

```
In [1]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
```

```
In [2]: personal=pd.read_csv("personal.csv",sep=":-",header=None)
```

C:\Users\athis\Anaconda3\lib\site-packages\ipykernel_launcher.py:1: ParserWarning: Falling back to the 'python' engine because the 'c' engine does not support regex separators (separators > 1 char and different from '\s+' are interpreted as regex); you can avoid this warning by specifying engine='python'.
"""Entry point for launching an IPython kernel.

```
In [3]: personal.head(10)
```

Out[3]:

	0	1
0	Name	RAMISHA RANI
1	Joint Holder	-
2	Address	D1, SHREE DHAKSHA APPARTMENT,IOB COLONY,COIMB...
3	Currency	INR
4	IFSC Code	UTIB0003080
5	MICR Code	641211017
6	Nominee Registered	Y
7	Registered Mobile No	XXXXXX6171
8	Registered Email ID	RAXXXXIT@GMAIL.COM
9	PAN	FORM60

```
In [4]: Statm=pd.read_csv("Nov 1 To Nov14.csv")
```

```
In [5]: Statm
```

Out[5]:

	Tran Date	CHQNO	PARTICULARS	DR	CR	BAL	SOL
0	01-11-2022	-	UPI/P2A/230546454047/NAVANEEDH/HDFC BANK/UPI	5000.00	25011.94	3080	
1	01-11-2022	-	UPI/P2A/230552984292/NAVANEEDH/HDFC BANK/UPI	5000.00	20011.94	3080	
2	01-11-2022	-	IMPS/P2A/230516319361/JOBMANGA/HDFCBANK/Fees	1000.00	21011.94	3080	
3	01-11-2022	-	UPI/P2A/230565866620/NAVANEEDH/HDFC BANK/UPI	5000.00	26011.94	3080	
4	01-11-2022	-	UPI/P2M/230574720064/HOTEL APO/Yes Bank /UPI	383.00	25628.94	3080	
5	01-11-2022	-	UPI/P2M/230574772513/HOTEL APO/Yes Bank /UPI	40.00	25588.94	3080	
6	02-11-2022	-	UPI/P2A/230683169378/KUMARAVAL/State Ban/Ramisha	5000.00	20588.94	3080	
7	03-11-2022	-	UPI/P2M/230718375364/Instamojo/INDUSIND /UPI	106.05	20482.89	3080	
8	03-11-2022	-	UPI/P2A/230732269417/K RAMISHA/HDFC BANK/UPI	6000.00	14482.89	3080	
9	03-11-2022	-	UPI/P2M/230776790195/Facebook /HDFC BANK/Upi Tra	3000.00	11482.89	3080	
10	03-11-2022	-	UPI/P2A/230736335631/S NIRANJA/Axis Bank/UPI	5000.00	16482.89	3080	
11	03-11-2022	-	UPI/P2A/230737585564/Mohamed F/State Ban/UPI	5000.00	11482.89	3080	
12	04-11-2022	-	INB/IFT/S B GANAPATHIRAMAN/TPARTY TRANSFER	5000.00	16482.89	14	
13	04-11-2022	-	NEFT/N308222192189789/ICE LABS /HDFC BANK/NEFT	346.37	16829.26	248	
14	04-11-2022	-	UPI/P2A/230858161766/Ms RAMISH/Indian Ba/UPI	2000.00	14829.26	3080	
15	06-11-2022	-	UPI/P2M/231083359175/Facebook /HDFC BANK/Upi Tra	1000.00	13829.26	3080	
16	07-11-2022	-	NEFT/CITIN22362827394/PAYPAL PA/CITIBANK /P0802	149.48	13978.74	248	
17	07-11-2022	-	IMPS/P2A/231122376130/JOBMANGA/HDFCBANK/AI	3000.00	16978.74	3080	
18	08-11-2022	-	UPI/P2M/231268635691/Sri Ganap/Paytm Pay/UPI	2665.00	14313.74	3080	
19	08-11-2022	-	UPI/P2M/231270217463/redbus/Axis Bank/UPI	1039.50	13274.24	3080	
20	10-11-2022	-	UPI/P2A/231419574106/Ms RAMISH/Indian Ba/UPI	1500.00	11774.24	3080	
21	10-11-2022	-	UPI/P2A/231419595659/I VETHA R/Indian Ov/UPI	5000.00	6774.24	3080	
22	11-11-2022	-	Razorpay Software Pvt Ltd Fund	89.10	6863.34	1506	
23	11-11-2022	-	UPI/P2M/231579806450/RazorpayZ/ICICI Ban/Zomato	481.40	6381.94	3080	
24	12-11-2022	-	UPI/P2M/231795860781/NETFLIX C/HDFC BANK/Monthly	649.00	5732.94	3080	
25	13-11-2022	-	UPI/P2A/231793154813/Ms RAMISH/Indian Ba/UPI	3500.00	2232.94	3080	

```
In [6]: Statm=Statm.drop("CHQNO",axis=1)
```

In [7]: Statm

Out[7]:

	Tran Date	PARTICULARS	DR	CR	BAL	SOL
0	01-11-2022	UPI/P2A/230546454047/NAVANEEDH/HDFC BANK/UPI	5000.00	25011.94	3080	
1	01-11-2022	UPI/P2A/230552984292/NAVANEEDH/HDFC BANK/UPI	5000.00	20011.94	3080	
2	01-11-2022	IMPS/P2A/230516319361/JOBMANGA/HDFCBANK/Fees	1000.00	21011.94	3080	
3	01-11-2022	UPI/P2A/230565866620/NAVANEEDH/HDFC BANK/UPI	5000.00	26011.94	3080	
4	01-11-2022	UPI/P2M/230574720064/HOTEL APO/Yes Bank /UPI	383.00	25628.94	3080	
5	01-11-2022	UPI/P2M/230574772513/HOTEL APO/Yes Bank /UPI	40.00	25588.94	3080	
6	02-11-2022	UPI/P2A/230683169378/KUMARAVAL/State Ban/Ramisha	5000.00	20588.94	3080	
7	03-11-2022	UPI/P2M/230718375364/Instamojo/INDUSIND /UPI	106.05	20482.89	3080	
8	03-11-2022	UPI/P2A/230732269417/K RAMISHA/HDFC BANK/UPI	6000.00	14482.89	3080	
9	03-11-2022	UPI/P2M/230776790195/Facebook /HDFC BANK/Upi Tra	3000.00	11482.89	3080	
10	03-11-2022	UPI/P2A/230736335631/S NIRANJA/Axis Bank/UPI	5000.00	16482.89	3080	
11	03-11-2022	UPI/P2A/230737585564/Mohamed F/State Ban/UPI	5000.00	11482.89	3080	
12	04-11-2022	INB/IFT/S B GANAPATHIRAMAN/TPARTY TRANSFER	5000.00	16482.89	14	
13	04-11-2022	NEFT/N308222192189789/ICE LABS /HDFC BANK/NEFT	346.37	16829.26	248	
14	04-11-2022	UPI/P2A/230858161766/Ms RAMISH/Indian Ba/UPI	2000.00	14829.26	3080	
15	06-11-2022	UPI/P2M/231083359175/Facebook /HDFC BANK/Upi Tra	1000.00	13829.26	3080	
16	07-11-2022	NEFT/CITIN22362827394/PAYPAL PA/CITIBANK /P0802	149.48	13978.74	248	
17	07-11-2022	IMPS/P2A/231122376130/JOBMANGA/HDFCBANK/AI	3000.00	16978.74	3080	
18	08-11-2022	UPI/P2M/231268635691/Sri Ganap/Paytm Pay/UPI	2665.00	14313.74	3080	
19	08-11-2022	UPI/P2M/231270217463/redbus/Axis Bank/UPI	1039.50	13274.24	3080	
20	10-11-2022	UPI/P2A/231419574106/Ms RAMISH/Indian Ba/UPI	1500.00	11774.24	3080	
21	10-11-2022	UPI/P2A/231419595659/I VETHA R/Indian Ov/UPI	5000.00	6774.24	3080	
22	11-11-2022	Razorpay Software Pvt Ltd Fund	89.10	6863.34	1506	
23	11-11-2022	UPI/P2M/231579806450/RazorpayZ/ICICI Ban/Zomato	481.40	6381.94	3080	
24	12-11-2022	UPI/P2M/231795860781/NETFLIX C/HDFC BANK/Monthly	649.00	5732.94	3080	
25	13-11-2022	UPI/P2A/231793154813/Ms RAMISH/Indian Ba/UPI	3500.00	2232.94	3080	

In [8]: Particular_sep=Statm["PARTICULARS"].to_csv("Particulars.csv",index=False)

```
C:\Users\athis\Anaconda3\lib\site-packages\ipykernel_launcher.py:1: FutureWarning: The signature of `Series.to_csv` was aligned to that of `DataFrame.to_csv`, and argument 'header' will change its default value from False to True: please pass an explicit value to suppress this warning.
```

```
"""Entry point for launching an IPython kernel.
```

In [9]: particulars=pd.read_csv("Particulars.csv",sep="/",header=None)

In [10]: particulars

Out[10]:

	0	1	2	3	4	5
0	UPI	P2A	230546454047	NAVANEEDH	HDFC BANK	UPI
1	UPI	P2A	230552984292	NAVANEEDH	HDFC BANK	UPI
2	IMPS	P2A	230516319361	JOBMANGA	HDFCBANK	Fees
3	UPI	P2A	230565866620	NAVANEEDH	HDFC BANK	UPI
4	UPI	P2M	230574720064	HOTEL APO	Yes Bank	UPI
5	UPI	P2M	230574772513	HOTEL APO	Yes Bank	UPI
6	UPI	P2A	230683169378	KUMARAVAL	State Ban	Ramisha
7	UPI	P2M	230718375364	Instamojo	INDUSIND	UPI
8	UPI	P2A	230732269417	K RAMISHA	HDFC BANK	UPI
9	UPI	P2M	230776790195	Facebook	HDFC BANK	Upi Tra
10	UPI	P2A	230736335631	S NIRANJA	Axis Bank	UPI
11	UPI	P2A	230737585564	Mohamed F	State Ban	UPI
12	INB	IFT	S B GANAPATHIRAMAN	TPARTY TRANSFER	NaN	NaN
13	NEFT	N308222192189789	ICE LABS	HDFC BANK	NEFT	NaN
14	UPI	P2A	230858161766	Ms RAMISH	Indian Ba	UPI
15	UPI	P2M	231083359175	Facebook	HDFC BANK	Upi Tra
16	NEFT	CITIN22362827394	PAYPAL PA	CITIBANK	P0802	NaN
17	IMPS	P2A	231122376130	JOBMANGA	HDFCBANK	AI
18	UPI	P2M	231268635691	Sri Ganap	Paytm Pay	UPI
19	UPI	P2M	231270217463	redbus	Axis Bank	UPI
20	UPI	P2A	231419574106	Ms RAMISH	Indian Ba	UPI
21	UPI	P2A	231419595659	I VETHA R	Indian Ov	UPI
22	Razorpay Software Pvt Ltd Fund	NaN	NaN	NaN	NaN	NaN
23	UPI	P2M	231579806450	RazorpayZ	ICICI Ban	Zomato
24	UPI	P2M	231795860781	NETFLIX C	HDFC BANK	Monthly
25	UPI	P2A	231793154813	Ms RAMISH	Indian Ba	UPI

