

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

```
In [2]: df = pd.read_csv(r'C:\Users\VARBRU\OneDrive\Desktop\FFINAL_FILES\FFINAL_FILES_CSV\FFINAL_FILES_CSV\Hospitals_dummy.csv')#
df=pd.DataFrame(df)
(df)
```

```
Out[2]:
```

	Hospital ID	Hospital Name	Hospital City	Insurance ID	Insurance Company
0	70001	The Johns Hopkins Hospital	Baltimore, MD	1001	Aegon Life Insurance Co. Ltd.
1	70001	NaN	Baltimore, MD	1001	NaN
2	70001	The Johns Hopkins Hospital	Baltimore, MD	1001	Aegon Life Insurance Co. Ltd.
3	70002	Massachusetts General Hospital	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
4	70002	Massachusetts General Hospital	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
5	70002	NaN	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
6	70003	UCSF Medical Center	San Francisco, CA	1001	Aegon Life Insurance Co. Ltd.
7	70004	Mayo Clinic	Phoenix, AZ	1001	Aegon Life Insurance Co. Ltd.
8	70005	Brigham And Women's Hospital	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
9	80001	Rechts der Isar Hospital	Munich	1002	Edelweiss Life Insurance Co.
10	80002	University Hospital Cologne	Cologne	1002	Edelweiss Life Insurance Co.
11	80002	University Hospital Cologne	Cologne	1002	Edelweiss Life Insurance Co.
12	80003	University Medical Center	Freiburg	1002	Edelweiss Life Insurance Co.
13	80003	University Medical Center	Freiburg	1002	NaN
14	80003	University Medical Center	Freiburg	1002	Edelweiss Life Insurance Co.
15	80004	University Medical Center Schleswig Holstein	Keil	1002	Edelweiss Life Insurance Co.
16	80005	University Hospital Regensburg	Regensburg	1002	Edelweiss Life Insurance Co.
17	90001	Rainbow Hospitals	Hyderabad	1003	Birla Sun Life Insurance Co.

	Hospital ID	Hospital Name	Hospital City	Insurance ID	Insurance Company
18	90001	Rainbow Hospitals	NaN	1003	Birla Sun Life Insurance Co.
19	90001	Rainbow Hospitals	Hyderabad	1003	NaN
20	90002	Apollo Hospital	Visakhapatnam	1003	Birla Sun Life Insurance Co.
21	90003	Gauhati Medical College and Hospital	Gauhati	1003	Birla Sun Life Insurance Co.
22	90004	AIIMS	Patna	1003	Birla Sun Life Insurance Co.
23	90004	AIIMS	Patna	1003	Birla Sun Life Insurance Co.
24	90005	Ruby General Hospital	Kolkata	1003	Birla Sun Life Insurance Co.

In [3]:

```
df = pd.read_csv(r'C:\Users\VARBRU\OneDrive\Desktop\FFINAL_FILES\FFINAL_FILES_CSV\FFINAL_FILES_CSV\Hospitals_dummy.csv')#
df=pd.DataFrame(df)
(df)
```

Out[3]:

	Hospital ID	Hospital Name	Hospital City	Insurance ID	Insurance Company
0	70001	The Johns Hopkins Hospital	Baltimore, MD	1001	Aegon Life Insurance Co. Ltd.
1	70001	NaN	Baltimore, MD	1001	NaN
2	70001	The Johns Hopkins Hospital	Baltimore, MD	1001	Aegon Life Insurance Co. Ltd.
3	70002	Massachusetts General Hospital	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
4	70002	Massachusetts General Hospital	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
5	70002	NaN	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
6	70003	UCSF Medical Center	San Francisco, CA	1001	Aegon Life Insurance Co. Ltd.
7	70004	Mayo Clinic	Phoenix, AZ	1001	Aegon Life Insurance Co. Ltd.
8	70005	Brigham And Women's Hospital	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
9	80001	Rechts der Isar Hospital	Munich	1002	Edelweiss Life Insurance Co.
10	80002	University Hospital Cologne	Cologne	1002	Edelweiss Life Insurance Co.
11	80002	University Hospital Cologne	Cologne	1002	Edelweiss Life Insurance Co.
12	80003	University Medical Center	Freiburg	1002	Edelweiss Life Insurance Co.

	Hospital ID	Hospital Name	Hospital City	Insurance ID	Insurance Company
13	80003	University Medical Center	Freiburg	1002	NaN
14	80003	University Medical Center	Freiburg	1002	Edelweiss Life Insurance Co.
15	80004	University Medical Center Schleswig Holstein	Keil	1002	Edelweiss Life Insurance Co.
16	80005	University Hospital Regensburg	Regensburg	1002	Edelweiss Life Insurance Co.
17	90001	Rainbow Hospitals	Hyderabad	1003	Birla Sun Life Insurance Co.
18	90001	Rainbow Hospitals	NaN	1003	Birla Sun Life Insurance Co.
19	90001	Rainbow Hospitals	Hyderabad	1003	NaN
20	90002	Apollo Hospital	Visakhapatnam	1003	Birla Sun Life Insurance Co.
21	90003	Gauhati Medical College and Hospital	Gauhati	1003	Birla Sun Life Insurance Co.
22	90004	AIIMS	Patna	1003	Birla Sun Life Insurance Co.
23	90004	AIIMS	Patna	1003	Birla Sun Life Insurance Co.
24	90005	Ruby General Hospital	Kolkata	1003	Birla Sun Life Insurance Co.

In [4]: `df.isnull() #checking the null values`

Out[4]:

	Hospital ID	Hospital Name	Hospital City	Insurance ID	Insurance Company
0	False	False	False	False	False
1	False	True	False	False	True
2	False	False	False	False	False
3	False	False	False	False	False
4	False	False	False	False	False
5	False	True	False	False	False
6	False	False	False	False	False
7	False	False	False	False	False
8	False	False	False	False	False

	Hospital ID	Hospital Name	Hospital City	Insurance ID	Insurance Company
9	False	False	False	False	False
10	False	False	False	False	False
11	False	False	False	False	False
12	False	False	False	False	False
13	False	False	False	False	True
14	False	False	False	False	False
15	False	False	False	False	False
16	False	False	False	False	False
17	False	False	False	False	False
18	False	False	True	False	False
19	False	False	False	False	True
20	False	False	False	False	False
21	False	False	False	False	False
22	False	False	False	False	False
23	False	False	False	False	False
24	False	False	False	False	False

In [5]:

```
duplicate=df[df.duplicated()]
duplicate
```

Out[5]:

	Hospital ID	Hospital Name	Hospital City	Insurance ID	Insurance Company
2	70001	The Johns Hopkins Hospital	Baltimore, MD	1001	Aegon Life Insurance Co. Ltd.
4	70002	Massachusetts General Hospital	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
11	80002	University Hospital Cologne	Cologne	1002	Edelweiss Life Insurance Co.
14	80003	University Medical Center	Freiburg	1002	Edelweiss Life Insurance Co.
23	90004	AIIMS	Patna	1003	Birla Sun Life Insurance Co.

```
In [6]: remove_duplicates=df.drop_duplicates()
remove_duplicates #drop duplicates
```

```
Out[6]:
```

	Hospital ID	Hospital Name	Hospital City	Insurance ID	Insurance Company
0	70001	The Johns Hopkins Hospital	Baltimore, MD	1001	Aegon Life Insurance Co. Ltd.
1	70001	NaN	Baltimore, MD	1001	NaN
3	70002	Massachusetts General Hospital	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
5	70002	NaN	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
6	70003	UCSF Medical Center	San Francisco, CA	1001	Aegon Life Insurance Co. Ltd.
7	70004	Mayo Clinic	Phoenix, AZ	1001	Aegon Life Insurance Co. Ltd.
8	70005	Brigham And Women's Hospital	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
9	80001	Rechts der Isar Hospital	Munich	1002	Edelweiss Life Insurance Co.
10	80002	University Hospital Cologne	Cologne	1002	Edelweiss Life Insurance Co.
12	80003	University Medical Center	Freiburg	1002	Edelweiss Life Insurance Co.
13	80003	University Medical Center	Freiburg	1002	NaN
15	80004	University Medical Center Schleswig Holstein	Keil	1002	Edelweiss Life Insurance Co.
16	80005	University Hospital Regensburg	Regensburg	1002	Edelweiss Life Insurance Co.
17	90001	Rainbow Hospitals	Hyderabad	1003	Birla Sun Life Insurance Co.
18	90001	Rainbow Hospitals	NaN	1003	Birla Sun Life Insurance Co.
19	90001	Rainbow Hospitals	Hyderabad	1003	NaN
20	90002	Apollo Hospital	Visakhapatnam	1003	Birla Sun Life Insurance Co.
21	90003	Gauhati Medical College and Hospital	Gauhati	1003	Birla Sun Life Insurance Co.
22	90004	AIIMS	Patna	1003	Birla Sun Life Insurance Co.
24	90005	Ruby General Hospital	Kolkata	1003	Birla Sun Life Insurance Co.

```
In [7]: drop_null=remove_duplicates.dropna()
drop_null #Drop Null Values
```

Out[7]:

	Hospital ID	Hospital Name	Hospital City	Insurance ID	Insurance Company
0	70001	The Johns Hopkins Hospital	Baltimore, MD	1001	Aegon Life Insurance Co. Ltd.
3	70002	Massachusetts General Hospital	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
6	70003	UCSF Medical Center	San Francisco, CA	1001	Aegon Life Insurance Co. Ltd.
7	70004	Mayo Clinic	Phoenix, AZ	1001	Aegon Life Insurance Co. Ltd.
8	70005	Brigham And Women's Hospital	Boston, MA	1001	Aegon Life Insurance Co. Ltd.
9	80001	Rechts der Isar Hospital	Munich	1002	Edelweiss Life Insurance Co.
10	80002	University Hospital Cologne	Cologne	1002	Edelweiss Life Insurance Co.
12	80003	University Medical Center	Freiburg	1002	Edelweiss Life Insurance Co.
15	80004	University Medical Center Schleswig Holstein	Keil	1002	Edelweiss Life Insurance Co.
16	80005	University Hospital Regensburg	Regensburg	1002	Edelweiss Life Insurance Co.
17	90001	Rainbow Hospitals	Hyderabad	1003	Birla Sun Life Insurance Co.
20	90002	Apollo Hospital	Visakhapatnam	1003	Birla Sun Life Insurance Co.
21	90003	Gauhati Medical College and Hospital	Gauhati	1003	Birla Sun Life Insurance Co.
22	90004	AIIMS	Patna	1003	Birla Sun Life Insurance Co.
24	90005	Ruby General Hospital	Kolkata	1003	Birla Sun Life Insurance Co.

In [8]: `drop_null.to_csv('Hospitals_dummy_Final')`

In []:

In []: