```
import pandas as pd
import matplotlib.pyplot as plt
import numpy as np
import seaborn as sns

f = pd.read_csv('Medicine_Details.csv')
f
```

	Medicine Name	Composition	Uses	Side_effects	
0	Avastin 400mg Injection	Bevacizumab (400mg)	Cancer of colon and rectum Non- small cell lun	Rectal bleeding Taste change Headache Noseblee	https://onemg.gumlet.io/l_wa
1	Augmentin 625 Duo Tablet	Amoxycillin (500mg) + Clavulanic Acid (125mg)	Treatment of Bacterial infections	Vomiting Nausea Diarrhea Mucocutaneous candidi	https://onemg.gumlet.io/l_wa
2	Azithral 500 Tablet	Azithromycin (500mg)	Treatment of Bacterial infections	Nausea Abdominal pain Diarrhea	https://onemg.gumlet.io/l_wa
3	Ascoril LS Syrup	Ambroxol (30mg/5ml) + Levosalbutamol (1mg/5ml)	Treatment of Cough with mucus	Nausea Vomiting Diarrhea Upset stomach Stomach	https://onemg.gumlet.io/l_wa
4	Aciloc 150 Tablet	Ranitidine (150mg)	Treatment of Gastroesophageal reflux disease (	Headache Diarrhea Gastrointestinal disturbance	https://onemg.gumlet.io/l_wa
		•••			
11820	Zilarta-CT 40/6.25 Tablet	Azilsartan medoxomil (40mg) + Chlorthalidone (	Hypertension (high blood pressure)	Dizziness Tiredness Decreased potassium level 	https://onemg.gumlet.io/l_wa
11821	Zipcoz Tablet	Chromium Picolinate (100mcg) + D- Chiro Inosito	Polycystic ovarian syndrome (PCOS)	Rash Nausea Paresthesia tingling or pricking s	https://onemg.gumlet.io/l_wa
11822	Zestasil 100 Tablet	Sildenafil (100mg)	Treatment of Erectile dysfunction	Flushing sense of warmth in the face ears neck	https://onemg.gumlet.io/l_wa
11823	Zedruff Shampoo	Ketoconazole (2% w/v) + Zinc pyrithione (1% w/v)	Treatment of Dandruff	Application site reactions burning irritation	https://onemg.gumlet.io/l_wa
11824	Zedruff Shampoo	Ketoconazole (2% w/v) + Zinc pyrithione (1% w/v)	Treatment of Dandruff	Application site reactions burning irritation	https://onemg.gumlet.io/l_wa

11825 rows × 9 columns

f.head()

		Medicine Name	Composition	Uses	Side_effects	
	0	Avastin 400mg Injection	Bevacizumab (400mg)	Cancer of colon and rectum Non- small cell lun	Rectal bleeding Taste change Headache Noseblee	https://onemg.gumlet.io/l_waterm
	1	Augmentin 625 Duo Tablet	Amoxycillin (500mg) + Clavulanic Acid (125mg)	Treatment of Bacterial infections	Vomiting Nausea Diarrhea Mucocutaneous candidi	https://onemg.gumlet.io/l_waterm
f.tai]	<b>2</b> L()	Azithral 500 Tablet	Azithromycin (500mg)	Treatment of Bacterial infections	Nausea Abdominal pain Diarrhea	https://onemg.gumlet.io/l_waterm
		Medicine Name Composition		Uses S	ide_effects	
	Azilsartan				Dizziness	