In [11]: particulars.rename(columns={0:"Mode of Transaction",1:"Type",2:"Reference number",3:"To",4:"To Bank",5:"Remarks"},inplace=True)

In [12]: particulars

Out[12]:

	Mode of Transaction	Type	Reference number	To	To Bank	Remarks
0	UPI	P2A	230546454047	NAVANEEDH	HDFC BANK	UPI
1	UPI	P2A	230552984292	NAVANEEDH	HDFC BANK	UPI
2	IMPS	P2A	230516319361	JOBMANGA	HDFCBANK	Fees
3	UPI	P2A	230565866620	NAVANEEDH	HDFC BANK	UPI
4	UPI	P2M	230574720064	HOTEL APO	Yes Bank	UPI
5	UPI	P2M	230574772513	HOTEL APO	Yes Bank	UPI
6	UPI	P2A	230683169378	KUMARAVAL	State Ban	Ramisha
7	UPI	P2M	230718375364	Instamojo	INDUSIND	UPI
8	UPI	P2A	230732269417	K RAMISHA	HDFC BANK	UPI
9	UPI	P2M	230776790195	Facebook	HDFC BANK	Upi Tra
10	UPI	P2A	230736335631	S NIRANJA	Axis Bank	UPI
11	UPI	P2A	230737585564	Mohamed F	State Ban	UPI
12	INB	IFT	S B GANAPATHIRAMAN	TPARTY TRANSFER	NaN	NaN
13	NEFT	N308222192189789	ICE LABS	HDFC BANK	NEFT	NaN
14	UPI	P2A	230858161766	Ms RAMISH	Indian Ba	UPI
15	UPI	P2M	231083359175	Facebook	HDFC BANK	Upi Tra
16	NEFT	CITIN22362827394	PAYPAL PA	CITIBANK	P0802	NaN
17	IMPS	P2A	231122376130	JOBMANGA	HDFCBANK	AI
18	UPI	P2M	231268635691	Sri Ganap	Paytm Pay	UPI
19	UPI	P2M	231270217463	redbus	Axis Bank	UPI
20	UPI	P2A	231419574106	Ms RAMISH	Indian Ba	UPI
21	UPI	P2A	231419595659	I VETHA R	Indian Ov	UPI
22	Razorpay Software Pvt Ltd Fund	NaN	NaN	NaN	NaN	NaN
23	UPI	P2M	231579806450	RazorpayZ	ICICI Ban	Zomato
24	UPI	P2M	231795860781	NETFLIX C	HDFC BANK	Monthly
25	UPI	P2A	231793154813	Ms RAMISH	Indian Ba	UPI

In [13]: Statm=Statm.drop("PARTICULARS",axis=1)

In [14]: Final_statm=pd.concat([Statm,particulars],axis=1)

In [15]: Final_statm

Out[15]:

	Tran Date	DR	CR	BAL	SOL	Mode of Transaction	Type	Reference number	To	To Bank	Remarks
0	01-11-2022		5000.00	25011.94	3080	UPI	P2A	230546454047	NAVANEEDH	HDFC BANK	UPI
1	01-11-2022	5000.00		20011.94	3080	UPI	P2A	230552984292	NAVANEEDH	HDFC BANK	UPI
2	01-11-2022		1000.00	21011.94	3080	IMPS	P2A	230516319361	JOBMANGA	HDFCBANK	Fees
3	01-11-2022		5000.00	26011.94	3080	UPI	P2A	230565866620	NAVANEEDH	HDFC BANK	UPI
4	01-11-2022	383.00		25628.94	3080	UPI	P2M	230574720064	HOTEL APO	Yes Bank	UPI
5	01-11-2022	40.00		25588.94	3080	UPI	P2M	230574772513	HOTEL APO	Yes Bank	UPI
6	02-11-2022	5000.00		20588.94	3080	UPI	P2A	230683169378	KUMARAVAL	State Ban	Ramisha
7	03-11-2022	106.05		20482.89	3080	UPI	P2M	230718375364	Instamojo	INDUSIND	UPI
8	03-11-2022	6000.00		14482.89	3080	UPI	P2A	230732269417	K RAMISHA	HDFC BANK	UPI
9	03-11-2022	3000.00		11482.89	3080	UPI	P2M	230776790195	Facebook	HDFC BANK	Upi Tra
10	03-11-2022		5000.00	16482.89	3080	UPI	P2A	230736335631	S NIRANJA	Axis Bank	UPI
11	03-11-2022	5000.00		11482.89	3080	UPI	P2A	230737585564	Mohamed F	State Ban	UPI
12	04-11-2022		5000.00	16482.89	14	INB	IFT	S B GANAPATHIRAMAN	TPARTY TRANSFER	NaN	NaN
13	04-11-2022		346.37	16829.26	248	NEFT	N308222192189789	ICE LABS	HDFC BANK	NEFT	NaN
14	04-11-2022	2000.00		14829.26	3080	UPI	P2A	230858161766	Ms RAMISH	Indian Ba	UPI
15	06-11-2022	1000.00		13829.26	3080	UPI	P2M	231083359175	Facebook	HDFC BANK	Upi Tra
16	07-11-2022		149.48	13978.74	248	NEFT	CITIN22362827394	PAYPAL PA	CITIBANK	P0802	NaN
17	07-11-2022		3000.00	16978.74	3080	IMPS	P2A	231122376130	JOBMANGA	HDFCBANK	AI
18	08-11-2022	2665.00		14313.74	3080	UPI	P2M	231268635691	Sri Ganap	Paytm Pay	UPI
19	08-11-2022	1039.50		13274.24	3080	UPI	P2M	231270217463	redbus	Axis Bank	UPI
20	10-11-2022	1500.00		11774.24	3080	UPI	P2A	231419574106	Ms RAMISH	Indian Ba	UPI
21	10-11-2022	5000.00		6774.24	3080	UPI	P2A	231419595659	I VETHA R	Indian Ov	UPI
22	11-11-2022		89.10	6863.34	1506	Razorpay Software Pvt Ltd Fund	NaN	NaN	NaN	NaN	NaN
23	11-11-2022	481.40		6381.94	3080	UPI	P2M	231579806450	RazorpayZ	ICICI Ban	Zomato
24	12-11-2022	649.00		5732.94	3080	UPI	P2M	231795860781	NETFLIX C	HDFC BANK	Monthly
25	13-11-2022	3500.00		2232.94	3080	UPI	P2A	231793154813	Ms RAMISH	Indian Ba	UPI

In [16]: Final_statm=Final_statm.fillna("No data")

In [17]: Final_statm.to_csv("Pre-processed_statm.csv",index=False)

In [18]: Final_statm

Out[18]:

	Tran Date	DR	CR	BAL	SOL	Mode of Transaction	Type	Reference number	To	To Bank	Remarks
0	01-11-2022		5000.00	25011.94	3080	UPI	P2A	230546454047	NAVANEEDH	HDFC BANK	UPI
1	01-11-2022	5000.00		20011.94	3080	UPI	P2A	230552984292	NAVANEEDH	HDFC BANK	UPI
2	01-11-2022		1000.00	21011.94	3080	IMPS	P2A	230516319361	JOBMANGA	HDFCBANK	Fees
3	01-11-2022		5000.00	26011.94	3080	UPI	P2A	230565866620	NAVANEEDH	HDFC BANK	UPI
4	01-11-2022	383.00		25628.94	3080	UPI	P2M	230574720064	HOTEL APO	Yes Bank	UPI
5	01-11-2022	40.00		25588.94	3080	UPI	P2M	230574772513	HOTEL APO	Yes Bank	UPI
6	02-11-2022	5000.00		20588.94	3080	UPI	P2A	230683169378	KUMARAVAL	State Ban	Ramisha
7	03-11-2022	106.05		20482.89	3080	UPI	P2M	230718375364	Instamojo	INDUSIND	UPI
8	03-11-2022	6000.00		14482.89	3080	UPI	P2A	230732269417	K RAMISHA	HDFC BANK	UPI
9	03-11-2022	3000.00		11482.89	3080	UPI	P2M	230776790195	Facebook	HDFC BANK	Upi Tra
10	03-11-2022		5000.00	16482.89	3080	UPI	P2A	230736335631	S NIRANJA	Axis Bank	UPI
11	03-11-2022	5000.00		11482.89	3080	UPI	P2A	230737585564	Mohamed F	State Ban	UPI
12	04-11-2022		5000.00	16482.89	14	INB	IFT	S B GANAPATHIRAMAN	TPARTY TRANSFER	No data	No data
13	04-11-2022		346.37	16829.26	248	NEFT	N308222192189789	ICE LABS	HDFC BANK	NEFT	No data
14	04-11-2022	2000.00		14829.26	3080	UPI	P2A	230858161766	Ms RAMISH	Indian Ba	UPI
15	06-11-2022	1000.00		13829.26	3080	UPI	P2M	231083359175	Facebook	HDFC BANK	Upi Tra
16	07-11-2022		149.48	13978.74	248	NEFT	CITIN22362827394	PAYPAL PA	CITIBANK	P0802	No data
17	07-11-2022		3000.00	16978.74	3080	IMPS	P2A	231122376130	JOBMANGA	HDFCBANK	AI
18	08-11-2022	2665.00		14313.74	3080	UPI	P2M	231268635691	Sri Ganap	Paytm Pay	UPI
19	08-11-2022	1039.50		13274.24	3080	UPI	P2M	231270217463	redbus	Axis Bank	UPI
20	10-11-2022	1500.00		11774.24	3080	UPI	P2A	231419574106	Ms RAMISH	Indian Ba	UPI
21	10-11-2022	5000.00		6774.24	3080	UPI	P2A	231419595659	I VETHA R	Indian Ov	UPI
22	11-11-2022		89.10	6863.34	1506	Razorpay Software Pvt Ltd Fund	No data	No data	No data	No data	No data
23	11-11-2022	481.40		6381.94	3080	UPI	P2M	231579806450	RazorpayZ	ICICI Ban	Zomato
24	12-11-2022	649.00		5732.94	3080	UPI	P2M	231795860781	NETFLIX C	HDFC BANK	Monthly
25	13-11-2022	3500.00		2232.94	3080	UPI	P2A	231793154813	Ms RAMISH	Indian Ba	UPI

