\_date) as Latest\_Donation from donations;

100% 24:78

**Result Grid** Filter Rows:  Search Export:

Latest_Donation
2025-05-08



## 11. List donor names with their contact and donation details.



**select d.Name ,d.Phone,n.Donation\_Date,n.Volume\_ml from donors d join donations n on d.Donor\_id;**

```
84      #List donor names with their contact and donation details.
85 •  select d.Name ,d.Phone,n.Donation_Date,n.Volume_ml
86    from donors d join donations n on d.Donor_id;
100%   61:82
```

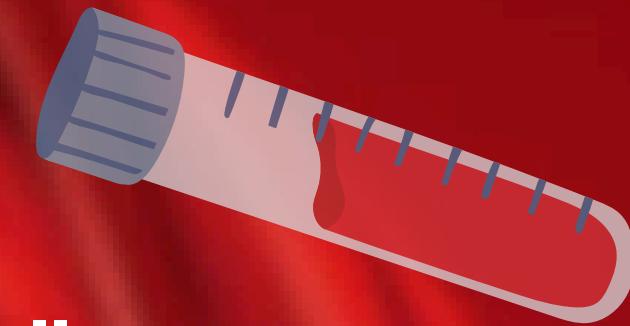
Result Grid    Filter Rows:    Search    Export:    Fetch rows:

Name	Phone	Donation_Date	Volume_ml
Sahil Bava	02155228257	2024-06-23	350
Vedika Balakrishnan	0116352613	2024-06-23	350
Jayant Kalita	07324597100	2024-06-23	350
Hansh Sridhar	+917068911561	2024-06-23	350
Miraan Majumdar	5065137783	2024-06-23	350
Shaan D'Alia	00165208917	2024-06-23	350
Reyansh Kumar	0345216046	2024-06-23	350
Faiyaz Khanna	5627987108	2024-06-23	350
Alisha Dey	+917533672554	2024-06-23	350
Vihaan D'Alia	+910910433936	2024-06-23	350
Urvi Basu	7016802874	2024-06-23	350
Jhanvi Lal	4095634540	2024-06-23	350
Lakshay Dora	7743410400	2024-06-23	350
Fateh Kade	0699987104	2024-06-23	350
Inaaya Dutt	01981929919	2024-06-23	350
Ranbir Kibe	3560797473	2024-06-23	350
Renee Choudhary	+910924196200	2024-06-23	350
Samar Sandhu	5622225609	2024-06-23	350
Hansh Badami	+911983560193	2024-06-23	350
Lakshit Saxena	03839419399	2024-06-23	350
Zara Varma	+912028208593	2024-06-23	350

Result 29



## 12. Find donors who have never donated blood.



**select d.Name, Age, Blood\_group, Phone from donors d  
Left Join donations n on d.Donor\_id = n.Donor\_id where n.Donor\_id is null;**

```
89      # Find donors who have never donated blood.  
90 •  select d.Name, Age, Blood_group, Phone from donors d  
91    Left Join donations n on d.Donor_id = n.Donor_id where n.Donor_id is null;  
92
```

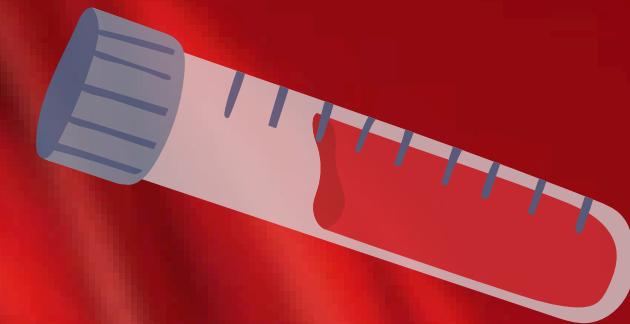
Result Grid    Filter Rows:    Search    Export:

Name	Age	Blood_group	Phone
Dharmajan Sehgal	23	O+	1756048063
Tarini Bhatnagar	29	A-	07029296111
Ritvik Chahal	23	AB-	+916238573415
Parinaaz Bansal	20	A+	4090536656
Vaibhav Sane	46	B+	9973653505
Kartik Walla	25	B+	2463656018
Aarav Lal	44	O+	02873467889
Nitya Chad	58	O-	+918378015715
Uthkarsh Sanghvi	53	O-	+913979122754
Lakshay Sehgal	32	B-	+916932273242
Nirvaan Luthra	52	AB+	+911002335941
Darshit Rajagopal	60	AB+	07759100912
Kismat Khurana	37	O-	+918474842742
Mannat Bhalla	20	O+	00346580747
Madhav Ghosh	41	B-	+910583389672
Ivana Chakrabarti	43	B+	8840099522
Azad Bandi	47	B+	5845285184
Vanya Kulkarni	18	AB-	+912715825801
Sara Tripathi	44	B-	05259290868
Yashvi Kaur	49	AB+	+918165685531
Mamootv Ratti	60	A-	+916236351200

Result 32



### 13. Find donors who have never donated blood.



```
select d.Blood_group,sum(n.Volume_ml) as Total_Donation  
from donors d join donations n on d.Donor_id = n.Donor_id group by  
Blood_group;
```

```
93      # Show total donation volume grouped by blood group.  
94 •  select d.Blood_group,sum(n.Volume_ml) as Total_Donation  
95    from donors d join donations n on d.Donor_id = n.Donor_id group by Blood_group;  
100%  ◊  51:90
```

Result Grid    Filter Rows:    Search    Export:

Blood_group	Total_Donati...
B+	28550
AB+	24800
O-	30150
B-	28250
O+	23850
A+	31400
AB-	26400
A-	23550



## 14. List donor names along with their donation dates and volumes.

**select d.Name,n.Donation\_date,n.Volume\_ml from donors d join donations n on d.donor\_id = n.Donor\_id;**

```
97      #List donor names along with their donation dates and volumes.  
98 •  select d.Name,n.Donation_date,n.Volume_ml  
99    from donors d join donations n on d.donor_id = n.Donor_id;  
100%   ◁ 80:95 |  
  
Result Grid  Filter Rows:  Search  Export:  
  

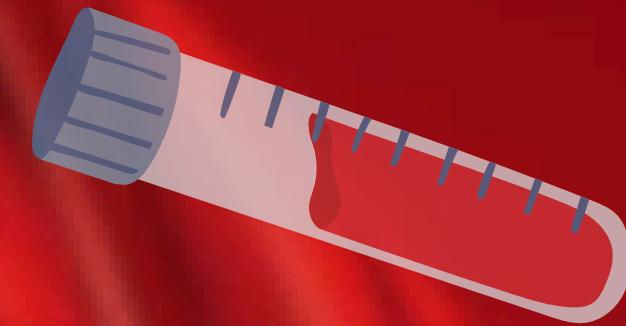

| Name           | Donation_date | Volume_ml |
|----------------|---------------|-----------|
| Rati Sahota    | 2024-06-23    | 350       |
| Anaya Batra    | 2024-08-11    | 350       |
| Jiya Sangha    | 2024-08-13    | 350       |
| Anahi Dara     | 2024-08-07    | 500       |
| Manjari Sibal  | 2024-01-29    | 350       |
| Sumer Raja     | 2023-09-21    | 500       |
| Reyansh Bhalla | 2024-07-06    | 350       |
| Heer Rajagopal | 2023-10-31    | 350       |
| Elakshi Dey    | 2024-12-25    | 500       |
| Saanvi Khare   | 2023-07-01    | 350       |
| Raunak Jani    | 2024-05-19    | 450       |
| Alia Comar     | 2025-01-16    | 350       |
| Ira Borra      | 2024-01-02    | 350       |
| Ira Gaba       | 2024-11-02    | 500       |
| Umang Saha     | 2024-07-25    | 500       |
| Indrans Johal  | 2023-10-26    | 350       |
| Bhamini Kala   | 2025-01-30    | 450       |
| Zara Krishna   | 2023-10-17    | 350       |
| Riya Seshadri  | 2023-05-12    | 350       |
| Raghav Upad... | 2023-06-03    | 350       |
| Nirvaan Bumb   | 2023-09-11    | 350       |



Result 34


```

## 15. Which donor has donated the most blood (by total volume)?



```
select d.Name ,sum(n.Volume_ml) as Total_Donated from donors d  
join donations n on d.Donor_id = n.Donor_id  
group by d.Donor_id order by Total_Donated desc limit 2;
```

```
101      # Which donor has donated the most blood (by total volume)?  
102 •  select d.Name ,sum(n.Volume_ml) as Total_Donated from donors d  
103      join donations n on d.Donor_id = n.Donor_id  
104      group by d.Donor_id order by Total_Donated desc limit 2;  
100%    ◁  59:99
```

Result Grid



Filter Rows:

Search

Export:



Fetch rows:



Name	Total_Donat...
Umang Saha	2150
Nirvaan Bumb	1900



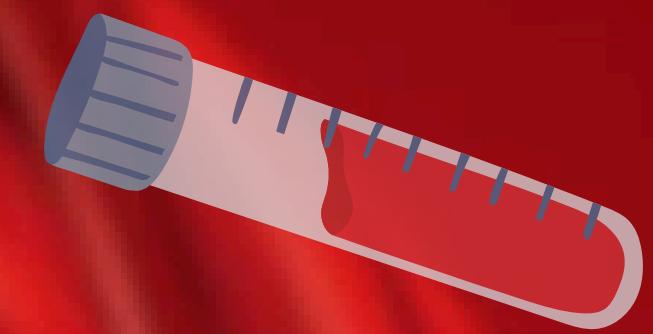
## 16. Which blood group has the highest number of fulfilled requests

```
select Blood_Group, COUNT(*) as Fulfilled_Count from requests  
where Request_Status = 'Fulfilled' group by Blood_Group  
order by Fulfilled_Count desc limit 1;
```

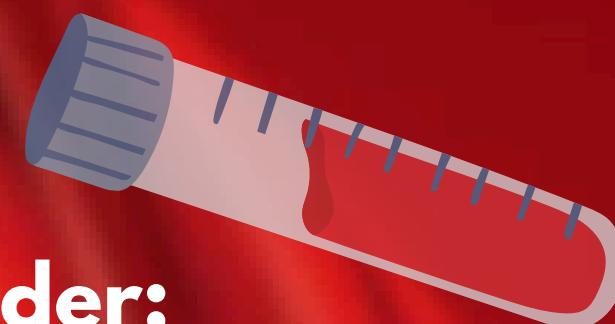
```
106      #Which blood group has the highest number of fulfilled requests  
107 •  select Blood_Group, COUNT(*) as Fulfilled_Count from requests  
108      where Request_Status = 'Fulfilled' group by Blood_Group  
109      order by Fulfilled_Count desc limit 1;  
100%    57:104
```

**Result Grid** Filter Rows:  Search Export: Fetch rows:

Blood_Group	Fulfilled_Count
AB-	29



## 17. How many donors are male vs female



**select Gender,count(\*) as Gener\_count from donors Group by Gender;**

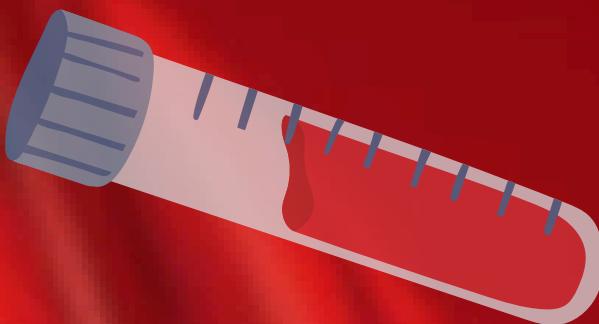
```
111      #how many donors are male vs female
112 •  select Gender,count(*) as Gener_count
113    from donors Group by Gender;
100%   ◁ | 56:108 |
```

**Result Grid**   Filter Rows:  Search   Export:

Gender	Gener_count
Female	249
Male	251



## 18. List the donors whose last donation was more than 6 months ago



**select \* from donors where Last\_donation <= curdate() - Interval 6 Month;**

```
115      #List the donors whose last donation was more than 6 months ago
116 •  select * from donors where Last_donation <= curdate() - Interval 6 Month;
117
100%   1:114
```

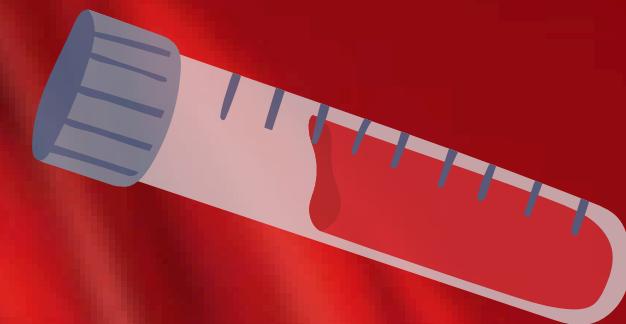
Result Grid    Filter Rows:    Search    Edit:    Export/Import:

