

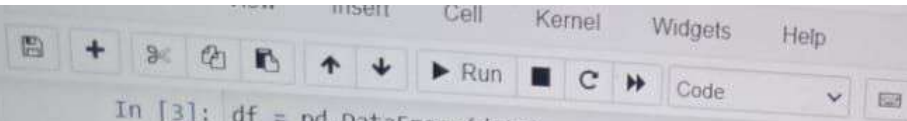
```
In [1]: import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

```
In [2]: data = {
    'Name': ['Tiffany Ramirez', 'Ruben Burns', 'Chad Byrd', 'Antonio Frederick', 'Mrs. Brandy Flowers',
            'Patrick Parker', 'Charles Horton', 'Patty Norman', 'Ryan Hayes', 'Sharon Perez',
            'Amy Roberts', 'Mrs. Caroline Farrell'],
    'Age': [81, 35, 61, 49, 51, 41, 82, 55, 33, 39, 45, 23],
    'Gender': ['Female', 'Male', 'Male', 'Male', 'Male', 'Male', 'Male', 'Female', 'Male', 'Female', 'Male', 'Female'],
    'Blood Type': ['O-', 'O+', 'B-', 'B-', 'O-', 'AB+', 'AB+', 'O-', 'A+', 'O-', 'B-', 'O-'],
    'Medical Condition': ['Diabetes', 'Asthma', 'Obesity', 'Asthma', 'Arthritis', 'Arthritis', 'Hypertension',
                        'Arthritis', 'Diabetes', 'Asthma', 'Cancer', 'Hypertension'],
    'Date of Admission': ['17-11-2022', '01-06-2023', '09-01-2019', '02-05-2020', '09-07-2021', '20-08-2020',
                        '22-03-2021', '16-05-2019', '17-12-2020', '15-12-2022', '13-04-2021', '09-06-2019'],
    'Doctor': ['Patrick Parker', 'Diane Jackson', 'Paul Baker', 'Brian Chandler', 'Dustin Griffin',
              'Robin Green', 'Patricia Bishop', 'Brian Kennedy', 'Kristin Dunn', 'Jessica Bailey',
              'Anthony Roberts', 'William Miller'],
    'Hospital': ['Wallace-Hamilton', 'Burke, Griffin and Cooper', 'Walton LLC', 'Garcia Ltd',
                'Jones, Brown and Murray', 'Boyd PLC', 'Wheeler, Bryant and Johns', 'Brown Inc',
                'Smith, Edwards and O'Brien', 'Brown-Golden', 'Little-Spencer', 'Rose Inc'],
    'Insurance Provider': ['Medicare', 'UnitedHealthcare', 'Medicare', 'Medicare', 'UnitedHealthcare',
                          'Aetna', 'Cigna', 'Blue Cross', 'Aetna', 'Blue Cross', 'Aetna', 'Medicare']
}
```

```
In [3]: df = pd.DataFrame(data)
```

```
In [4]: # Convert 'Date of Admission' to datetime
df['Date of Admission'] = pd.to_datetime(df['Date of Admission'], format='%d-%m-%Y')

# Display the cleaned DataFrame
print("Cleaned DataFrame:")
```



```
In [3]: df = pd.DataFrame(data)
```

```
In [4]: # Convert 'Date of Admission' to datetime
df['Date of Admission'] = pd.to_datetime(df['Date of Admission'], format='%d-%m-%Y')

# Display the cleaned DataFrame
print("Cleaned DataFrame:")
print(df)
print()

# Data Visualization:

# 1. Age Distribution:
plt.figure(figsize=(10, 6))
sns.histplot(df['Age'], bins=10, kde=True, color='skyblue')
plt.title('Age Distribution')
plt.xlabel('Age')
plt.ylabel('Frequency')
plt.show()

# 2. Medical Condition Count:
plt.figure(figsize=(12, 6))
sns.countplot(x='Medical Condition', data=df, palette='viridis')
plt.title('Medical Condition Count')
plt.xlabel('Medical Condition')
plt.ylabel('Count')
plt.xticks(rotation=45)
plt.show()

