5.4.2 Summary Statistics for the Fare by City Type

While you're gathering summary statistics, a lightbulb goes off: you should calculate the summary statistics for the average fares for each city type. This will help you determine which city types are generating the most money. And V. Isualize will definitely want to know that!

In order to get the summary statistics for the average fare for each city type, we'll need to get the data from the "fare" column in each city type DataFrame.

Add the following code to a new cell to create a Series with all the fares from the "fare" column for the `urban_cities_df` DataFrame:

```
# Get the fares for the urban cities.
urban_fares = urban_cities_df["fare"]
urban_fares.head()
```

When you run the cell, the output will be all the fares for the urban cities:

```
0     13.83
1     30.24
2     33.44
3     23.44
4     34.58
Name: fare, dtype: float64
```

Now we can calculate the mean, median, and mode for the `urban_fares` Series. To get the mean and median, we'll use the NumPy mean and median functions; to get the mode, we'll use the SciPy statistics mode function, `sts.mode()`. Using this mode function returns how many times the mode appears in the dataset.

Add the following code to a new cell and run the cell.

```
# Calculate the measures of central tendency for the average fare for the ur
mean_urban_fares = np.mean(urban_fares)
print(f"The mean fare price for urban trips is ${mean_urban_fares:.2f}.")

median_urban_fares = np.median(urban_fares)
print(f"The median fare price for urban trips is ${median_urban_fares:.2f}."

mode_urban_fares = sts.mode(urban_fares)
print(f"The mode fare price for urban trips is {mode_urban_fares}.")
```

The output from the code will look like this:

```
The mean fare price for urban trips is $24.53.
The median fare price for urban trips is $24.64.
The mode fare price for urban trips is $ModeResult(mode=array([22.86]), count=array([5])).
```

The mean is $24.53, the median is $24.64, and the mode is $22.86, which appears five times.