Donor_id	Name	Age	Gender	Phone	Blood_Group	Last_donation
1	Vaibhav Chaudhry	43	Female	2332146881	B-	2023-09-03
3	Dharmajan Sehgal	23	Female	1756048063	O+	2023-11-12
4	Hazel Baria	52	Male	08397052327	O-	2024-10-16
5	Damini Sahota	44	Male	+910102761612	AB-	2024-04-06
6	Miraya Agate	31	Male	05286303748	O-	2023-07-02
7	Tarini Bhatnagar	29	Female	07029296111	A-	2023-11-14
8	Ritvik Chahal	23	Female	+916238573415	AB-	2024-03-22
9	Parinaaz Bansal	20	Female	4090536656	A+	2024-02-28
10	Zeeshan Talwar	31	Female	08120567343	A-	2024-01-21
14	Kartik Walla	25	Male	2463656018	B+	2024-01-09
15	Aarav Lal	44	Male	02873467889	O+	2023-07-31
16	Krish Shankar	23	Male	+911419006458	AB+	2023-08-15
19	Nitya Chad	58	Male	+918378015715	O-	2024-08-18
20	Jiya Sangha	52	Female	4095642290	B+	2024-05-11
21	Armaan Bajwa	48	Male	08384270633	B+	2023-09-02
23	Samaira Bhatnagar	25	Male	+912810862539	AB+	2024-11-11
24	Shlok Som	29	Female	+915634212780	B+	2024-10-08
25	Uthkarsh Sanghvi	53	Female	+913979122754	O-	2024-09-11
26	Khushi Bajaj	34	Male	6042204844	AB-	2024-10-30
27	Bhamini Kala	22	Female	+910529555064	A+	2023-09-17
28	Ira Borra	21	Female	0466832860	B-	2024-04-17

donors 41



## 19.What is the total number of donation records in the system?



**select count(\*) as Total\_Donations from donations;**

```
118      #What is the total number of donation records in the system?  
119 •   select count(*) as Total_Donations from donations;
```

100% ◊ | 64:115 |

**Result Grid**



Filter Rows:



Search

Export:



Total_Donatio...
500



## 20. Average time gap between donations for each donor

```
SELECT
    d.Donor_id,
    d.Name,
    ROUND(AVG(DATEDIFF(n2.Donation_date, n1.Donation_date)), 1) AS Avg_Days_Between_Donations
FROM
    donations n1
JOIN
    donations n2 ON n1.Donor_id = n2.Donor_id AND n2.Donation_date > n1.Donation_date
JOIN
    donors d ON d.Donor_id = n1.Donor_id
GROUP BY
    d.Donor_id, d.Name
HAVING
    COUNT(*) > 1;
129     #Average time gap between donations for each donor
130 • SELECT
131     d.Donor_id,
132     d.Name,
133     ROUND(AVG(DATEDIFF(n2.Donation_date, n1.Donation_date)), 1) AS Avg_Days_Between_Donations
134     FROM
135         donations n1
136     JOIN
137         donations n2 ON n1.Donor_id = n2.Donor_id AND n2.Donation_date > n1.Donation_date
138     JOIN
139         donors d ON d.Donor_id = n1.Donor_id
140     GROUP BY
141         d.Donor_id, d.Name
142     HAVING
143         COUNT(*) > 1;
```

Donor_id	Name	Avg_Days_Between_Donatio...
181	Anaya Batra	56.0
134	Manjari Sibal	168.0
352	Umang Saha	221.8
27	Bhamini Kala	347.2
456	Riya Seshadri	381.7
402	Nirvaan Bumb	180.6

# Conclusion



**The Blood Bank Management System is a vital tool for efficiently organizing, monitoring, and analyzing blood donations, donor information, stock levels, and blood requests.**

**By leveraging structured SQL queries, we were able to extract meaningful insights such as donation trends, stock shortages, high-demand blood groups, and donor activity.**

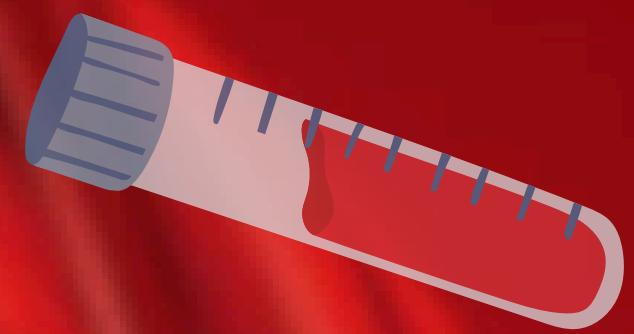
**This system not only streamlines operations for blood banks but also enhances decision-making and planning for future blood requirements.**

**Overall, this project demonstrates how data management and analytics can significantly improve healthcare services by ensuring timely availability and distribution of blood units.**



# Q & A

## Questions ?





# Thank You !