# 3. Insurance Provider Distribution:
plt.figure(figsize=(10, 6))
df['Insurance Provider'].value_counts().plot(kind='bar', color='orange')
plt.title('Insurance Provider Distribution')
plt.xlabel('Insurance Provider')
plt.ylabel('Count')
plt.show()
```

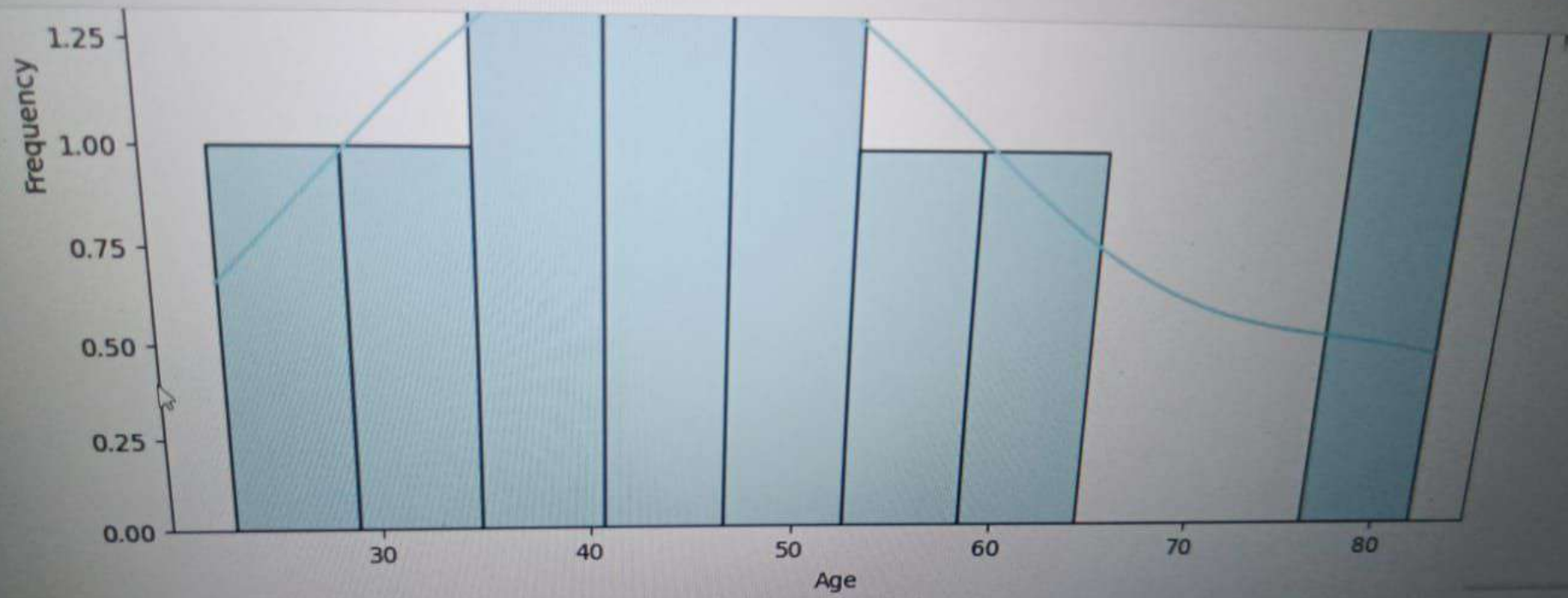
```
plt.show()

# 3. Insurance Provider Distribution:
plt.figure(figsize=(10, 6))
df['Insurance Provider'].value_counts().plot(kind='bar', color='orange')
plt.title('Insurance Provider Distribution')
plt.xlabel('Insurance Provider')
plt.ylabel('Count')
plt.show()
```

Cleaned DataFrame:

	Name	Age	Gender	Blood Type	Medical Condition \
0	Tiffany Ramirez	81	Female	O-	Diabetes
1	Ruben Burns	35	Male	O+	Asthma
2	Chad Byrd	61	Male	B-	Obesity
3	Antonio Frederick	49	Male	B-	Asthma
4	Mrs. Brandy Flowers	51	Male	O-	Arthritis
5	Patrick Parker	41	Male	AB+	Arthritis
6	Charles Horton	82	Male	AB+	Hypertension
7	Patty Norman	55	Female	O-	Arthritis
8	Ryan Hayes	33	Male	A+	Diabetes
9	I Sharon Perez	39	Female	O-	Asthma
10	Amy Roberts	45	Male	B-	Cancer
11	Mrs. Caroline Farrell	23	Female	O-	Hypertension

	Date of Admission	Doctor	Hospital \
0	2022-11-17	Patrick Parker	Wallace-Hamilton
1	2023-06-01	Diane Jackson	Burke, Griffin and Cooper
2	2019-01-09	Paul Baker	Walton LLC



In []:

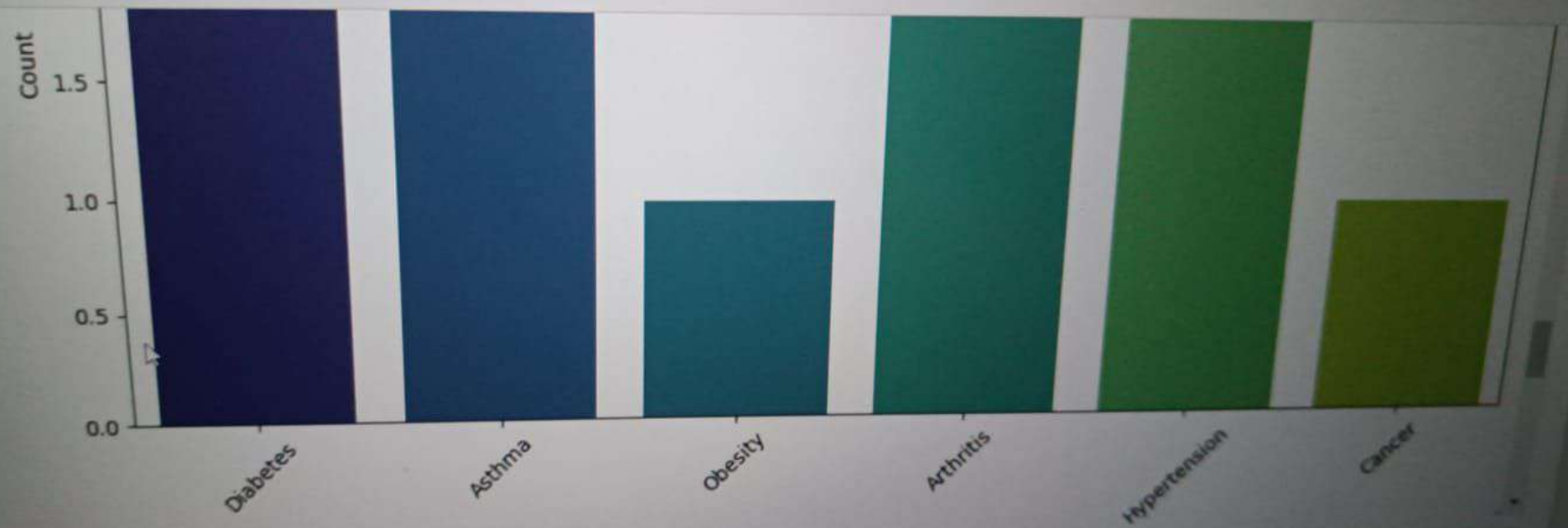


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```
df['Insurance Provider'].value_counts().plot(kind='bar', color='orange')  
plt.title('Insurance Provider Distribution')  
plt.xlabel('Insurance Provider')  
plt.ylabel('Count')  
plt.show()
```