In [19]: max(Final_statm["CR"])

Out[19]: '5000.00'

In [20]: max(Final_statm["DR"])

Out[20]: '6000.00'

In [21]: Final_statm["Tran Date"].value_counts().head(1)

Out[21]: 01-11-2022 6
Name: Tran Date, dtype: int64

In [22]: Final_statm["Tran Date"].value_counts().tail(1)

Out[22]: 12-11-2022 1
Name: Tran Date, dtype: int64

```
In [23]: Final_statm.dtypes
```

```
Out[23]: Tran Date          object
          DR             object
          CR             object
          BAL            float64
          SOL            int64
          Mode of Transaction  object
          Type            object
          Reference number   object
          To              object
          To Bank          object
          Remarks          object
          dtype: object
```

```
In [24]: Final_statm["CR"] = Final_statm["CR"].str.replace(' ', '')
```

```
In [25]: Final_statm["CR"]
```

```
Out[25]: 0      5000.00
         1
         2      1000.00
         3      5000.00
         4
         5
         6
         7
         8
         9
         10     5000.00
        11
        12     5000.00
        13     346.37
        14
        15
        16     149.48
        17     3000.00
        18
        19
        20
        21
        22     89.10
        23
        24
        25

Name: CR, dtype: object
```

```
In [26]: Final_statm["CR"] = pd.to_numeric(Final_statm["CR"])
```

```
In [27]: Final_statm["CR"]
```

```
Out[27]: 0      5000.00
         1      NaN
         2      1000.00
         3      5000.00
         4      NaN
         5      NaN
         6      NaN
         7      NaN
         8      NaN
         9      NaN
        10     5000.00
        11     NaN
        12     5000.00
        13     346.37
        14     NaN
        15     NaN
        16     149.48
        17     3000.00
        18     NaN
        19     NaN
        20     NaN
        21     NaN
        22     89.10
        23     NaN
        24     NaN
        25     NaN

Name: CR, dtype: float64
```

```
In [28]: Final_statm.isnull().sum()
```

```
Out[28]: Tran Date      0  
DR          0  
CR         17  
BAL         0  
SOL         0  
Mode of Transaction  0  
Type        0  
Reference number    0  
To          0  
To Bank     0  
Remarks     0  
dtype: int64
```

```
In [29]: Final_statm["DR"] = Final_statm["DR"].str.replace(' ', '')
```

```
In [30]: Final_statm["DR"] = pd.to_numeric(Final_statm["DR"])
```

```
In [31]: Final_statm.isnull().sum()
```

```
Out[31]: Tran Date      0  
DR          9  
CR         17  
BAL         0  
SOL         0  
Mode of Transaction  0  
Type        0  
Reference number    0  
To          0  
To Bank     0  
Remarks     0  
dtype: int64
```

```
In [32]: Final_statm["SOL"] = pd.to_numeric(Final_statm["SOL"])
```

In [33]: Final_statm

Out[33]:

	Tran Date	DR	CR	BAL	SOL	Mode of Transaction	Type	Reference number	To	To Bank	Remarks
0	01-11-2022	NaN	5000.00	25011.94	3080	UPI	P2A	230546454047	NAVANEEDH	HDFC BANK	UPI
1	01-11-2022	5000.00	NaN	20011.94	3080	UPI	P2A	230552984292	NAVANEEDH	HDFC BANK	UPI
2	01-11-2022	NaN	1000.00	21011.94	3080	IMPS	P2A	230516319361	JOBMANGA	HDFCBANK	Fees
3	01-11-2022	NaN	5000.00	26011.94	3080	UPI	P2A	230565866620	NAVANEEDH	HDFC BANK	UPI
4	01-11-2022	383.00	NaN	25628.94	3080	UPI	P2M	230574720064	HOTEL APO	Yes Bank	UPI
5	01-11-2022	40.00	NaN	25588.94	3080	UPI	P2M	230574772513	HOTEL APO	Yes Bank	UPI
6	02-11-2022	5000.00	NaN	20588.94	3080	UPI	P2A	230683169378	KUMARAVAL	State Ban	Ramisha
7	03-11-2022	106.05	NaN	20482.89	3080	UPI	P2M	230718375364	Instamojo	INDUSIND	UPI
8	03-11-2022	6000.00	NaN	14482.89	3080	UPI	P2A	230732269417	K RAMISHA	HDFC BANK	UPI
9	03-11-2022	3000.00	NaN	11482.89	3080	UPI	P2M	230776790195	Facebook	HDFC BANK	Upi Tra
10	03-11-2022	NaN	5000.00	16482.89	3080	UPI	P2A	230736335631	S NIRANJA	Axis Bank	UPI
11	03-11-2022	5000.00	NaN	11482.89	3080	UPI	P2A	230737585564	Mohamed F	State Ban	UPI
12	04-11-2022	NaN	5000.00	16482.89	14	INB	IFT	S B GANAPATHIRAMAN	TPARTY TRANSFER	No data	No data
13	04-11-2022	NaN	346.37	16829.26	248	NEFT	N308222192189789	ICE LABS	HDFC BANK	NEFT	No data
14	04-11-2022	2000.00	NaN	14829.26	3080	UPI	P2A	230858161766	Ms RAMISH	Indian Ba	UPI
15	06-11-2022	1000.00	NaN	13829.26	3080	UPI	P2M	231083359175	Facebook	HDFC BANK	Upi Tra
16	07-11-2022	NaN	149.48	13978.74	248	NEFT	CITIN22362827394	PAYPAL PA	CITIBANK	P0802	No data
17	07-11-2022	NaN	3000.00	16978.74	3080	IMPS	P2A	231122376130	JOBMANGA	HDFCBANK	AI
18	08-11-2022	2665.00	NaN	14313.74	3080	UPI	P2M	231268635691	Sri Ganap	Paytm Pay	UPI
19	08-11-2022	1039.50	NaN	13274.24	3080	UPI	P2M	231270217463	redbus	Axis Bank	UPI
20	10-11-2022	1500.00	NaN	11774.24	3080	UPI	P2A	231419574106	Ms RAMISH	Indian Ba	UPI
21	10-11-2022	5000.00	NaN	6774.24	3080	UPI	P2A	231419595659	I VETHA R	Indian Ov	UPI
22	11-11-2022	NaN	89.10	6863.34	1506	Razorpay Software Pvt Ltd Fund	No data	No data	No data	No data	No data
23	11-11-2022	481.40	NaN	6381.94	3080	UPI	P2M	231579806450	RazorpayZ	ICICI Ban	Zomato
24	12-11-2022	649.00	NaN	5732.94	3080	UPI	P2M	231795860781	NETFLIX C	HDFC BANK	Monthly
25	13-11-2022	3500.00	NaN	2232.94	3080	UPI	P2A	231793154813	Ms RAMISH	Indian Ba	UPI

In [34]: Final_statm.isnull().sum()

Out[34]: Tran Date

0

DR

9

CR

17

BAL

0

SOL

0

Mode of Transaction

0

Type

0

Reference number

0

To

0

To Bank

0

Remarks

0

dtype: int64

In [35]: Final_statm=Final_statm.fillna(0.0)

In [36]: Final_statm

Out[36]:

	Tran Date	DR	CR	BAL	SOL	Mode of Transaction	Type	Reference number	To	To Bank	Remarks
0	01-11-2022	0.00	5000.00	25011.94	3080	UPI	P2A	230546454047	NAVANEEDH	HDFC BANK	UPI
1	01-11-2022	5000.00	0.00	20011.94	3080	UPI	P2A	230552984292	NAVANEEDH	HDFC BANK	UPI
2	01-11-2022	0.00	1000.00	21011.94	3080	IMPS	P2A	230516319361	JOBMANGA	HDFCBANK	Fees
3	01-11-2022	0.00	5000.00	26011.94	3080	UPI	P2A	230565866620	NAVANEEDH	HDFC BANK	UPI
4	01-11-2022	383.00	0.00	25628.94	3080	UPI	P2M	230574720064	HOTEL APO	Yes Bank	UPI
5	01-11-2022	40.00	0.00	25588.94	3080	UPI	P2M	230574772513	HOTEL APO	Yes Bank	UPI
6	02-11-2022	5000.00	0.00	20588.94	3080	UPI	P2A	230683169378	KUMARAVAL	State Ban	Ramisha
7	03-11-2022	106.05	0.00	20482.89	3080	UPI	P2M	230718375364	Instamojo	INDUSIND	UPI
8	03-11-2022	6000.00	0.00	14482.89	3080	UPI	P2A	230732269417	K RAMISHA	HDFC BANK	UPI
9	03-11-2022	3000.00	0.00	11482.89	3080	UPI	P2M	230776790195	Facebook	HDFC BANK	Upi Tra
10	03-11-2022	0.00	5000.00	16482.89	3080	UPI	P2A	230736335631	S NIRANJA	Axis Bank	UPI
11	03-11-2022	5000.00	0.00	11482.89	3080	UPI	P2A	230737585564	Mohamed F	State Ban	UPI
12	04-11-2022	0.00	5000.00	16482.89	14	INB	IFT	S B GANAPATHIRAMAN	TPARTY TRANSFER	No data	No data
13	04-11-2022	0.00	346.37	16829.26	248	NEFT	N308222192189789	ICE LABS	HDFC BANK	NEFT	No data
14	04-11-2022	2000.00	0.00	14829.26	3080	UPI	P2A	230858161766	Ms RAMISH	Indian Ba	UPI
15	06-11-2022	1000.00	0.00	13829.26	3080	UPI	P2M	231083359175	Facebook	HDFC BANK	Upi Tra
16	07-11-2022	0.00	149.48	13978.74	248	NEFT	CITIN22362827394	PAYPAL PA	CITIBANK	P0802	No data
17	07-11-2022	0.00	3000.00	16978.74	3080	IMPS	P2A	231122376130	JOBMANGA	HDFCBANK	AI
18	08-11-2022	2665.00	0.00	14313.74	3080	UPI	P2M	231268635691	Sri Ganap	Paytm Pay	UPI
19	08-11-2022	1039.50	0.00	13274.24	3080	UPI	P2M	231270217463	redbus	Axis Bank	UPI
20	10-11-2022	1500.00	0.00	11774.24	3080	UPI	P2A	231419574106	Ms RAMISH	Indian Ba	UPI
21	10-11-2022	5000.00	0.00	6774.24	3080	UPI	P2A	231419595659	I VETHA R	Indian Ov	UPI
22	11-11-2022	0.00	89.10	6863.34	1506	Razorpay Software Pvt Ltd Fund	No data	No data	No data	No data	No data
23	11-11-2022	481.40	0.00	6381.94	3080	UPI	P2M	231579806450	RazorpayZ	ICICI Ban	Zomato
24	12-11-2022	649.00	0.00	5732.94	3080	UPI	P2M	231795860781	NETFLIX C	HDFC BANK	Monthly
25	13-11-2022	3500.00	0.00	2232.94	3080	UPI	P2A	231793154813	Ms RAMISH	Indian Ba	UPI