	Medicine Name	Composition	Uses	Side_effects	
11820	Zilarta- CT 40/6.25 Tablet	Azilsartan medoxomil (40mg) + Chlorthalidone (	Hypertension (high blood pressure)	Dizziness Tiredness Decreased potassium level	https://onemg.gumlet.io/l_watermark
11821	Zipcoz Tablet	Chromium Picolinate (100mcg) + D- Chiro Inosito	Polycystic ovarian syndrome (PCOS)	Rash Nausea Paresthesia tingling or pricking s	https://onemg.gumlet.io/l_watermark
11822	Zestasil 100 Tablet	Sildenafil (100mg)	Treatment of Erectile dysfunction	Flushing sense of warmth in the face ears neck	https://onemg.gumlet.io/l_watermark_
11823	Zedruff Shampoo	Ketoconazole (2% w/v) + Zinc pyrithione (1% w/v)	Treatment of Dandruff	Application site reactions burning irritation	https://onemg.gumlet.io/l_watermark_
4		Ketoconazole (2% w/v) +		Application	Þ

```
exe_val = f['Excellent Review %']

print("Mean is : ", exe_val.mean())
    Mean is : 38.516025369978856

print("Median is : ", exe_val.median())
    Median is : 34.0

print("Standard Deviation is :", exe_val.std())
    Standard Deviation is : 25.225343025425268

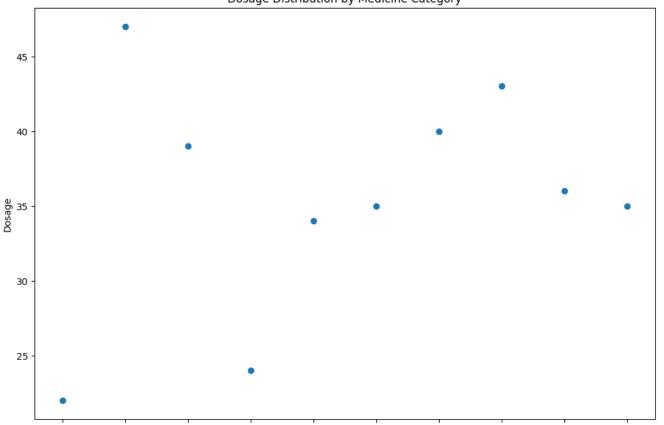
# data pre-processing
f = f.dropna()
f
```

```
Medicine
                                                                                                                                                   Excellent
                             Composition
                                                        Uses
                                                                Side_effects
                                                                                                                     Image URL
                                                                                                                                   Manufacturer
                    Name
                                                                                                                                                    Review %
                                                               Rectal bleeding
                                              Cancer of colon
                  Avastin
                                                                                                                                  Roche Products
                             Bevacizumab
                                                                 Taste change
                                                                                https://onemg.gumlet.io/l_watermark 346,w 480,...
         0
                  400mg
                                             and rectum Non-
                                                                                                                                                           22
                                                                                                                                     India Pvt Ltd
                                  (400mg)
                                                                    Headache
                 Injection
                                               small cell lun...
                                                                   Noseblee...
                                                                      Vomiting
                               Amoxycillin
                                                                                                                                           Glaxo
              Augmentin
                                                 Treatment of
                                                                      Nausea
                                (500mg) +
                                                                                                                                       SmithKline
                 625 Duo
                                                    Bacterial
                                                                     Diarrhea
                                                                                https://onemg.gumlet.io/l_watermark_346,w_480,...
                                                                                                                                                           47
                                                                                                                                 Pharmaceuticals
                           Clavulanic Acid
                   Tablet
                                                    infections Mucocutaneous
                                  (125mg)
                                                                                                                                              Ltd
                                                                     candidi...
                                                 Treatment of
                                                                                                                                         Alembic
                                                                      Nausea
                  Azithral
                             Azithromycin
         2
                                                    Bacterial
                                                               Abdominal pain
                                                                                https://onemg.gumlet.io/l_watermark_346,w_480,... Pharmaceuticals
                                                                                                                                                           39
                                 (500mg)
               500 Tablet
                                                    infections
                                                                     Diarrhea
                                                                      Nausea
                                Ambroxol
                                                 Treatment of
                                                                      Vomiting
                                                                                                                                        Glenmark
               Ascoril LS
                             (30mg/5mI) +
                                                               Diarrhea Upset
                                                                                https://onemg.gumlet.io/l_watermark_346,w_480,... Pharmaceuticals
                                                                                                                                                           24
                                                  Cough with
                          Levosalbutamol
                   Syrup
                                                      mucus
                                                                     stomach
                                                                                                                                              I td
                              (1mg/5ml)...
                                                                    Stomach...
                                                                    Headache
                                                                                                                                           Cadila
                                                 Treatment of
               Aciloc 150
                                Ranitidine
                                                                     Diarrhea
                                           Gastroesophageal
                                                                                https://onemg.gumlet.io/l_watermark_346,w_480,... Pharmaceuticals
                                                                                                                                                           34
                                                               Gastrointestinal
                   Tablet
                                 (150mg)
                                            reflux disease (...
                                                                                                                                              Ltd
                                                                   disturbance
                                Azilsartan
                                                                     Dizziness
               Zilarta-CT
                                medoxomil
                                                Hypertension
                                                                    Tiredness
       11820
                  40/6.25
                                 (40mg) +
                                                  (high blood
                                                                   Decreased
                                                                                https://onemg.gumlet.io/l_watermark_346,w 480,...
                                                                                                                                                           67
                                                                                                                                   Micro Labs Ltd
                            Chlorthalidone
                   Tablet
                                                    pressure)
                                                               potassium level
                                       (...
                                Chromium
                                                                 Rash Nausea
                                                                                                                                          Lifeline
                  Zipcoz
                                Picolinate
                                            Polycystic ovarian
                                                                  Paresthesia
                                                                                https://onemg.gumlet.io/l_watermark_346,w_480,...
       11821
                                                                                                                                  Remedies India
                                                                                                                                                            0
                   Tablet
                            (100mcg) + D-
                                           syndrome (PCOS)
                                                                    tingling or
                                                                                                                                           Pvt Ltd
                            Chiro Inosito...
                                                                   pricking s...
                                                               Flushing sense
                                                 Treatment of
                                 Sildenafil
                 Zestasil
                                                                  of warmth in
       11822
                                                                                https://onemg.gumlet.io/l\_watermark\_346,w\_480,...
                                                                                                                                  TBG pharma ltd
                                                                                                                                                           25
                                                      Erectile
               100 Tablet
                                 (100mg)
                                                                  the face ears
                                                  dysfunction
                                                                       neck...
                             Ketoconazole
                                                                Application site
                                                                                                                                      Minova Life
                  Zedruff
                           (2% w/v) + Zinc
                                                 Treatment of
                                                                     reactions
       11823
                                                                                                                                     Sciences Pvt
                                                                                                                                                            0
                                                                                https://onemg.gumlet.io/l_watermark_346,w_480,...
                Shampoo
                            pyrithione (1%
                                                     Dandruff
                                                                      burning
                                                                                                                                              Ltd
                                     w/v)
                                                                    irritation ...
comp = f['Composition'].count()
comp
      11825
      11825 rows x 9 columns
f['Composition'].name == 'Azithromycin (500mg)'
      False
average_dosage = f.groupby('Medicine Name')['Average Review %'].mean()
print(average_dosage)
      Medicine Name
      A Doxid 100mg Capsule
                                    34.0
      A Ret HC Cream
                                    20.0
      A-CN Gel
                                    33.0
      A-Ret 0.025% Gel
                                    48.0
      A-Ret 0.05% Gel
                                    31.0
      Zytrav Eye Drop
                                    58.0
      Zyvac Tcv-PFS Vaccine
                                    33.0
      Zyven OD 100 Tablet ER
                                    0.0
      Zyven-OD 50 Tablet ER
                                    46.0
      leocan 150mg Tablet
      Name: Average Review %, Length: 11498, dtype: float64
correlation = f[['Medicine Name', 'Poor Review %']].corr()
print(correlation)
```

```
Poor Review %
Poor Review %
1.0
<ipython-input-16-1fec94851cea>:1: FutureWarning: The default value of numeric_only in DataFrame.corr is deprecated. In a future versio correlation = f[['Medicine Name', 'Poor Review %']].corr()

plt.figure(figsize=(12, 8))
plt.scatter(x='Medicine Name', y='Excellent Review %', data=f.head(10))
plt.title('Dosage Distribution by Medicine Category')
plt.xlabel('Medicine Category')
plt.ylabel('Dosage')
plt.show()
```

