

# BLOOD BANK COLLECTION DATABASE

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# OVERVIEW

- ❖ Why Blood Bank?
- ❖ Brief Description
- ❖ ER Diagram/Business Rules
- ❖ Schema
- ❖ Live Demo

# WHY A BLOOD BANK DATABASE?

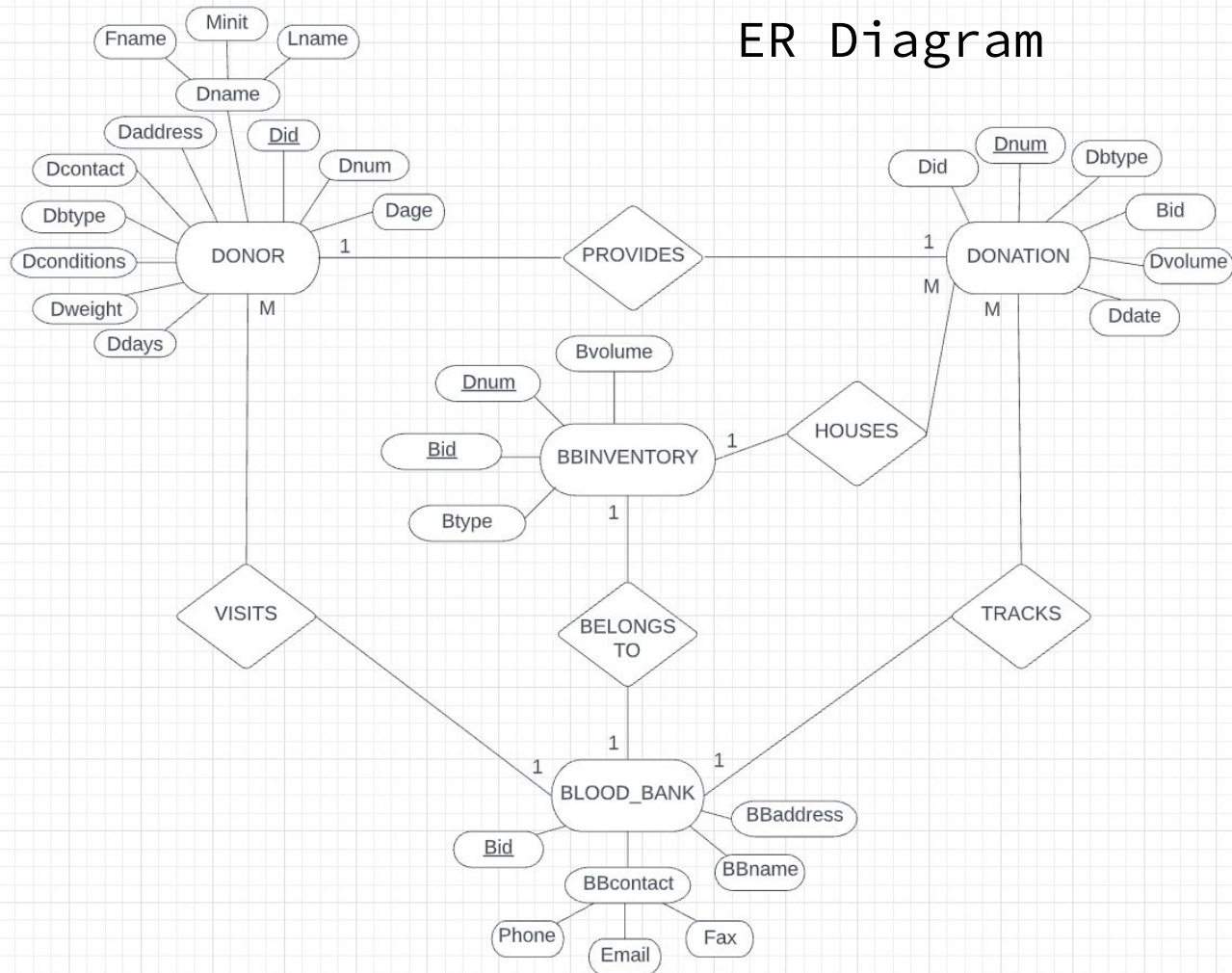
- Brainstorm
- Unique from others
- Real life application