In [37]: sum(Final_statm["CR"])

Out[37]: 24584.949999999997

In [38]: sum(Final_statm["DR"])

Out[38]: 42363.950000000004

In [39]: float(Final_statm["BAL"].tail(1))

Out[39]: 2232.94

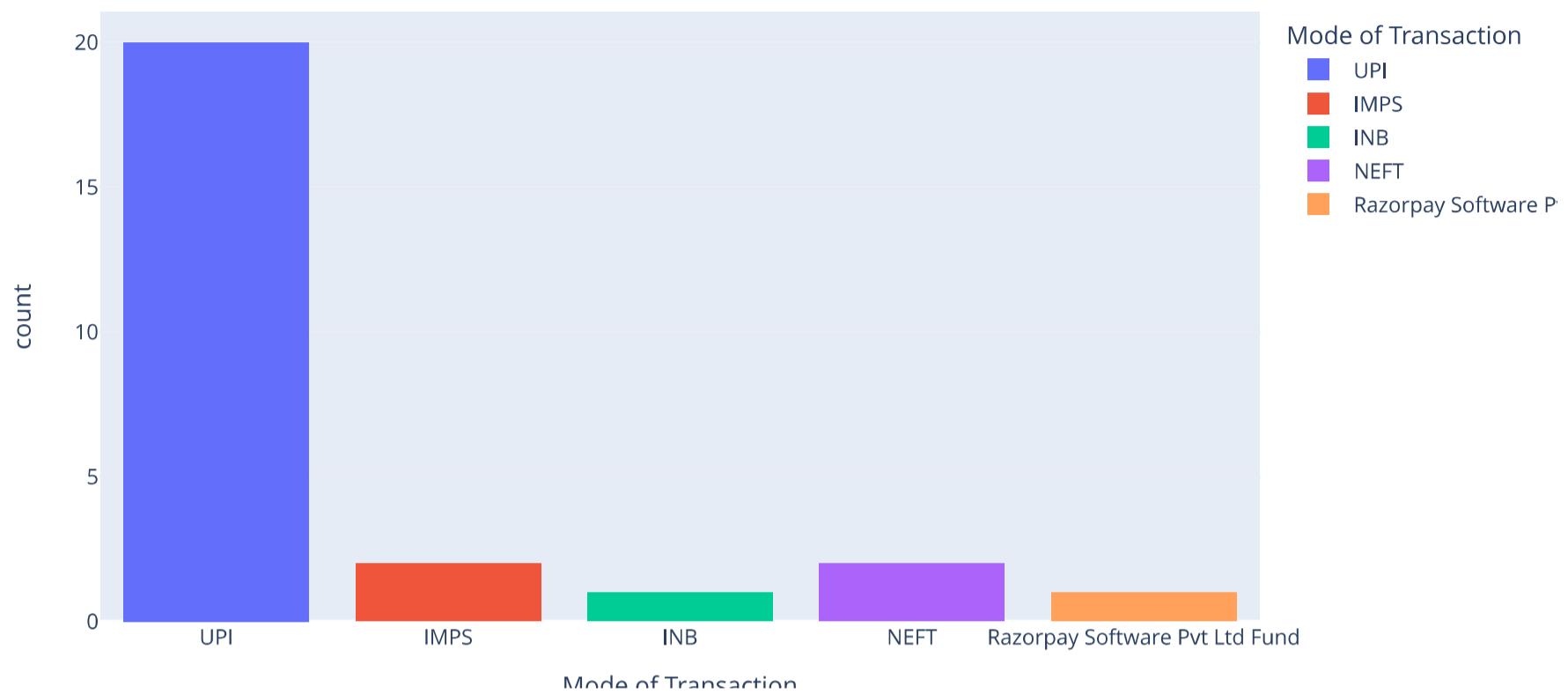
In [40]: float(Final_statm["BAL"][0])

Out[40]: 25011.94

In [41]: import plotly.express as px

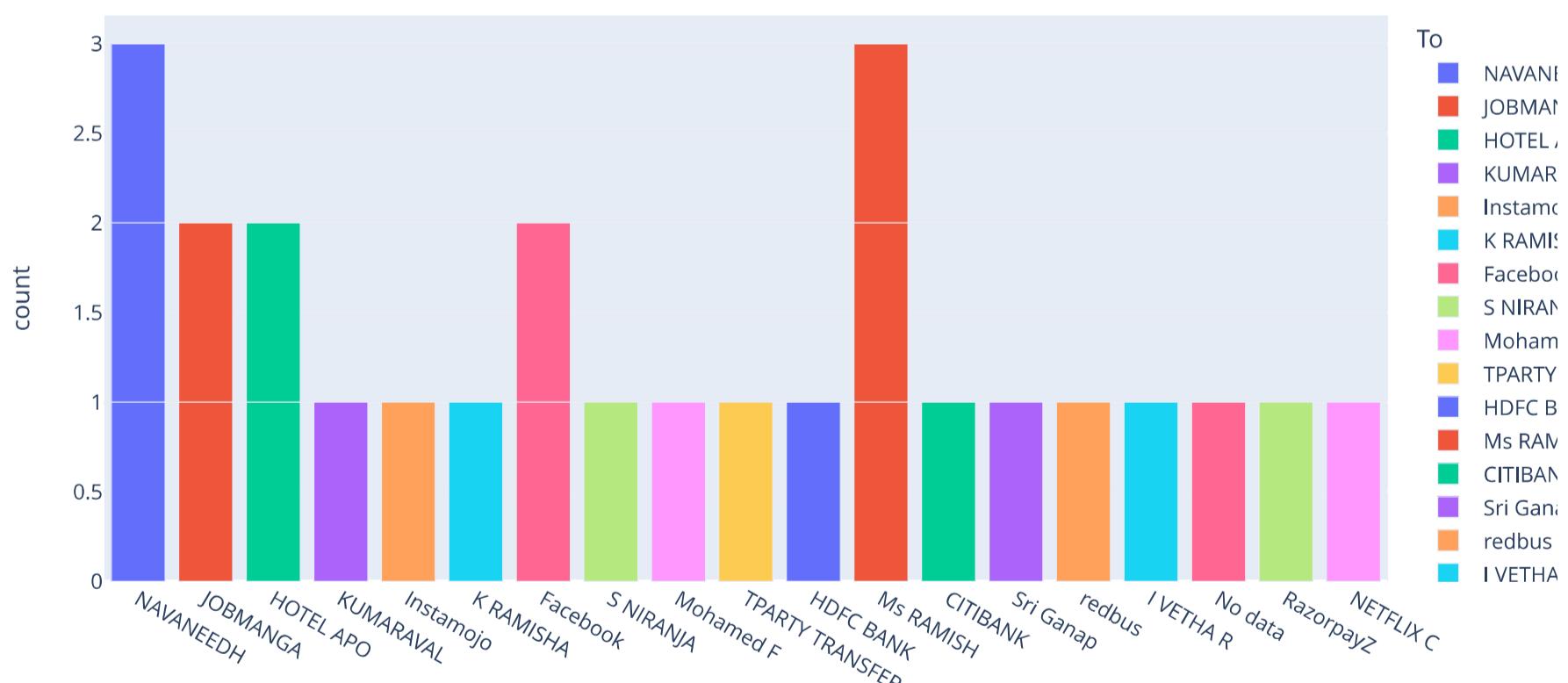
```
In [42]: fig=px.histogram(Final_statm,x="Mode of Transaction",
                      color="Mode of Transaction",
                      title="MODE OF TRANSACTION")
fig.show()
```

MODE OF TRANSACTION

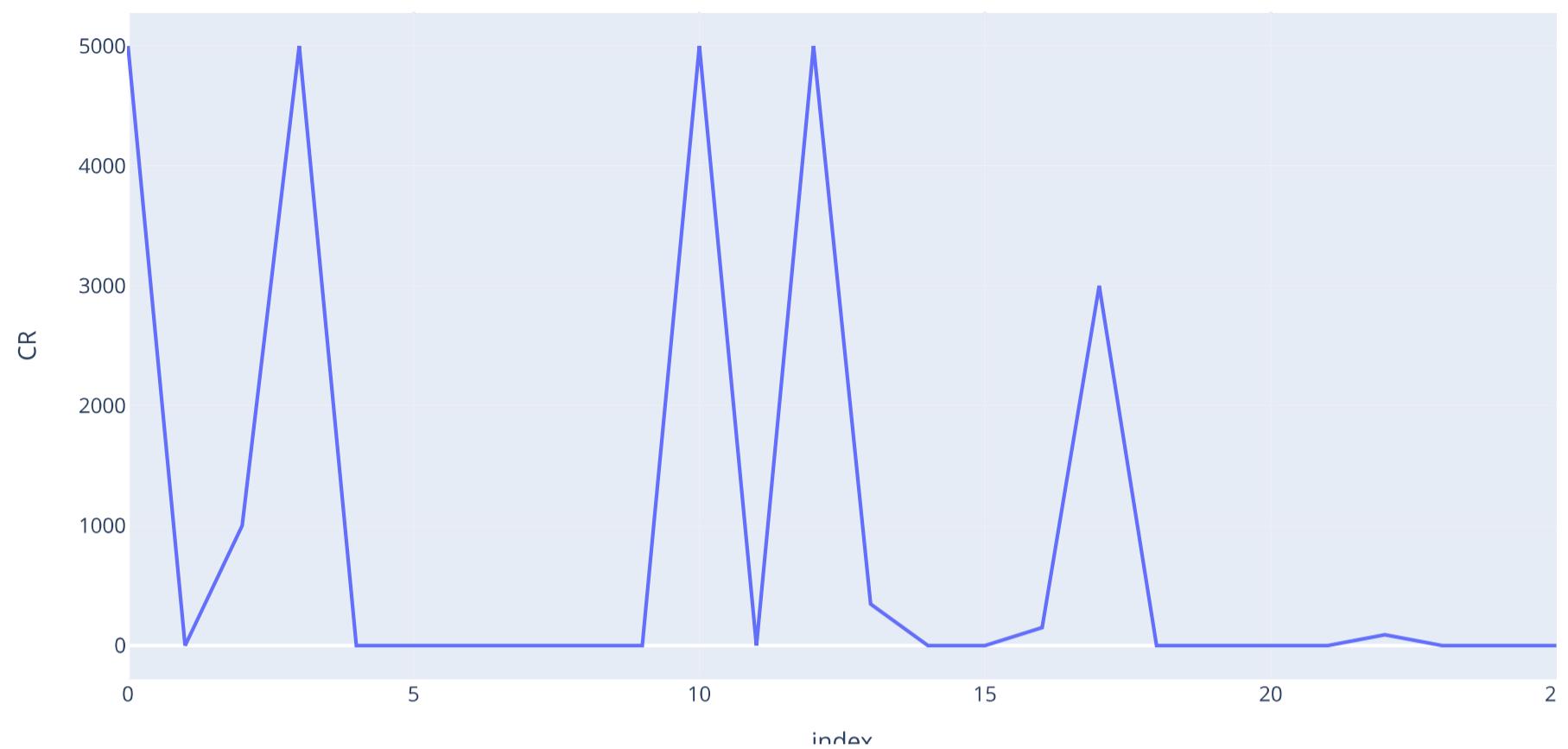


```
In [43]: fig=px.bar(Final_statm,x="To",
                  color="To",
                  title="Money Tranfered To")
fig.show()
```

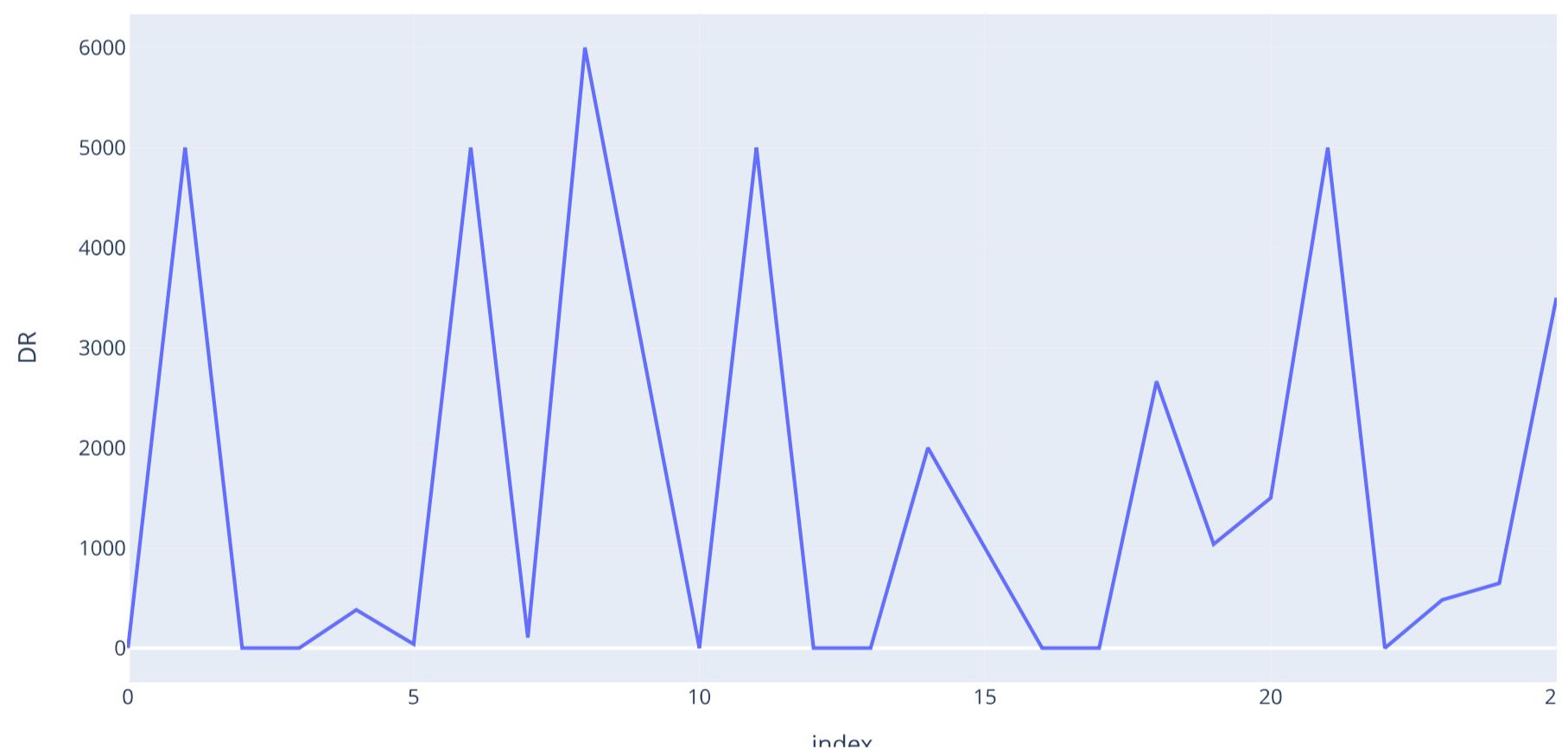
Money Tranfered To



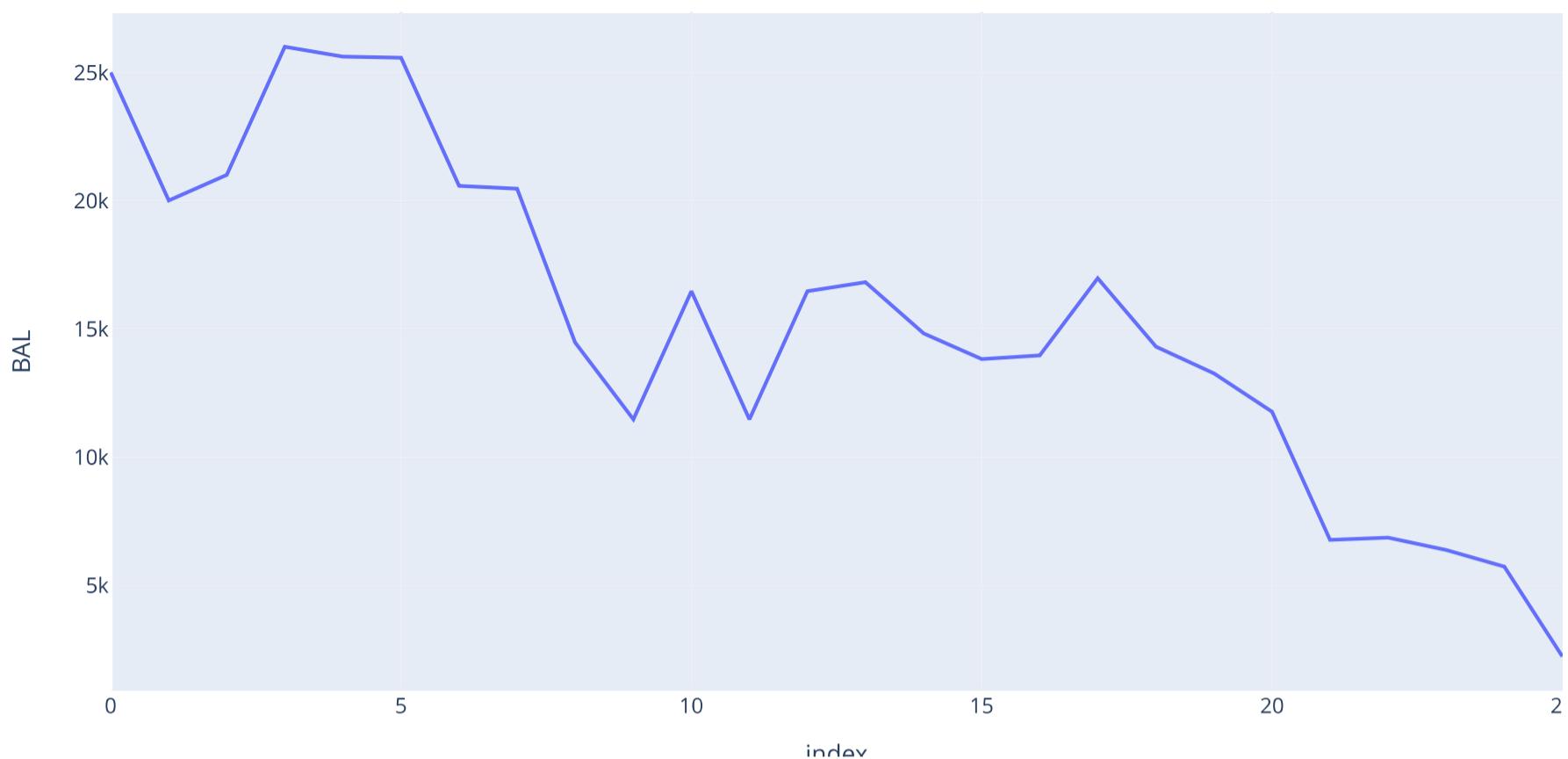
```
In [44]: fig = px.line(Final_statm, y="CR")
fig.show()
```



```
In [45]: fig = px.line(Final_statm, y="DR")
fig.show()
```



```
In [46]: fig = px.line(Final_statm,y="BAL")
fig.show()
```



```
In [47]: Total_No_of_trans_datewise=pd.DataFrame(Final_statm["Tran Date"].value_counts())
```

```
In [48]: Total_No_of_trans_datewise=Total_No_of_trans_datewise.rename(columns={"Tran Date":"Total No of Transactions Per Day"})
```

```
In [49]: Total_No_of_trans_datewise
```

Out[49]:

Total No of Transactions Per Day	
01-11-2022	6
03-11-2022	5
04-11-2022	3
11-11-2022	2
10-11-2022	2
08-11-2022	2
07-11-2022	2
02-11-2022	1
13-11-2022	1
06-11-2022	1
12-11-2022	1

```
In [50]: data=[
    ["Maximum amount credited",max(Final_statm["CR"])],
    ["Maximum amount debited",max(Final_statm["DR"])],
    ["Opening balance",Final_statm["BAL"][0]],
    ["Closing balance",Final_statm["BAL"][-1]]
]
```

```
In [51]: data
```

```
Out[51]: [['Maximum amount credited', 5000.0],
['Maximum amount debited', 6000.0],
['Opening balance', 25011.94],
['Closing balance', 2232.94]]
```

```
In [52]: imp_datas= pd.DataFrame(data, columns=['Details', 'Amount'])
```

In [53]: `imp_datas`

Out[53]:

	Details	Amount
0	Maximum amount credited	5000.00
1	Maximum amount debited	6000.00
2	Opening balance	25011.94
3	Closing balance	2232.94

In [54]: `To_which_bank=pd.DataFrame(Final_statm["To Bank"].value_counts())`

In [55]: `To_which_bank`

Out[55]:

	To Bank
HDFC BANK	7
Indian Ba	3
No data	2
HDFCBANK	2
State Ban	2
Yes Bank	2
Axis Bank	2
ICICI Ban	1
INDUSIND	1
Paytm Pay	1
P0802	1
Indian Ov	1
NEFT	1

In [56]: `To_which_bank=To_which_bank.rename(columns={"To Bank":"Banks Involved"})`

In [57]: `To_which_bank`

Out[57]:

	Banks Involved
HDFC BANK	7
Indian Ba	3
No data	2
HDFCBANK	2
State Ban	2
Yes Bank	2
Axis Bank	2
ICICI Ban	1
INDUSIND	1
Paytm Pay	1
P0802	1
Indian Ov	1
NEFT	1

In [58]: `Mode_of_Transactions_done=pd.DataFrame(Final_statm["Mode of Transaction"].value_counts())`

In [59]: `Mode_of_Transactions_done`

Out[59]:

	Mode of Transaction
	UPI
	20
	NEFT
	2
	IMPS
	2
Razorpay Software Pvt Ltd Fund	1
	INB
	1

In [60]: Type_of_transaction=pd.DataFrame(Final_statm["Type"].value_counts())
Type_of_transaction

Out[60]:

Type	
P2A	13
P2M	9
CITIN22362827394	1
IFT	1
N308222192189789	1
No data	1

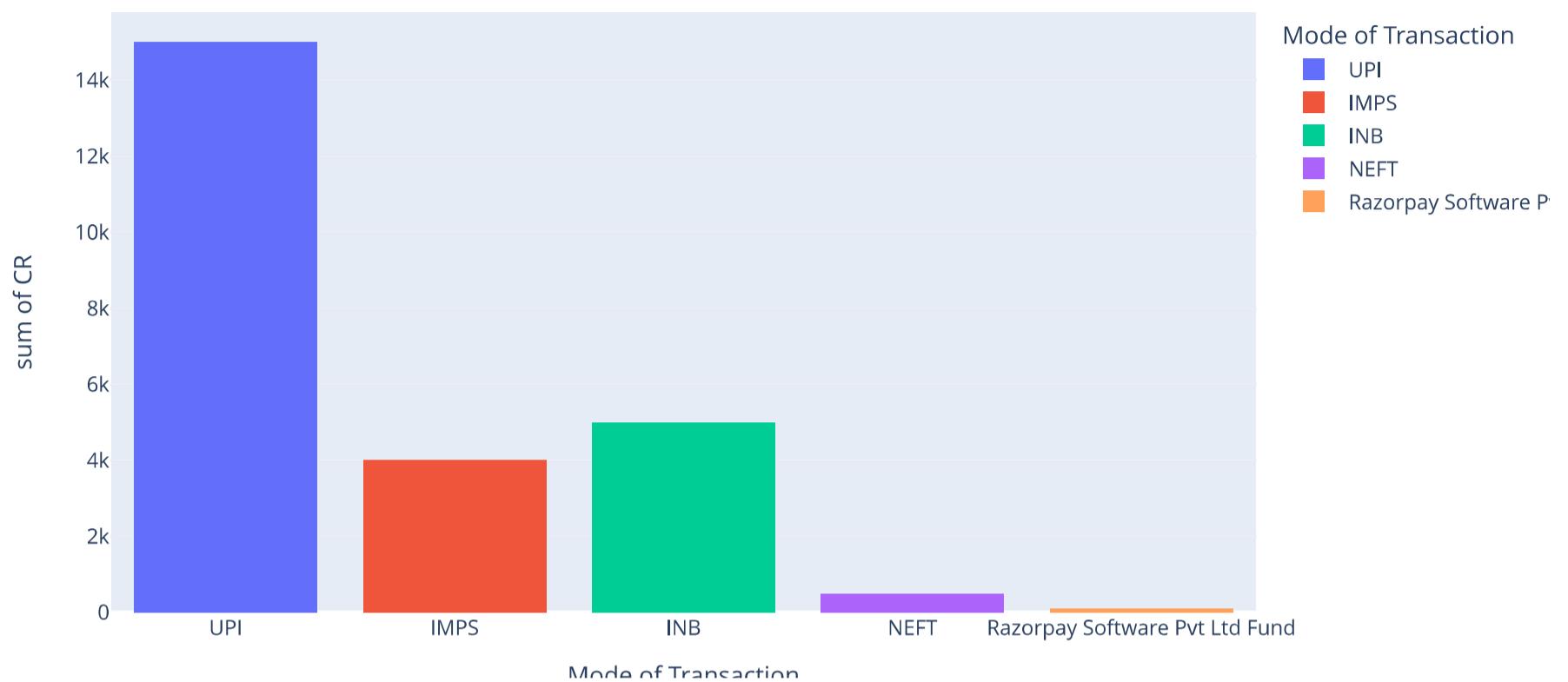
In [61]: Final_statm

Out[61]:

	Tran Date	DR	CR	BAL	SOL	Mode of Transaction	Type	Reference number	To	To Bank	Remarks
0	01-11-2022	0.00	5000.00	25011.94	3080	UPI	P2A	230546454047	NAVANEEDH	HDFC BANK	UPI
1	01-11-2022	5000.00	0.00	20011.94	3080	UPI	P2A	230552984292	NAVANEEDH	HDFC BANK	UPI
2	01-11-2022	0.00	1000.00	21011.94	3080	IMPS	P2A	230516319361	JOBMANGA	HDFCBANK	Fees
3	01-11-2022	0.00	5000.00	26011.94	3080	UPI	P2A	230565866620	NAVANEEDH	HDFC BANK	UPI
4	01-11-2022	383.00	0.00	25628.94	3080	UPI	P2M	230574720064	HOTEL APO	Yes Bank	UPI
5	01-11-2022	40.00	0.00	25588.94	3080	UPI	P2M	230574772513	HOTEL APO	Yes Bank	UPI
6	02-11-2022	5000.00	0.00	20588.94	3080	UPI	P2A	230683169378	KUMARAVAL	State Ban	Ramisha
7	03-11-2022	106.05	0.00	20482.89	3080	UPI	P2M	230718375364	Instamojo	INDUSIND	UPI
8	03-11-2022	6000.00	0.00	14482.89	3080	UPI	P2A	230732269417	K RAMISHA	HDFC BANK	UPI
9	03-11-2022	3000.00	0.00	11482.89	3080	UPI	P2M	230776790195	Facebook	HDFC BANK	Upi Tra
10	03-11-2022	0.00	5000.00	16482.89	3080	UPI	P2A	230736335631	S NIRANJA	Axis Bank	UPI
11	03-11-2022	5000.00	0.00	11482.89	3080	UPI	P2A	230737585564	Mohamed F	State Ban	UPI
12	04-11-2022	0.00	5000.00	16482.89	14	INB	IFT	S B GANAPATHIRAMAN	TPARTY TRANSFER	No data	No data
13	04-11-2022	0.00	346.37	16829.26	248	NEFT	N308222192189789	ICE LABS	HDFC BANK	NEFT	No data
14	04-11-2022	2000.00	0.00	14829.26	3080	UPI	P2A	230858161766	Ms RAMISH	Indian Ba	UPI
15	06-11-2022	1000.00	0.00	13829.26	3080	UPI	P2M	231083359175	Facebook	HDFC BANK	Upi Tra
16	07-11-2022	0.00	149.48	13978.74	248	NEFT	CITIN22362827394	PAYPAL PA	CITIBANK	P0802	No data
17	07-11-2022	0.00	3000.00	16978.74	3080	IMPS	P2A	231122376130	JOBMANGA	HDFCBANK	AI
18	08-11-2022	2665.00	0.00	14313.74	3080	UPI	P2M	231268635691	Sri Ganap	Paytm Pay	UPI
19	08-11-2022	1039.50	0.00	13274.24	3080	UPI	P2M	231270217463	redbus	Axis Bank	UPI
20	10-11-2022	1500.00	0.00	11774.24	3080	UPI	P2A	231419574106	Ms RAMISH	Indian Ba	UPI
21	10-11-2022	5000.00	0.00	6774.24	3080	UPI	P2A	231419595659	I VETHA R	Indian Ov	UPI
22	11-11-2022	0.00	89.10	6863.34	1506	Razorpay Software Pvt Ltd Fund	No data	No data	No data	No data	No data
23	11-11-2022	481.40	0.00	6381.94	3080	UPI	P2M	231579806450	RazorpayZ	ICICI Ban	Zomato
24	12-11-2022	649.00	0.00	5732.94	3080	UPI	P2M	231795860781	NETFLIX C	HDFC BANK	Monthly
25	13-11-2022	3500.00	0.00	2232.94	3080	UPI	P2A	231793154813	Ms RAMISH	Indian Ba	UPI

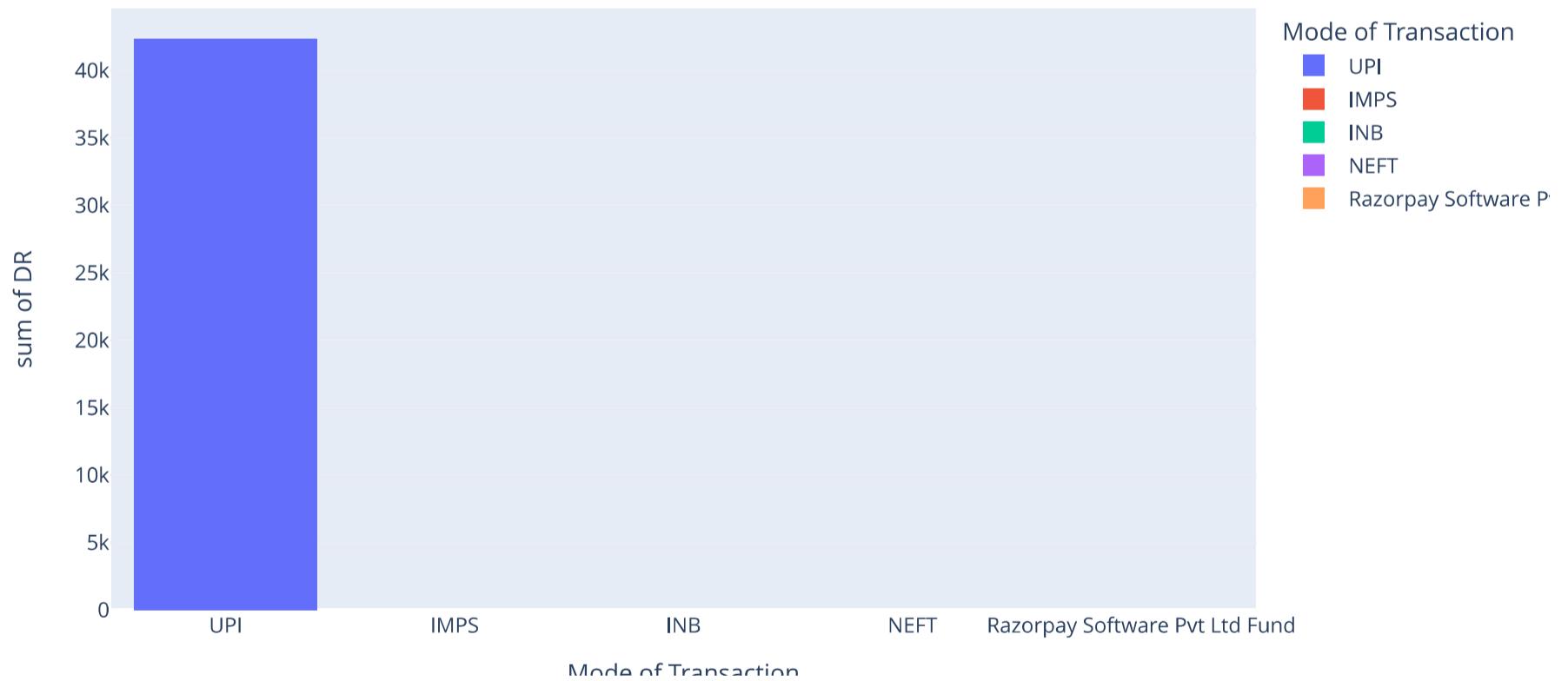
```
In [62]: fig=px.histogram(Final_statm,x="Mode of Transaction",y="CR",
                      color="Mode of Transaction",
                      title="MODE OF TRANSACTION")
fig.show()
```

MODE OF TRANSACTION



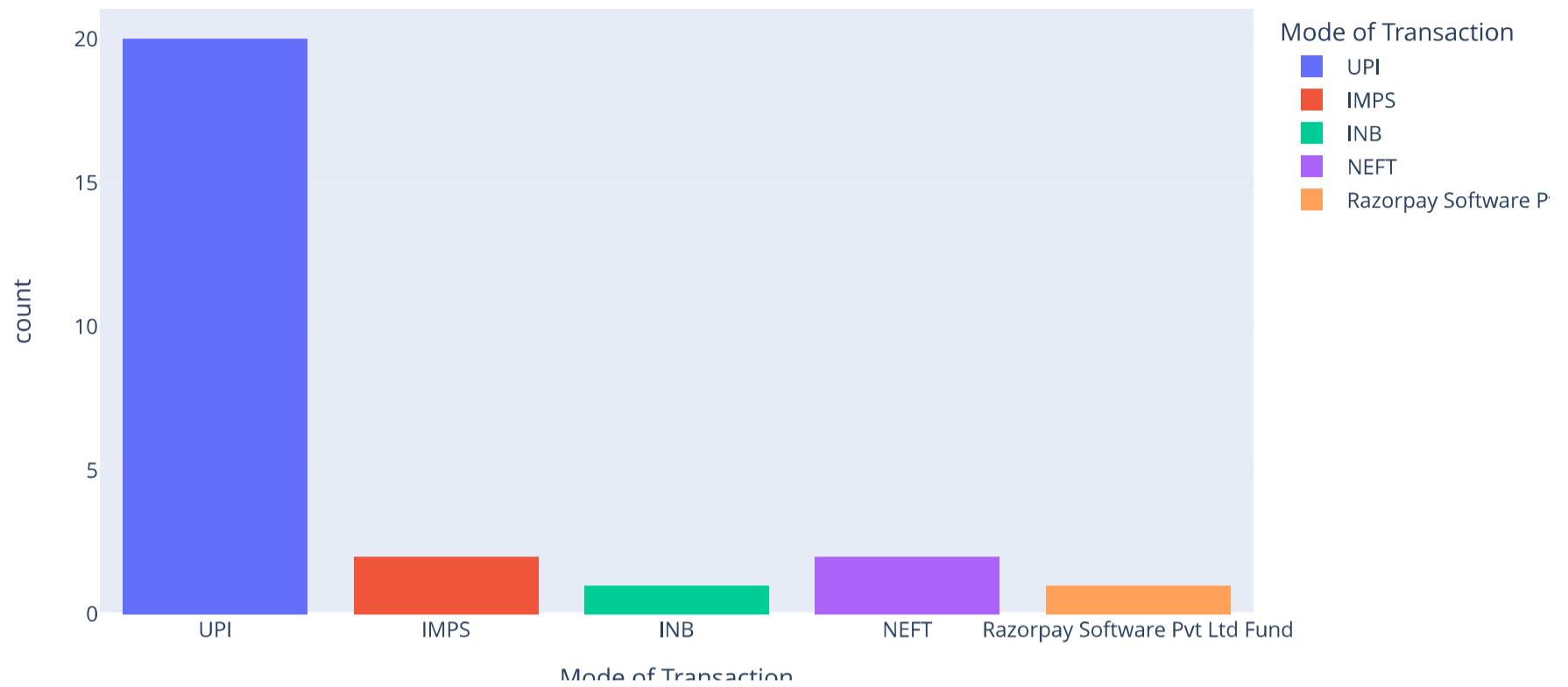
```
In [63]: fig=px.histogram(Final_statm,x="Mode of Transaction",y="DR",
                      color="Mode of Transaction",
                      title="MODE OF TRANSACTION")
fig.show()
```

MODE OF TRANSACTION



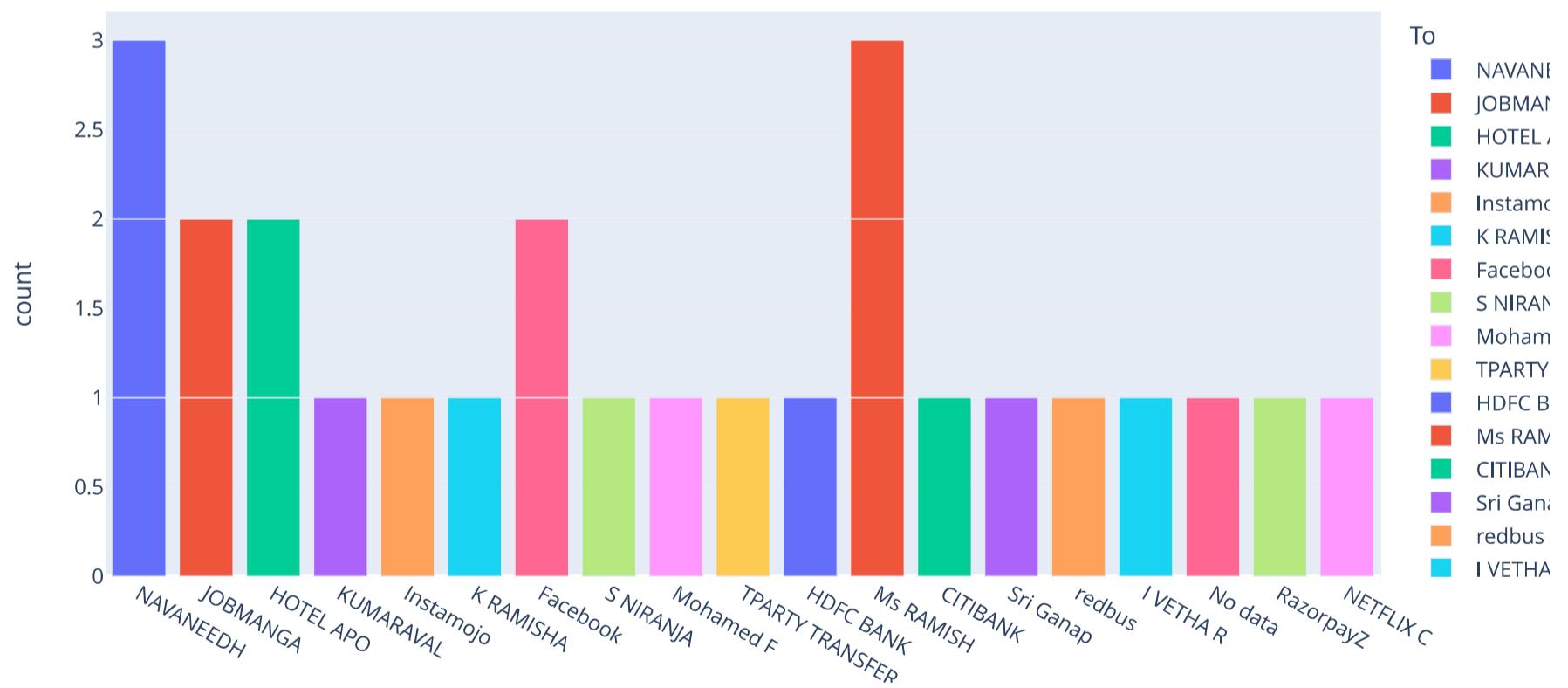
```
In [64]: fig=px.histogram(Final_statm,x="Mode of Transaction",
                      color="Mode of Transaction",
                      title="MODE OF TRANSACTION")
fig.show()
```

MODE OF TRANSACTION

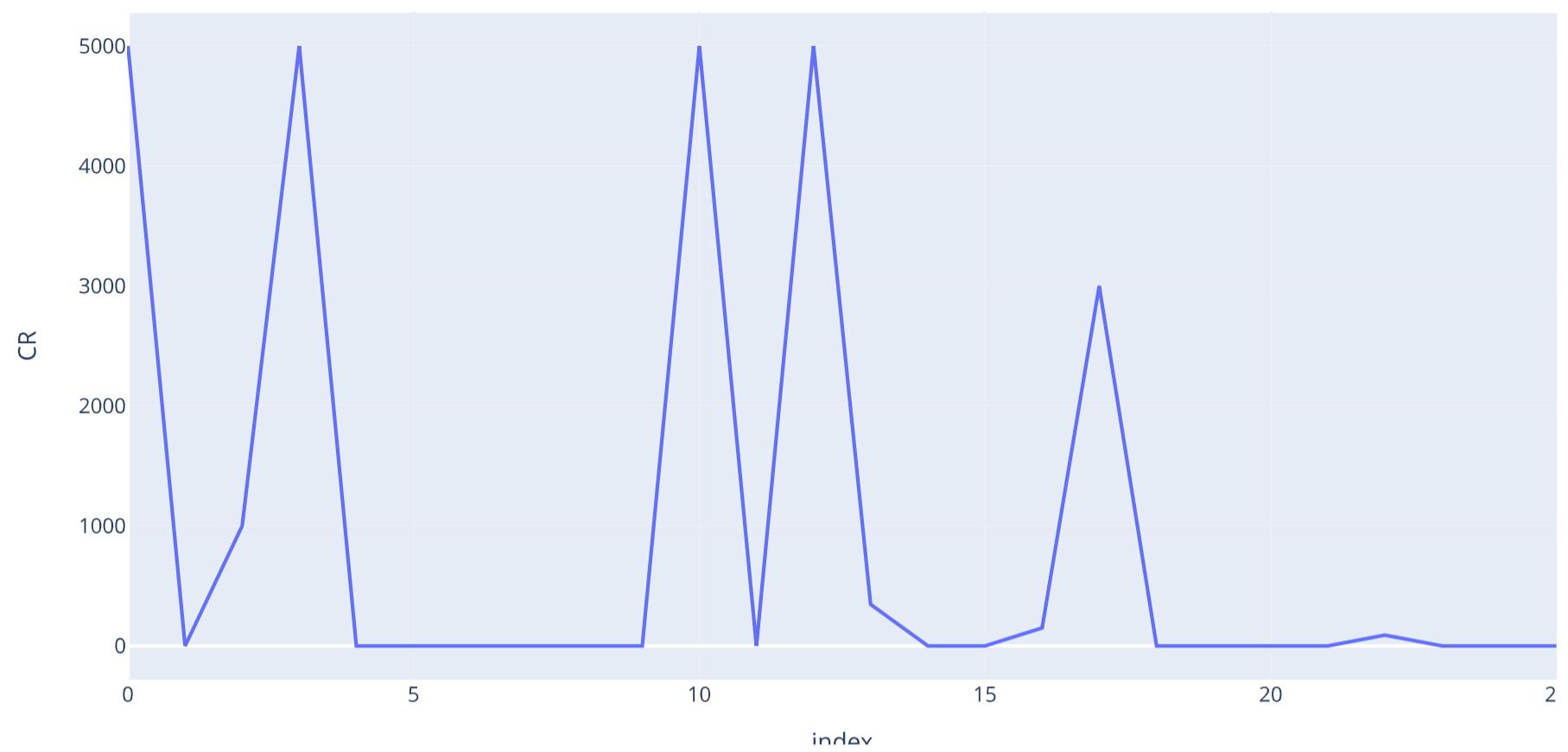


```
In [65]: fig=px.bar(Final_statm,x="To",
                  color="To",
                  title="Money Tranfered To")
fig.show()
```

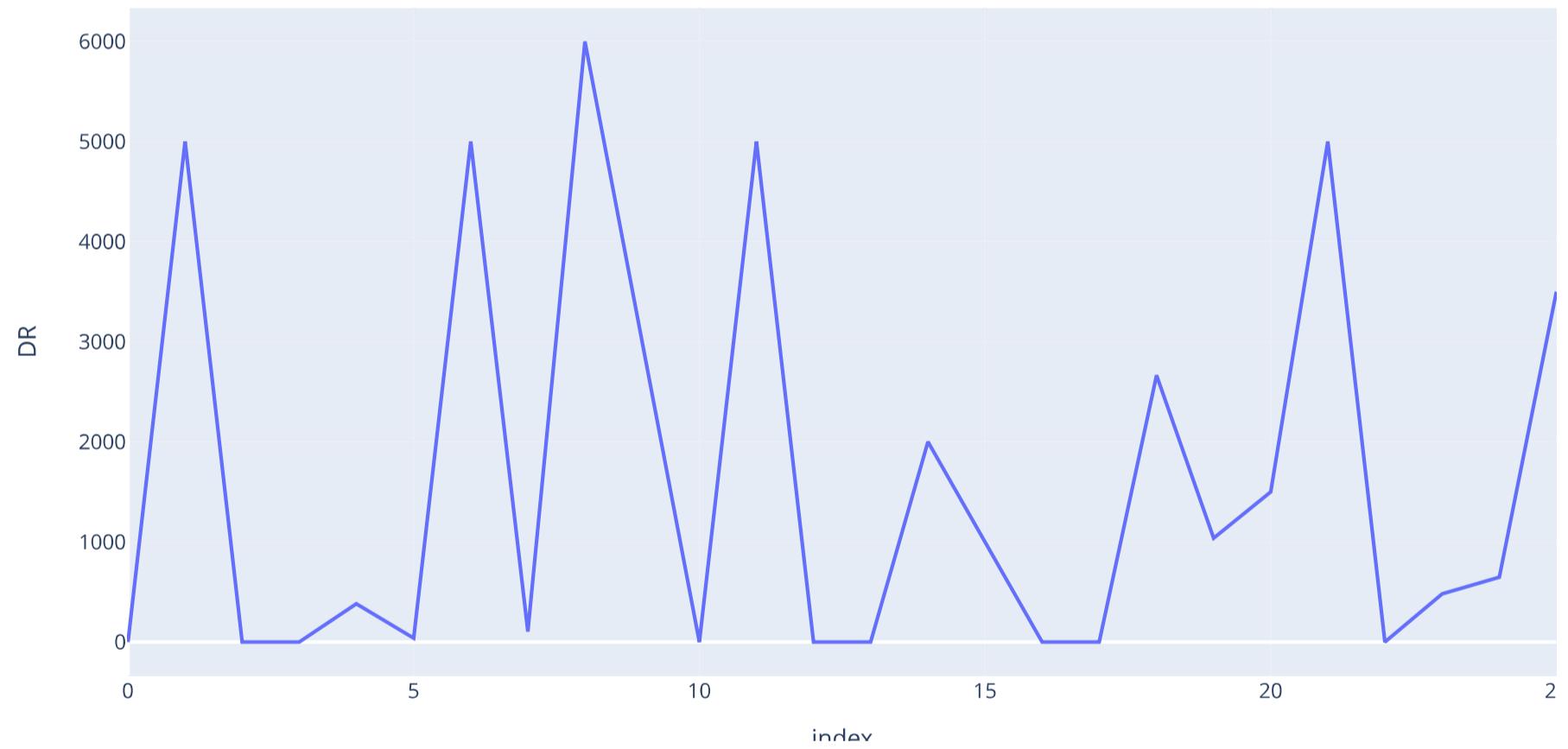
Money Tranfered To



```
In [66]: fig = px.line(Final_statm, y="CR")
fig.show()
```

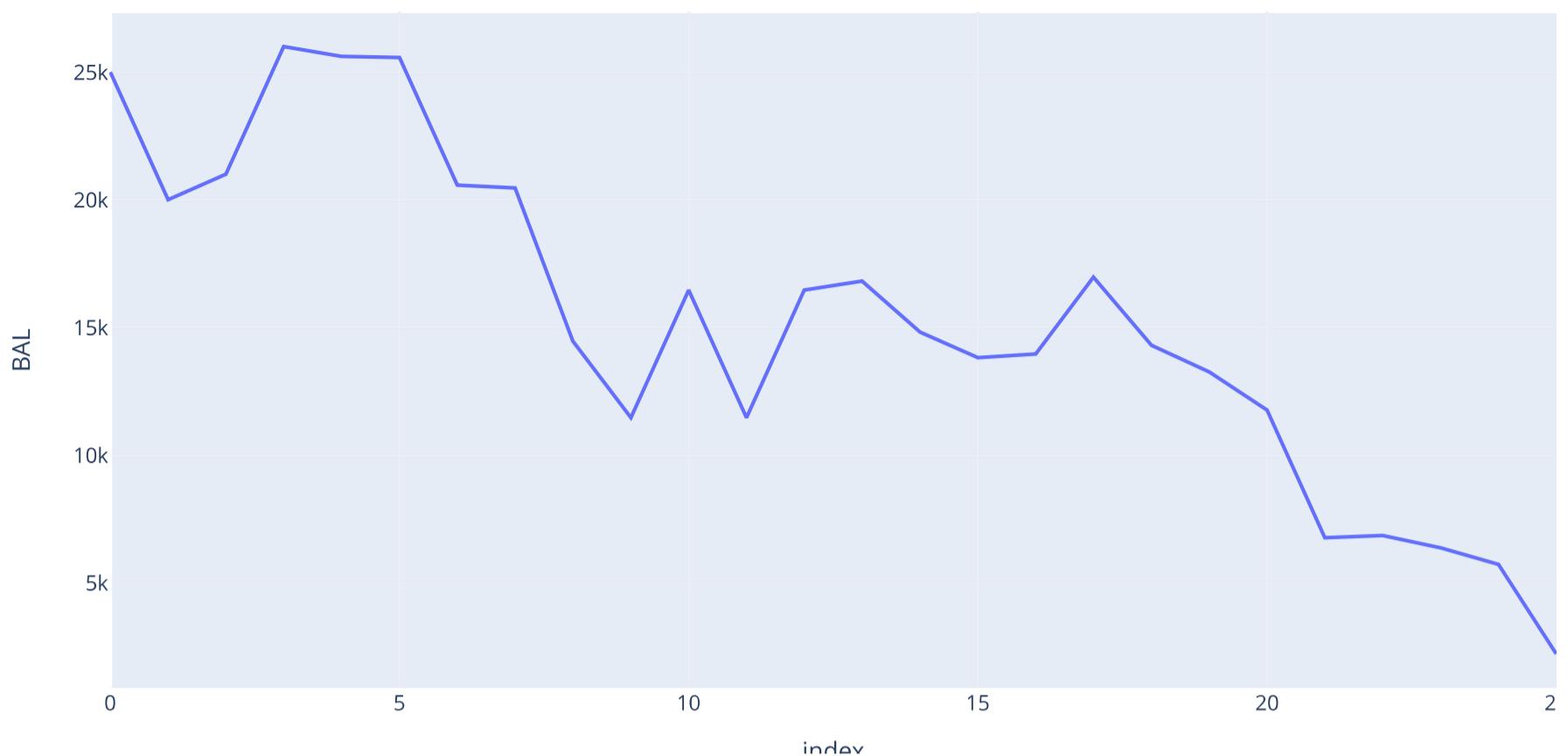


```
In [67]: fig = px.line(Final_statm, y="DR")
fig.show()
```



In [68]:

```
fig = px.line(Final_statm,y="BAL")
fig.show()
```



In [69]:

```
Total_No_of_trans_datewise
```

Out[69]:

Total No of Transactions Per Day	
01-11-2022	6
03-11-2022	5
04-11-2022	3
11-11-2022	2
10-11-2022	2
08-11-2022	2
07-11-2022	2
02-11-2022	1
13-11-2022	1
06-11-2022	1
12-11-2022	1

In [70]:

```
To_which_bank
```

Out[70]:

Banks Involved	
HDFC BANK	7
Indian Ba	3
No data	2
HDFCBANK	2
State Ban	2
Yes Bank	2
Axis Bank	2
ICICI Ban	1
INDUSIND	1
Paytm Pay	1
P0802	1
Indian Ov	1
NEFT	1

```
In [71]: imp_datas
```

Out[71]:

	Details	Amount
0	Maximum amount credited	5000.00
1	Maximum amount debited	6000.00
2	Opening balance	25011.94
3	Closing balance	2232.94

```
In [72]: Mode_of_Transactions_done
```

Out[72]:

	Mode of Transaction	
	UPI	20
	NEFT	2
	IMPS	2
	Razorpay Software Pvt Ltd Fund	1
	INB	1

```
In [73]: Type_of_transaction
```

Out[73]:

	Type	
	P2A	13
	P2M	9
	CITIN22362827394	1
	IFT	1
	N308222192189789	1
	No data	1

```
In [ ]:
```