## Dosage Distribution by Medicine Category



Avastin 400mAggmjeottionn625 DAkvitTable500 Talktedoril LS SyrAxpiloc 150 Talbegra 120mg Talktet 25 TabletAricep 5 Talbhedxyclav 625ATablext25mg Tablet
Medicine Category

```
# Read the first 100 rows
first_100_rows = f.head(100)

# Line plot for 'dosage'
plt.figure(figsize=(10, 6))
first_100_rows['Average Review %'].plot(kind='line', marker='o', linestyle='-', color='b')
plt.title('Line Plot for Medicine Review in the First 100 Rows')
plt.xlabel('Index')
plt.ylabel('Medicine')
plt.grid(True)
plt.show()
```

plt.xlabel('Poor Review')
plt.ylabel('Average Review')

plt.grid(True)
plt.show()

```
Line Plot for Medicine Review in the First 100 Rows
        60
        50
        40
        20
        10
# Group by 'medicine_category' and calculate the count
medicine_category_counts = f.groupby('Medicine Name').size()
# Display the result
print(medicine_category_counts)
     Medicine Name
     A Doxid 100mg Capsule
                               1
     A Ret HC Cream
                               1
     A-CN Gel
                               1
     A-Ret 0.025% Gel
     A-Ret 0.05% Gel
                               1
     Zytrav Eye Drop
                               1
     Zyvac Tcv-PFS Vaccine
     Zyven OD 100 Tablet ER
                               1
     Zyven-OD 50 Tablet ER
                               1
     leocan 150mg Tablet
     Length: 11498, dtype: int64
f_pr = f['Poor Review %']
f_manf = f['Average Review %']
merged_df = pd.merge(f_pr, f_manf, on=f_pr, how='left')
print(merged_df)
               key_0 Poor Review % Average Review %
     0
                                 22
                                                    56
                  22
     1
                  22
                                 22
                                                    46
     2
                  22
                                 22
                                                    47
     3
                  22
                                 22
                                                    56
     4
                  22
                                 22
                                                    37
     12623934
                 100
                                100
                                                     0
     12623935
                 100
                                100
                                                     0
     12623936
                 100
                                100
                                                     0
                                                     0
     12623937
                 100
                                100
     12623938
                 100
                                100
                                                     0
     [12623939 rows x 3 columns]
# Line plot for 'Merged Data'
plt.figure(figsize=(10, 8))
merged_df.head(50).plot(kind='line', marker='o', linestyle='--', color='g')
plt.title('Line Plot for Medicine Review in the First 50 Rows')
```

<Figure size 1000x800 with 0 Axes>

