Histogram Analysis:

The dataset here has four variables mainly

1) donation given by the patient to the hospital.

2) the health score given to the hospital.

3) Patient rating

4)Number of beds in the hospital

Importing packages Required

In [17]:
```
import pandas as pd
import numpy as np
import matplotlib as plt
import seaborn as sb
```

Importing the dataset

In [21]:
```
data = pd.read_csv("C:/Users\Maria Sanjai/Desktop/hist.csv")
```

In [22]:
```
data.head()
```

Out[22]:

	Donation	Health_Score	Patient_Rating	No.of_beds
0	40	0.439024	3	608
1	20	0.097561	8	514
2	10	0.048780	1	734
3	30	0.634146	8	550
4	20	0.024390	5	852

In [23]:
```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 6218 entries, 0 to 6217
Data columns (total 4 columns):
 #   Column          Non-Null Count  Dtype  
---  ------          --------------  -----  
 0   Donation        6218 non-null   int64  
 1   Health_Score    6218 non-null   float64
 2   Patient_Rating  6218 non-null   int64  
 3   No.of_beds      6218 non-null   int64  
dtypes: float64(1), int64(3)
memory usage: 194.4 KB
```

In [24]:
```
data.describe()
```

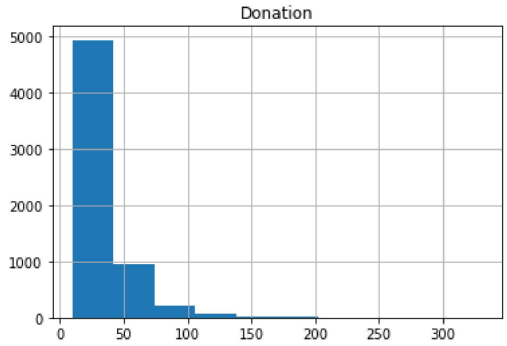
Out[24]:

	Donation	Health_Score	Patient_Rating	No.of_beds
count	6218.000000	6218.000000	6218.000000	6218.000000
mean	32.587649	0.517668	5.540849	549.878257
std	24.501676	0.289211	2.866897	258.436873
min	10.000000	0.001667	1.000000	100.000000
25%	20.000000	0.263094	3.000000	325.000000
50%	30.000000	0.529706	6.000000	550.000000
75%	40.000000	0.771429	8.000000	769.000000
max	330.000000	1.000000	10.000000	1000.000000

Constructing Histogram for the data

In [25]:
```
data.hist(["Donation"])
```

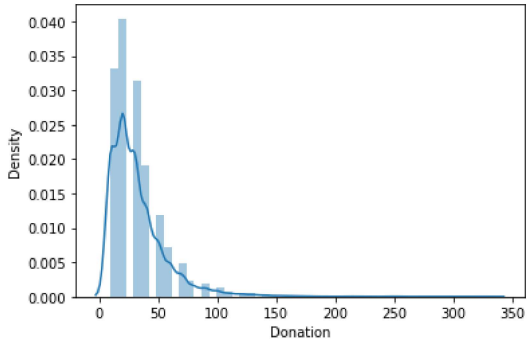
Out[25]:
```
array([[<AxesSubplot:title={'center':'Donation'}>]], dtype=object)
```



In [18]:
```
sb.distplot(data["Donation"])
```

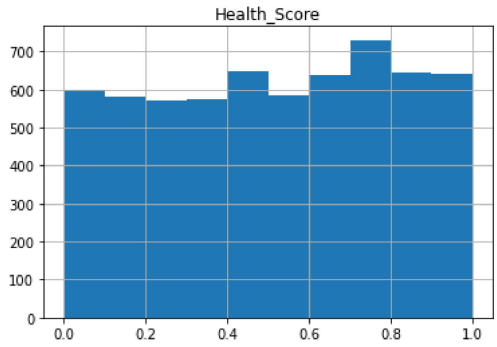
```
C:\Users\Maria Sanjai\anaconda3\lib\site-packages\seaborn\distributions.py:2557: FutureWarning: `distplot` is a deprecated func
tion and will be removed in a future version. Please adapt your code to use either `displot` (a figure-level function with simi
lar flexibility) or `histplot` (an axes-level function for histograms).
  warnings.warn(msg, FutureWarning)
```

Out[18]:
```
<AxesSubplot:xlabel='Donation', ylabel='Density'>
```



In [11]:
```
data.hist(["Health_Score"])
```

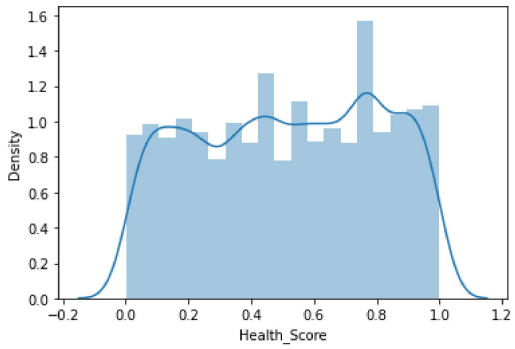
Out[11]:
```
array([[<AxesSubplot:title={'center':'Health_Score'}>]], dtype=object)
```