In []:



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```
plt.show()
```

```
# 3. Insurance Provider Distribution:
```

```
plt.figure(figsize=(10, 6))
```

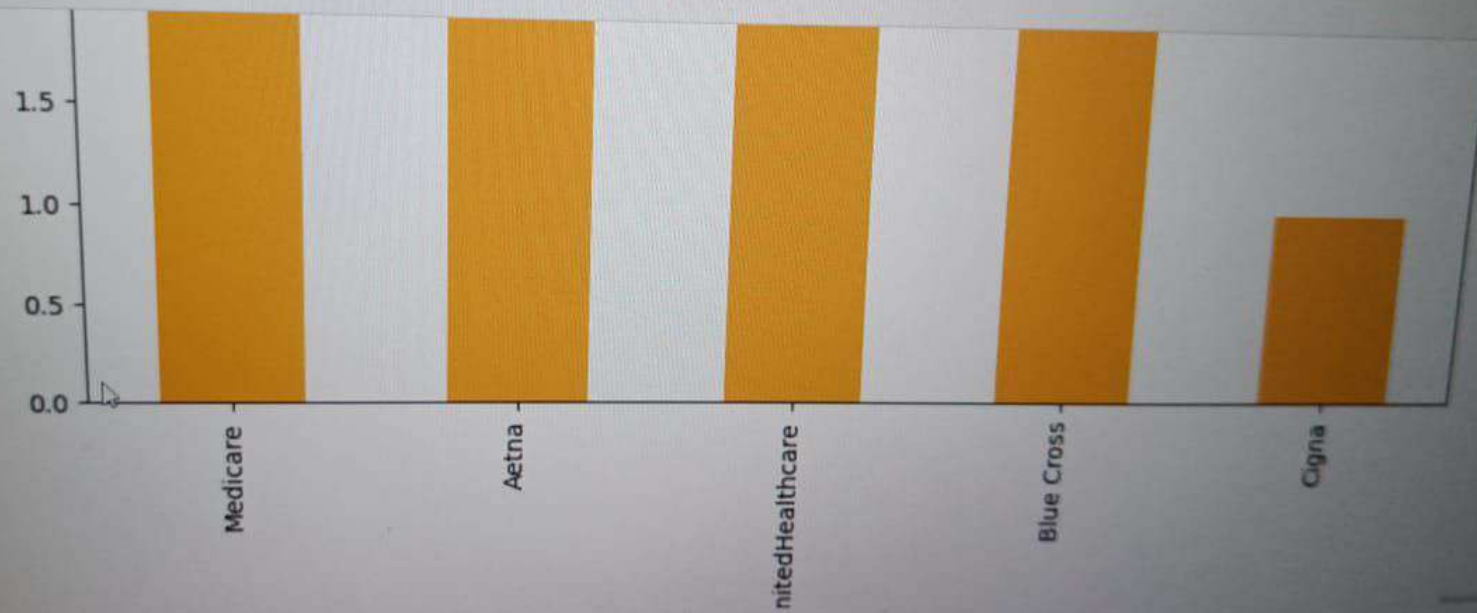
```
df['Insurance Provider'].value_counts().plot(kind='bar', color='orange')
```

```
plt.title('Insurance Provider Distribution')
```

```
plt.xlabel('Insurance Provider')
```

```
plt.ylabel('Count')
```

```
plt.show()
```



In []: