```
In [1]: import pandas as pd
```

```
In [4]: df=pd.DataFrame()
```

```
In [5]: df['Age Group']=['Young Adult', 'Young Adult', 'Young Adult', 'Young Adult',
                          'Mid Age Adult', 'Mid Age Adult',
                          'Senior Adult', 'Senior Adult','Senior Adult', 'Senior Adult'
```

```
In [6]: df['Income']=[30000,35000,32000,33000, 50000,55000,75000,80000,78000,82000]
```

```
In [7]: df
```

Out[7]:

|   | Age Group | Income |
|---|-----------|--------|
| 0 | Young Adult | 30000 |
| 1 | Young Adult | 35000 |
| 2 | Young Adult | 32000 |
| 3 | Young Adult | 33000 |
| 4 | Mid Age Adult | 50000 |
| 5 | Mid Age Adult | 55000 |
| 6 | Senior Adult | 75000 |
| 7 | Senior Adult | 80000 |
| 8 | Senior Adult | 78000 |
| 9 | Senior Adult | 82000 |

```
In [8]: df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10 entries, 0 to 9
Data columns (total 2 columns):
 #   Column     Non-Null Count  Dtype
---  ------     --------------  -----
 0   Age Group  10 non-null     object
 1   Income     10 non-null     int64
dtypes: int64(1), object(1)
memory usage: 288.0+ bytes
```

In [9]: `df.describe()`

Out[9]:

| | Income |
|---|---|
| count | 10.000000 |
| mean | 55000.000000 |
| std | 21974.732965 |
| min | 30000.000000 |
| 25% | 33500.000000 |
| 50% | 52500.000000 |
| 75% | 77250.000000 |
| max | 82000.000000 |

In [10]:
```python
import seaborn as sns
import matplotlib.pyplot as plt
```

In [11]:
```python
sns.boxplot(x='Age Group', y='Income', data=df)
plt.xlabel('Age Group')
plt.ylabel('Income')
plt.title('Age Group wise Boxplot of Income')
```

Out[11]: `Text(0.5, 1.0, 'Age Group wise Boxplot of Income')`
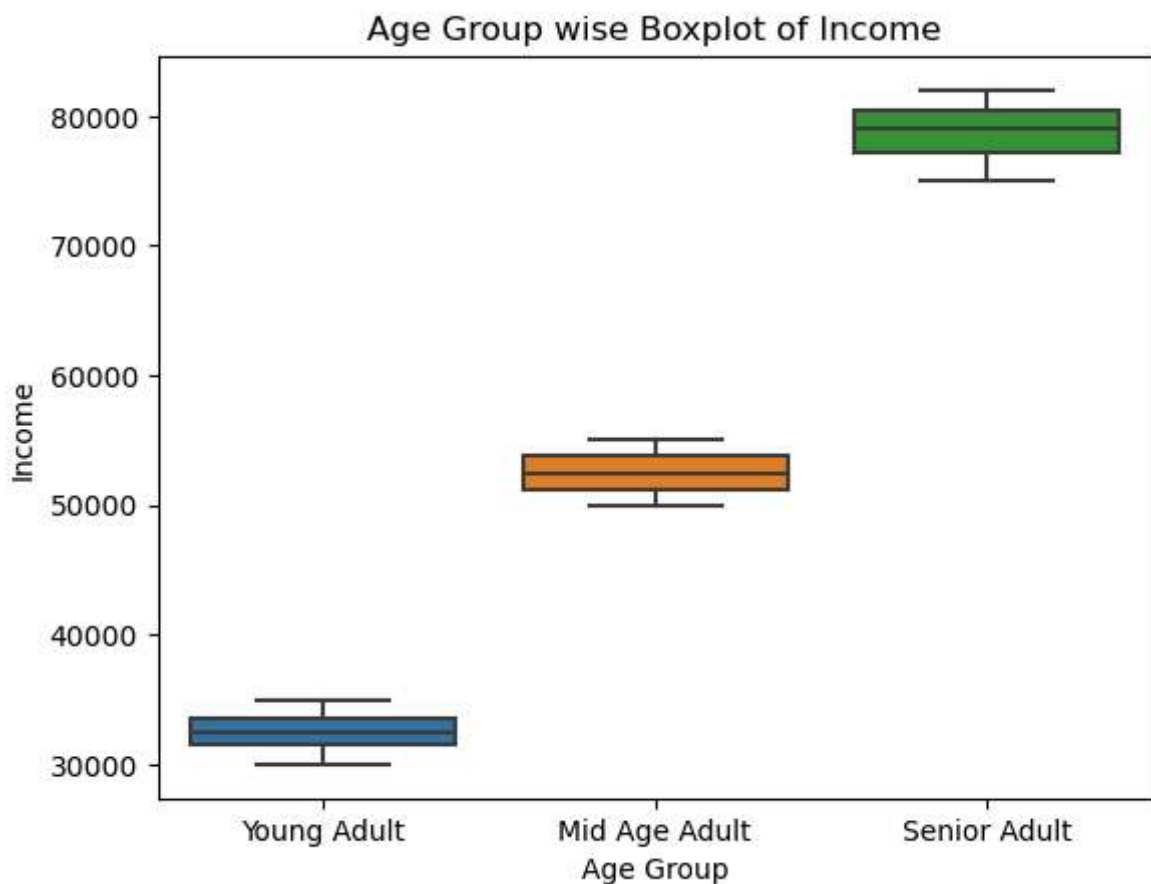
```
In [12]: print(df.groupby('Age Group')['Income'].mean())
```

```
Age Group
Mid Age Adult    52500.0
Senior Adult     78750.0
Young Adult      32500.0
Name: Income, dtype: float64
```

```
In [13]: print(df.groupby('Age Group')['Income'].median())
```

```
Age Group
Mid Age Adult    52500.0
Senior Adult     79000.0
Young Adult      32500.0
Name: Income, dtype: float64
```

```
In [14]: df['Income'].mode()
```

```
Out[14]: 0    30000
         1    32000
         2    33000
         3    35000
         4    50000
         5    55000
         6    75000
         7    78000
         8    80000
         9    82000
         Name: Income, dtype: int64
```

```
In [15]: df['Age Group'].mode()
```

```
Out[15]: 0    Senior Adult
         1     Young Adult
         Name: Age Group, dtype: object
```

```
In [16]: print(df.groupby('Age Group')['Income'].min())
```

```
Age Group
Mid Age Adult    50000
Senior Adult     75000
Young Adult      30000
Name: Income, dtype: int64
```

```
In [17]: print(df.groupby('Age Group')['Income'].max())
```

```
Age Group
Mid Age Adult    55000
Senior Adult     82000
Young Adult      35000
Name: Income, dtype: int64
```

In [18]: `print(df.groupby('Age Group')['Income'].std())`

```
Age Group
Mid Age Adult    3535.533906
Senior Adult     2986.078811
Young Adult       2081.665999
Name: Income, dtype: float64
```

In [23]: `print(df.groupby('Age Group')['Income'].describe())`

```
                count     mean           std      min      25%       50%  \
Age Group
Mid Age Adult     2.0  52500.0  3535.533906  50000.0  51250.0  52500.0
Senior Adult      4.0  78750.0  2986.078811  75000.0  77250.0  79000.0
Young Adult       4.0  32500.0  2081.665999  30000.0  31500.0  32500.0

                  75%      max
Age Group
Mid Age Adult  53750.0  55000.0
Senior Adult   80500.0  82000.0
Young Adult    33500.0  35000.0
```