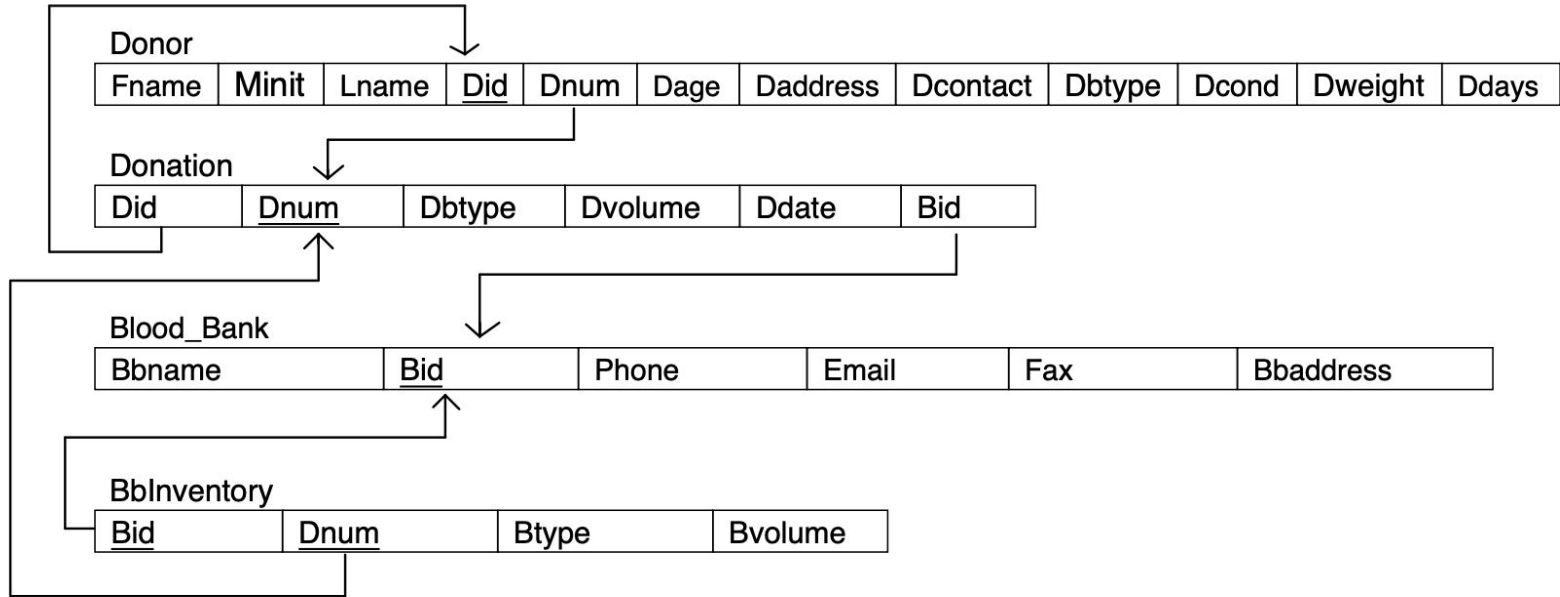
# WHAT OUR BLOOD BANK DATABASE DOES:

- Keeps track of:
  - Donor info: name, donor ID, donation number, address, contact number, age, weight, blood type, days since last donation
  - Donation instance info: donor ID, donation number, donor blood type, volume, donation date
  - Blood bank info: name, blood bank ID, address, contact info
  - Blood bank inventory data: blood bank ID, donation number, blood types, blood volume
- Restrictions:
  - Donors must be at least 16 yrs old and 110 lbs
  - Donor can provide donation up to six times a year
  - Donors cannot have the following pre-existing conditions: Hepatitis viruses B and C, HIV, HTLV I and II, Syphilis, West Nile Virus, Chagas Disease

# ER Diagram



# SCHEMA



DEMO

# BLOOD BANK SCHEMA AND DATA



BLOODBANK.sql

SQL Worksheet History

Worksheet Query Builder

SELECT \* FROM DONOR

Query Result x

All Rows Fetched: 23 in 0.005 seconds

|    | DONOR_ID  | FNAME     | MINIT | LNAME     | DONOR_AGE | WEIGHTLBS | CONDITIONS      | DONOR_ADDRESS                                 | DONOR_CONTACT | DONOR_BLOODTYPE |
|----|-----------|-----------|-------|-----------|-----------|-----------|-----------------|---|---------------|-----------------|
| 1  | 576000002 | Angel     | F     | Rodriguez | 38        | 198       | none            | 3959 W Chester Pike Newton Sq, PA 19073       | 781-768-6813  | B+              |
| 2  | 576000003 | Anastasia | R     | Fox       | 59        | 158       | HIV             | 324 Main St, Carbondale, PA 18407             | 717-365-2908  | AB+             |
| 3  | 576000004 | Thomas    | I     | McFarlane | 49        | 212       | Syphilis        | 563 Moore St, Springfield, PA 18407           | 570-688-1593  | O+              |
| 4  | 576000005 | Ellia     | N     | Murphy    | 17        | 120       | West Nile Virus | 518 Stout Street, Gratz, PA 18407             | 610-762-3203  | B-              |
| 5  | 576000006 | Jeffrey   | L     | Banks     | 22        | 145       | none            | 563 Moore St, Reading, PA 18407               | 717-652-9625  | AB+             |
| 6  | 576000007 | Melissa   | O     | Cox       | 25        | 190       | Chagas Disease  | 681 Lincoln Drive, Harrisburg, PA 18407       | 267-205-0482  | B-              |
| 7  | 576000008 | Kendra    | J     | Silva     | 45        | 165       | none            | 3139 Wakefield Street, Philadelphia, PA 19108 | 215-367-1617  | AB-             |
| 8  | 576000009 | Jennifer  | T     | Campos    | 61        | 234       | none            | 4737 Leo Street, Portland, PA 19108           | 724-207-2192  | B+              |
| 9  | 576000010 | Christian | A     | Humphrey  | 56        | 188       | none            | 2 Timber Dr, Chester Springs, PA 19425        | 215-367-1617  | AB-             |
| 10 | 576000012 | Damon     | L     | Bray      | 32        | 206       | Hepatitis B     | 3037 Cityview Drive, Philadelphia, PA 19108   | 267-616-0298  | O+              |
| 11 | 576000013 | Jorge     | R     | Gomez     | 39        | 130       | none            | 384 Quincy Street, Philadelphia, PA 19108     | 267-486-9526  | B-              |
| 12 | 576000014 | Kendra    | C     | Burton    | 47        | 155       | none            | 2303 Peach St, Erie, PA 19108                 | 215-367-1617  | B+              |
| 13 | 576000015 | Calvin    | K     | Guerra    | 26        | 165       | none            | 6 E Lancaster Ave, Wynnwood, PA 19003         | 404-297-8360  | A-              |
| 14 | 576000016 | Christian | R     | Greene    | 17        | 205       | none            | 6423 Beaumont Ave, Philadelphia, PA 19143     | 410-326-4036  | AB+             |
| 15 | 576000017 | Morgan    | D     | Cross     | 19        | 125       | Chagas Disease  | 5701 Hoffman Ave, Philadelphia, PA 19143      | 215-748-4027  | O+              |
| 16 | 576000018 | Damon     | D     | Norris    | 30        | 160       | Syphilis        | 5707 Cedar Ave, Philadelphia, PA 19143        | 215-895-1802  | B+              |
| 17 | 576000019 | Mai       | P     | Roy       | 35        | 180       | none            | 53 Brennan Dr, Bryn Mawr, PA 19010            | 610-520-0131  | B-              |
| 18 | 576000020 | Stella    | M     | Nguyen    | 42        | 165       | none            | 1221 Ridgewood Rd, Bryn Mawr, PA 19010        | 610-520-0131  | O-              |
| 19 | 576000021 | Jennifer  | L     | Webb      | 55        | 185       | none            | 1048 W Baltimore Pike, Media, PA 19063        | 610-738-6988  | AB-             |
| 20 | 576000022 | Gregory   | I     | Peck      | 52        | 220       | none            | 540 Maple Ct, Bensalem, PA 19108              | 215-447-8709  | A+              |
| 21 | 576000023 | Colby     | V     | Taylor    | 34        | 170       | none            | 589 S Mount Vernon Cir, Bensalem, PA 19020    | 215-638-9336  | AB+             |
| 22 | 576000024 | Kerri     | T     | Gross     | 21        | 130       | Syphilis        | 4211 Crawford Ave, Northern Cambria, PA 19108 | 814-420-8079  | A-              |
| 23 | 576000025 | Jolene    | J     | Boyle     | 24        | 135       | none            | 421 Wild Goose Rd, Tyrone, PA 16686           | 814-684-4581  | O-              |

← DONORS QUERY

DONATIONS QUERY →

Bloodbank.sql

SQL Worksheet History

Worksheet Query Builder

SELECT \* FROM DONATION

Script Output x Query Result x

All Rows Fetched: 15 in 0.007 seconds

|    | DONOR_ID  | DONATION_NUMBER | BLOOD_BANK_ID | DONATION_BLOODTYPE | DONATION_VOLUMEPT | DATE_OF_DONATION |
|----|-----------|-----------------|---------------|--------------------|-------------------|------------------|
| 1  | 576000002 | 2               | 1             | B+                 |                   | 124-SEP-19       |
| 2  | 576000006 | 6               | 1             | AB+                |                   | 116-MAR-17       |
| 3  | 576000008 | 8               | 1             | AB-                |                   | 128-MAY-21       |
| 4  | 576000009 | 9               | 1             | B+                 |                   | 124-FEB-20       |
| 5  | 576000010 | 10              | 1             | AB-                |                   | 123-OCT-21       |
| 6  | 576000013 | 13              | 1             | B-                 |                   | 125-MAY-18       |
| 7  | 576000014 | 14              | 1             | B+                 |                   | 104-JUN-17       |
| 8  | 576000015 | 15              | 1             | A-                 |                   | 109-DEC-17       |
| 9  | 576000016 | 16              | 1             | AB+                |                   | 106-NOV-18       |
| 10 | 576000019 | 19              | 1             | B-                 |                   | 123-JUL-18       |
| 11 | 576000020 | 20              | 1             | O-                 |                   | 117-JUN-21       |
| 12 | 576000021 | 21              | 1             | AB-                |                   | 102-DEC-21       |
| 13 | 576000022 | 22              | 1             | A+                 |                   | 105-JAN-18       |
| 14 | 576000023 | 23              | 1             | AB+                |                   | 124-AUG-21       |
| 15 | 576000025 | 25              | 1             | A-                 |                   | 120-OCT-21       |

BLOODBANK.sql

SQL Worksheet History

Worksheet Query Builder

SELECT \* FROM BLOODBANK

Query Result x

SQL All Rows Fetched: 1 in 0.002 seconds

| BLOOD_BANK_ID | BLOOD_BANK_NAME | BLOOD_BANK_ADDRESS           | BLOOD_BANK_EMAIL | BLOOD_BANK_FAX | BLOOD_BANK_PHONE |
|---------------|-----------------|------------------------------|------------------|----------------|------------------|
| 1             | 1 ARC           | 525 S 9th St Philadelphia PA | donate@arc.org   | 1-806-905-6421 | 1-800-732-2945   |

BLOOD BANK CONTACT INFO

BLOOD BANK  
INVENTORY QUERY

BLOODBANK.sql

SQL Worksheet History

Worksheet Query Builder

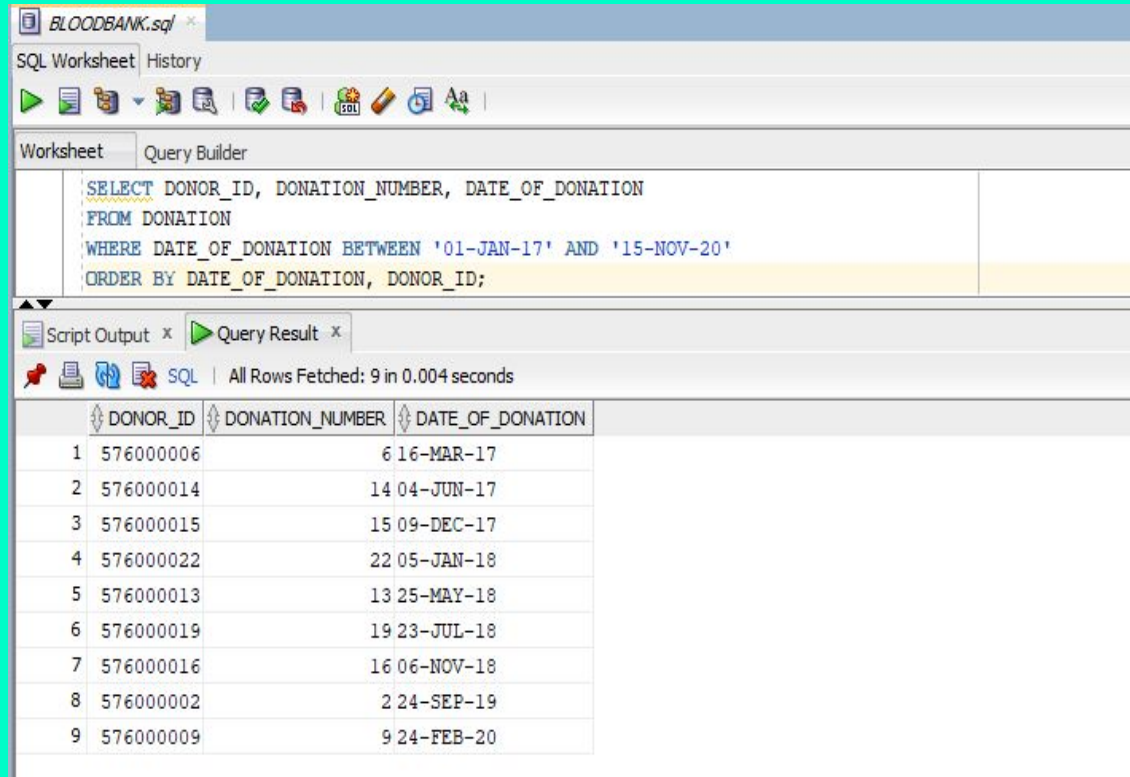
SELECT \* FROM BBINVENTORY

Query Result x

SQL All Rows Fetched: 16 in 0.005 seconds

|    | BLOOD_BANK_ID | DONATION_NU... | DONOR_ID  | BBTYPE | BBVOLUMEPT |
|----|---------------|----------------|-----------|--------|------------|
| 1  | 1             | 2              | 576000002 | B+     | 3          |
| 2  | 1             | 6              | 576000006 | AB+    | 4          |
| 3  | 1             | 7              | 576000007 | B-     | 2          |
| 4  | 1             | 8              | 576000008 | AB-    | 2          |
| 5  | 1             | 9              | 576000009 | B+     | 2          |
| 6  | 1             | 10             | 576000010 | AB-    | 1          |
| 7  | 1             | 13             | 576000013 | B-     | 4          |
| 8  | 1             | 14             | 576000014 | B+     | 4          |
| 9  | 1             | 15             | 576000015 | A-     | 3          |
| 10 | 1             | 16             | 576000016 | AB+    | 4          |
| 11 | 1             | 19             | 576000019 | B-     | 2          |
| 12 | 1             | 20             | 576000020 | O-     | 5          |
| 13 | 1             | 21             | 576000021 | AB-    | 1          |
| 14 | 1             | 22             | 576000022 | A+     | 3          |
| 15 | 1             | 23             | 576000023 | AB+    | 1          |
| 16 | 1             | 25             | 576000025 | A-     | 1          |

# SCENARIO: FIND THE DONATIONS MADE BETWEEN 01-JAN-17 AND 15-NOV-20



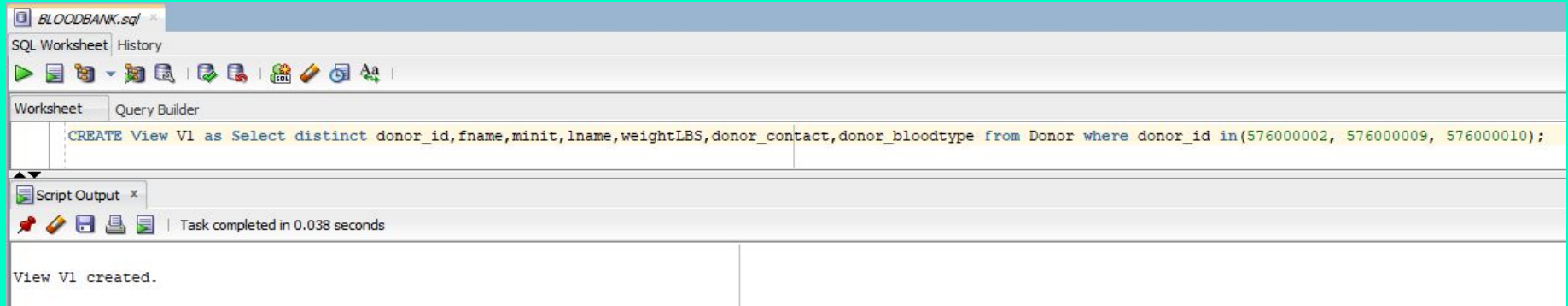
The screenshot shows an SQL worksheet titled "BLOODBANK.sql". The query is as follows:

```
SELECT DONOR_ID, DONATION_NUMBER, DATE_OF_DONATION
FROM DONATION
WHERE DATE_OF_DONATION BETWEEN '01-JAN-17' AND '15-NOV-20'
ORDER BY DATE_OF_DONATION, DONOR_ID;
```

The query results are displayed in a table with 9 rows. The columns are DONOR\_ID, DONATION\_NUMBER, and DATE\_OF\_DONATION. The status bar indicates "All Rows Fetched: 9 in 0.004 seconds".

|   | DONOR_ID  | DONATION_NUMBER | DATE_OF_DONATION |
|---|-----------|-----------------|------------------|
| 1 | 576000006 | 6               | 16-MAR-17        |
| 2 | 576000014 | 14              | 04-JUN-17        |
| 3 | 576000015 | 15              | 09-DEC-17        |
| 4 | 576000022 | 22              | 05-JAN-18        |
| 5 | 576000013 | 13              | 25-MAY-18        |
| 6 | 576000019 | 19              | 23-JUL-18        |
| 7 | 576000016 | 16              | 06-NOV-18        |
| 8 | 576000002 | 2               | 24-SEP-19        |
| 9 | 576000009 | 9               | 24-FEB-20        |

# SCENARIO: CREATE/SELECT/DELETE A VIEW FOR CERTAIN RECORDS

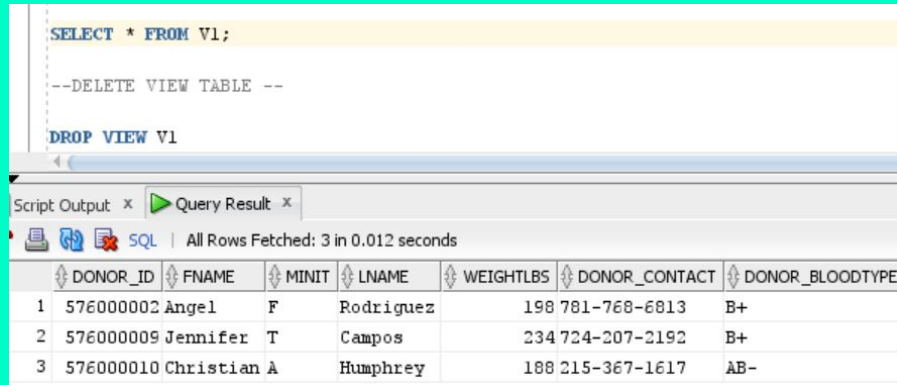


The screenshot shows the SQL Developer interface with a worksheet titled 'BLOODBANK.sql'. The 'Worksheet' tab is active, and the 'Query Builder' is also visible. The SQL statement entered is: `CREATE View V1 as Select distinct donor_id, fname, minit, lname, weightLBS, donor_contact, donor_bloodtype from Donor where donor_id in(576000002, 576000009, 576000010);`. The 'Script Output' tab shows the message 'Task completed in 0.038 seconds' and 'View V1 created.'

```
CREATE View V1 as Select distinct donor_id, fname, minit, lname, weightLBS, donor_contact, donor_bloodtype from Donor where donor_id in(576000002, 576000009, 576000010);
```

Task completed in 0.038 seconds

View V1 created.



The screenshot shows the SQL Developer interface with a worksheet titled 'BLOODBANK.sql'. The 'Worksheet' tab is active, and the 'Query Builder' is also visible. The SQL statement entered is: `SELECT * FROM V1;`. The 'Script Output' tab shows the message 'Task completed in 0.012 seconds' and 'All Rows Fetched: 3 in 0.012 seconds'. The 'Query Result' tab shows the results of the query, which are three rows of donor data.

```
SELECT * FROM V1;
```

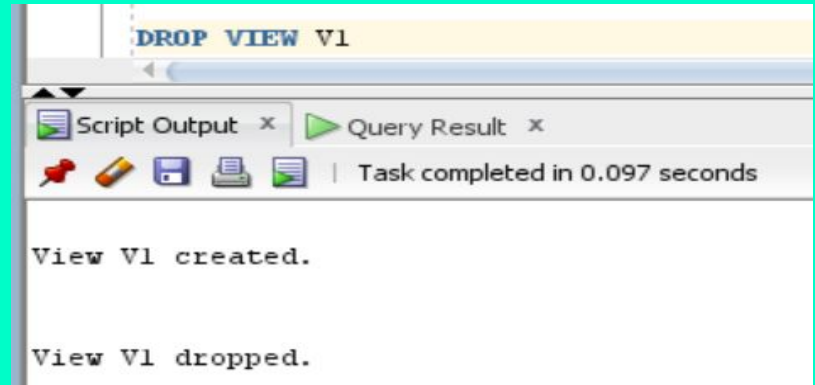
--DELETE VIEW TABLE --

```
DROP VIEW V1
```

Task completed in 0.012 seconds

All Rows Fetched: 3 in 0.012 seconds

|   | DONOR_ID  | FNAME       | MINIT    | LNAME     | WEIGHTLBS | DONOR_CONTACT | DONOR_BLOODTYPE |
|---|-----------|-------------|----------|-----------|-----------|---------------|-----------------|
| 1 | 576000002 | Angel       | F        | Rodriguez | 198       | 781-768-6813  | B+              |
| 2 | 576000009 | Jennifer    | T        | Campos    | 234       | 724-207-2192  | B+              |
| 3 | 576000010 | Christian A | Humphrey |           | 188       | 215-367-1617  | AB-             |



The screenshot shows the SQL Developer interface with a worksheet titled 'BLOODBANK.sql'. The 'Worksheet' tab is active, and the 'Query Builder' is also visible. The SQL statement entered is: `DROP VIEW V1`. The 'Script Output' tab shows the message 'Task completed in 0.097 seconds' and 'View V1 created.' and 'View V1 dropped.'

```
DROP VIEW V1
```

Task completed in 0.097 seconds

View V1 created.

View V1 dropped.

# EXAMPLE OF LEFT JOIN: RETRIEVE BLOODBANK AND BBINVENTORY INFO

Bloodbank.sql

SQL Worksheet History

Worksheet Query Builder

```
SELECT * FROM BBINVENTORY  
LEFT JOIN BLOODBANK ON BLOODBANK.BLOOD_BANK_ID = BBINVENTORY.BLOOD_BANK_ID
```

Script Output Query Result

SQL | Fetched 50 rows in 0.136 seconds

|    | BLOOD_BANK_ID | DONATION_NUMBER | DONOR_ID      | BBTYPE | BBVOLUMEPT | BLOOD_BANK_ID_1 | BLOOD_BANK_NAME           | BLOOD_BANK_ADDRESS | BLOOD_BANK_EMAIL | BLOOD_BANK_FAX |
|----|---------------|-----------------|---------------|--------|------------|-----------------|---------------------------|--------------------|------------------|----------------|
| 1  | 1             | 25              | 576000025 A-  |        | 1          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 2  | 1             | 2               | 576000002 B+  |        | 3          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 3  | 1             | 6               | 576000006 AB+ |        | 4          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 4  | 1             | 25              | 576000025 A-  |        | 1          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 5  | 1             | 6               | 576000006 AB+ |        | 4          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 6  | 1             | 8               | 576000008 AB- |        | 2          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 7  | 1             | 9               | 576000009 B+  |        | 2          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 8  | 1             | 10              | 576000010 AB- |        | 1          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 9  | 1             | 13              | 576000013 B-  |        | 4          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 10 | 1             | 14              | 576000014 B+  |        | 4          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 11 | 1             | 15              | 576000015 A-  |        | 3          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 12 | 1             | 16              | 576000016 AB+ |        | 4          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 13 | 1             | 19              | 576000019 B-  |        | 2          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 14 | 1             | 20              | 576000020 O-  |        | 5          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 15 | 1             | 21              | 576000021 AB- |        | 1          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 16 | 1             | 22              | 576000022 A+  |        | 3          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 17 | 1             | 23              | 576000023 AB+ |        | 1          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 18 | 1             | 25              | 576000025 A-  |        | 1          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 19 | 1             | 25              | 576000025 A-  |        | 1          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 20 | 1             | 25              | 576000025 A-  |        | 1          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 21 | 1             | 2               | 576000002 B+  |        | 3          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 22 | 1             | 7               | 576000007 B-  |        | 2          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 23 | 1             | 8               | 576000008 AB- |        | 2          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |
| 24 | 1             | 9               | 576000009 B+  |        | 2          | 1 ARC           | 525 S 9th St Philadelp... | donate@arc.org     | 1-806-905-6421   | ... 1-         |

Bloodbank.sql

Worksheet Query Builder

```
SELECT 'INELIGIBLE' AS donorstatus, DONOR.DONOR_ID, FNAME, MINIT, LNAME, CONDITIONS FROM DONOR
WHERE CONDITIONS <>'none'
```

Script Output x Query Result x

SQL | All Rows Fetched: 8 in 0.166 seconds

|   | DONORSTATUS | DONOR_ID  | FNAME       | MINIT     | LNAME           | CONDITIONS |
|---|-------------|-----------|-------------|-----------|-----------------|------------|
| 1 | INELIGIBLE  | 57600003  | Anastasia R | Fox       | HIV             |            |
| 2 | INELIGIBLE  | 576000004 | Thomas T    | McFarlane | Syphilis        |            |
| 3 | INELIGIBLE  | 576000005 | Ella N      | Murphy    | West Nile Virus |            |
| 4 | INELIGIBLE  | 576000007 | Melissa O   | Cox       | Chagas Disease  |            |
| 5 | INELIGIBLE  | 576000012 | Damon L     | Bray      | Hepatitis B     |            |
| 6 | INELIGIBLE  | 576000017 | Morgan D    | Cross     | Chagas Disease  |            |
| 7 | INELIGIBLE  | 576000018 | Damon D     | Norris    | Syphilis        |            |
| 8 | INELIGIBLE  | 576000024 | Kerri T     | Gross     | Syphilis        |            |

← INELIGIBLE DONORS QUERY

ELIGIBLE DONORS QUERY →

Bloodbank.sql

Worksheet Query Builder

```
SELECT 'ELIGIBLE' AS donorstatus, DONOR.DONOR_ID, FNAME, MINIT, LNAME, CONDITIONS FROM DONOR
WHERE CONDITIONS = 'none'
```

Script Output x Query Result x

SQL | All Rows Fetched: 15 in 0.007 seconds

|    | DONORSTATUS | DONOR_ID  | FNAME       | MINIT    | LNAME     | CONDITIONS |
|----|-------------|-----------|-------------|----------|-----------|------------|
| 1  | ELIGIBLE    | 576000002 | Angel       | F        | Rodriguez | none       |
| 2  | ELIGIBLE    | 576000006 | Jeffrey L   | Banks    | none      |            |
| 3  | ELIGIBLE    | 576000008 | Kendra J    | Silva    | none      |            |
| 4  | ELIGIBLE    | 576000009 | Jennifer T  | Campos   | none      |            |
| 5  | ELIGIBLE    | 576000010 | Christian A | Humphrey | none      |            |
| 6  | ELIGIBLE    | 576000013 | Jorge R     | Gomez    | none      |            |
| 7  | ELIGIBLE    | 576000014 | Kendra C    | Burton   | none      |            |
| 8  | ELIGIBLE    | 576000015 | Calvin K    | Guerra   | none      |            |
| 9  | ELIGIBLE    | 576000016 | Christian R | Greene   | none      |            |
| 10 | ELIGIBLE    | 576000019 | Mai P       | Roy      | none      |            |
| 11 | ELIGIBLE    | 576000020 | Stella M    | Nguyen   | none      |            |
| 12 | ELIGIBLE    | 576000021 | Jennifer L  | Webb     | none      |            |
| 13 | ELIGIBLE    | 576000022 | Gregory T   | Peck     | none      |            |
| 14 | ELIGIBLE    | 576000023 | Colby V     | Taylor   | none      |            |
| 15 | ELIGIBLE    | 576000025 | Jolene J    | Boyle    | none      |            |



# UPDATE RECORDS

1. FIND RECORD

The screenshot shows the SQL Developer interface with a query window titled 'BLOODBANK.sql'. The query is: `SELECT * FROM DONOR WHERE DONOR_ID = 576000023;`. The 'Query Result' tab is active, displaying a table with 10 columns: DONOR\_ID, FNAME, MINIT, LNAME, DONOR\_AGE, WEIGHTLBS, CONDITIONS, DONOR\_ADDRESS, DONOR\_CONTACT, and DONOR\_BLOODTYPE. The table contains one row of data for donor ID 576000023.

| DONOR_ID    | FNAME | MINIT | LNAME  | DONOR_AGE | WEIGHTLBS | CONDITIONS | DONOR_ADDRESS                              | DONOR_CONTACT | DONOR_BLOODTYPE |
|-------------|-------|-------|--------|-----------|-----------|------------|--|---------------|-----------------|
| 1 576000023 | Colby | V     | Taylor | 34        | 170       | none       | 589 S Mount Vernon Cir, Bensalem, PA 19020 | 215-638-9336  | AB+             |

2. UPDATE AGE  
AND ADDRESS  
OF RECORD

The screenshot shows the SQL Developer interface with the same query window. The query is now: `UPDATE DONOR SET DONOR_AGE = '35', DONOR_ADDRESS = '277 POPLAR ST, PHILADELPHIA, PA 19130' WHERE DONOR_ID = 576000023;`. The 'Script Output' tab is active, showing the message: '1 row updated.'.

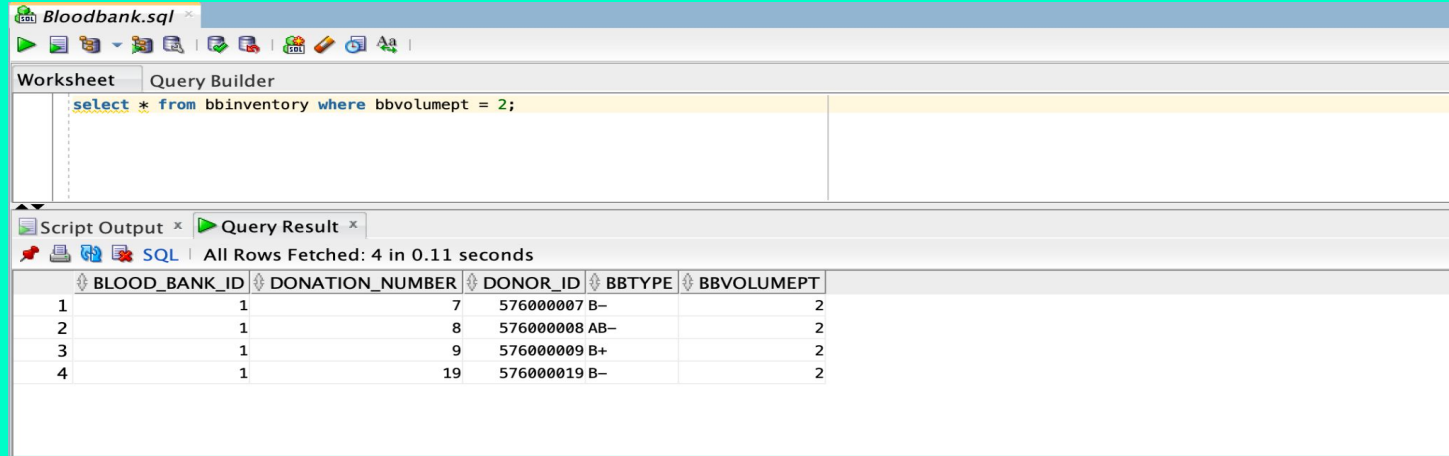
3. VIEW  
UPDATED  
RECORD

The screenshot shows the SQL Developer interface with the same query window. The query is: `SELECT * FROM DONOR WHERE DONOR_ID = 576000023;`. The 'Query Result' tab is active, displaying the updated record for donor ID 576000023.

| DONOR_ID    | FNAME | MINIT | LNAME  | DONOR_AGE | WEIGHTLBS | CONDITIONS | DONOR_ADDRESS                         | DONOR_CONTACT | DONOR_BLOODTYPE |
|-------------|-------|-------|--------|-----------|-----------|------------|---------------------------------------|---------------|-----------------|
| 1 576000023 | Colby | V     | Taylor | 35        | 170       | none       | 277 POPLAR ST, PHILADELPHIA, PA 19130 | 215-638-9336  | AB+             |

# AGGREGATE RECORDS

1. SELECT QUERY  
FOR DONATIONS  
UNDER 2 PINTS



The screenshot shows the SQL Developer interface with a query window titled 'Bloodbank.sql'. The query is `select * from bbinventory where bbvolumept = 2;`. The 'Query Result' pane shows 4 rows fetched in 0.11 seconds. The results are as follows:

|   | BLOOD_BANK_ID | DONATION_NUMBER | DONOR_ID  | BBTYPE | BBVOLUMEPT |
|---|---------------|-----------------|-----------|--------|------------|
| 1 | 1             | 7               | 576000007 | B-     | 2          |
| 2 | 1             | 8               | 576000008 | AB-    | 2          |
| 3 | 1             | 9               | 576000009 | B+     | 2          |
| 4 | 1             | 19              | 576000019 | B-     | 2          |

2. USE COUNT(\*)  
TO RETURN THE  
NUMBER OF  
RECORDS



The screenshot shows the SQL Developer interface with a query window titled 'Bloodbank.sql'. The query is `select count(*) from bbinventory where bbinventory.bbvolumept = 2;`. The 'Query Result' pane shows 1 row fetched in 0.005 seconds. The result is as follows:

| COUNT(*) |
|----------|
| 4        |



# DELETE INELIGIBLE DONORS

**Bloodbank.sql** x

SQL Worksheet History

Worksheet Query Builder

```
use Bloodbank
delete from Donor where not conditions = 'none';
```

Script Output x

Task completed in 0.094 seconds

8 rows deleted.

**Bloodbank.sql** x

SQL Worksheet History

Worksheet Query Builder

```
select * from donor
```

Script Output x Query Result x

SQL | All Rows Fetched: 15 in 0.032 seconds

|    | DONOR_ID  | FNAME     | MINIT | LNAME     | DONOR_AGE | WEIGHTLBS | CONDITIONS | DONOR_ADDRESS       | DONOR_CONTACT | DONOR_BLOODTYPE |
|----|-----------|-----------|-------|-----------|-----------|-----------|------------|---------------------|---------------|-----------------|
| 1  | 576000002 | Angel     | F     | Rodriguez | 38        | 198       | none       | 3999 W Chester P... | 781-768-6813  | B+              |
| 2  | 576000006 | Jeffrey   | L     | Banks     | 22        | 145       | none       | 563 Moore St, Re... | 717-652-9625  | AB+             |
| 3  | 576000008 | Kendra    | J     | Silva     | 45        | 165       | none       | 3139 Wakefield S... | 215-367-1617  | AB-             |
| 4  | 576000009 | Jennifer  | T     | Campos    | 61        | 234       | none       | 4737 Leo Street,... | 724-207-2192  | B+              |
| 5  | 576000010 | Christian | A     | Humphrey  | 56        | 188       | none       | 2 Timber Dr, Che... | 215-367-1617  | AB-             |
| 6  | 576000013 | Jorge     | R     | Gomez     | 39        | 130       | none       | 384 Quincy Stree... | 267-486-9526  | B-              |
| 7  | 576000014 | Kendra    | C     | Burton    | 47        | 155       | none       | 2303 Peach St, E... | 215-367-1617  | B+              |
| 8  | 576000015 | Calvin    | K     | Guerra    | 26        | 165       | none       | 6 E Lancaster Av... | 404-297-8360  | A-              |
| 9  | 576000016 | Christian | R     | Greene    | 17        | 205       | none       | 6423 Beaumont Av... | 410-326-4036  | AB+             |
| 10 | 576000019 | Mai       | P     | Roy       | 35        | 180       | none       | 53 Brennan Dr, B... | 610-520-0131  | B-              |
| 11 | 576000020 | Stella    | M     | Nguyen    | 42        | 165       | none       | 1221 Ridgewood R... | 610-520-0131  | O-              |
| 12 | 576000021 | Jennifer  | L     | Webb      | 55        | 185       | none       | 1048 W Baltimore... | 610-738-6988  | AB-             |
| 13 | 576000022 | Gregory   | T     | Peck      | 52        | 220       | none       | 540 Maple Ct, Be... | 215-447-8709  | A+              |
| 14 | 576000023 | Colby     | V     | Taylor    | 34        | 170       | none       | 589 S Mount Vern... | 215-638-9336  | AB+             |
| 15 | 576000025 | Jolene    | J     | Boyle     | 24        | 135       | none       | 421 Wild Goose R... | 814-684-4581  | O-              |

# ADVANCED SQL: CONCATENATION, NESTED QUERIES, SET OF VALUES

```
SELECT fname || ' ' || lname AS DONOR
FROM DONOR
WHERE donor_id IN (
    SELECT donor_id
    FROM DONATION
    WHERE donation_bloodtype IN ('AB-', 'O-') OR date_of_donation > '1-JAN-20');
```

Script Output x Query Result x

SQL | All Rows Fetched: 7 in 0.018 seconds

|   | DONOR              |
|---|--------------------|
| 1 | Kendra Silva       |
| 2 | Jennifer Campos    |
| 3 | Christian Humphrey |
| 4 | Stella Nguyen      |
| 5 | Jennifer Webb      |
| 6 | Colby Taylor       |
| 7 | Jolene Boyle       |

THANK YOU!

QUESTIONS