In [20]:
```
sb.distplot(data["Health_Score"])
```

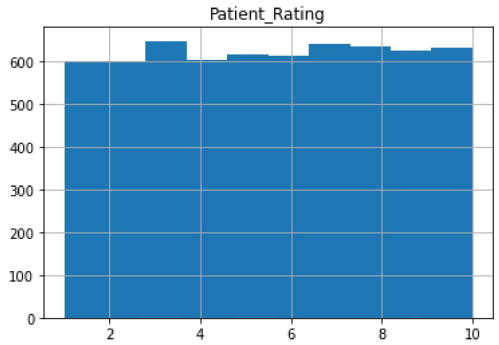
```
C:\Users\Maria Sanjai\anaconda3\lib\site-packages\seaborn\distributions.py:2557: FutureWarning: `distplot` is a deprecated func
tion and will be removed in a future version. Please adapt your code to use either `displot` (a figure-level function with simi
lar flexibility) or `histplot` (an axes-level function for histograms).
  warnings.warn(msg, FutureWarning)
```

Out[20]:
```
<AxesSubplot:xlabel='Health_Score', ylabel='Density'>
```



In [30]:
```
data.hist(["Patient_Rating"])
```

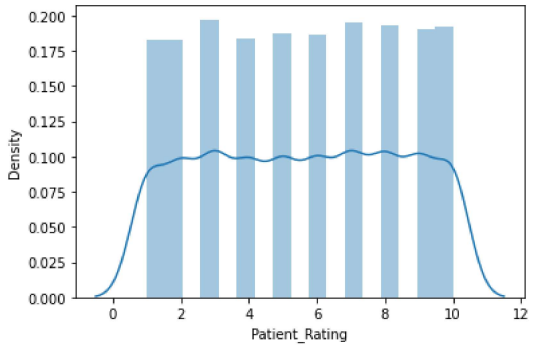
Out[30]:
```
array([[<AxesSubplot:title={'center':'Patient_Rating'}>]], dtype=object)
```



In [31]:
```
sb.distplot(data["Patient_Rating"])
```

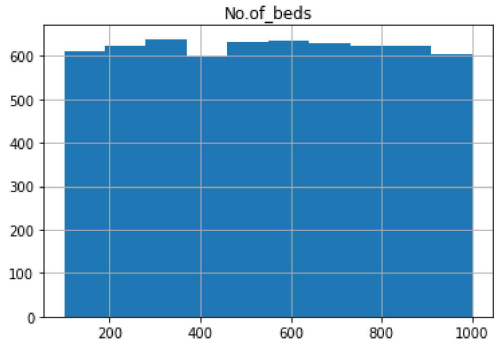
```
C:\Users\Maria Sanjai\anaconda3\lib\site-packages\seaborn\distributions.py:2557: FutureWarning: `distplot` is a deprecated func
tion and will be removed in a future version. Please adapt your code to use either `displot` (a figure-level function with simi
lar flexibility) or `histplot` (an axes-level function for histograms).
  warnings.warn(msg, FutureWarning)
```

Out[31]:
```
<AxesSubplot:xlabel='Patient_Rating', ylabel='Density'>
```



In [32]:
```
data.hist(["No.of_beds"])
```

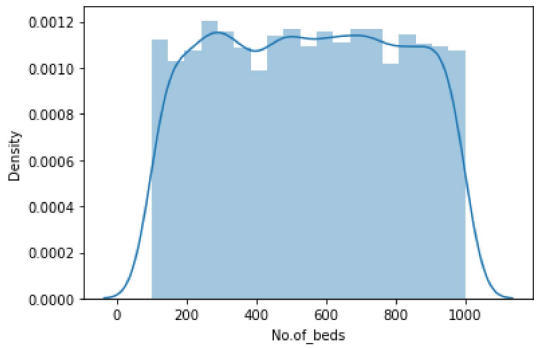
Out[32]:
```
array([[<AxesSubplot:title={'center':'No.of_beds'}>]], dtype=object)
```



In [33]:
```
sb.distplot(data["No.of_beds"])
```

```
C:\Users\Maria Sanjai\anaconda3\lib\site-packages\seaborn\distributions.py:2557: FutureWarning: `distplot` is a deprecated func
tion and will be removed in a future version. Please adapt your code to use either `displot` (a figure-level function with simi
lar flexibility) or `histplot` (an axes-level function for histograms).
  warnings.warn(msg, FutureWarning)
```

Out[33]:
```
<AxesSubplot:xlabel='No.of_beds', ylabel='Density'>
```



From this data we can see that the Donation variable is right skewed or positively skewed,but all other variables like health score, patient rating and no. of beds in hospital are multimodal variables. The donation mostly lies between 0-50Rs. so the rest are outliers.