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

In [ ]:
```
df=pd.read_csv(r"UScereal.csv")
df.isnull()
```

Out[ ]:

	Name	mfr	calories	protein	fat	sodium	fibre	carbo	sugars	shelf	potassium
0	False	False	False	False	False	False	False	False	False	False	False
1	False	False	False	False	False	False	False	False	False	False	False
2	False	False	False	False	False	False	False	False	False	False	False
3	False	False	False	False	False	False	False	False	False	False	False
4	False	False	False	False	False	False	False	False	False	False	False
...	...	...	...	...	...	...	...	...	...	...	...
60	False	False	False	False	False	False	False	False	False	False	False
61	False	False	False	False	False	False	False	False	False	False	False
62	False	False	False	False	False	False	False	False	False	False	False
63	False	False	False	False	False	False	False	False	False	False	False
64	False	False	False	False	False	False	False	False	False	False	False

65 rows × 12 columns

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

Out[ ]:

	calories	protein	fat	sodium	fibre	carbo	sugars	
count	65.000000	65.000000	65.000000	65.000000	65.000000	65.000000	65.000000	65.0
mean	149.408615	3.684000	1.422462	237.838308	3.870923	19.967538	10.051077	2.1
std	62.411936	2.642821	1.647561	130.629537	6.133094	8.468190	5.835252	0.8
min	50.000000	0.750000	0.000000	0.000000	0.000000	10.530000	0.000000	1.0
25%	110.000000	2.000000	0.000000	180.000000	0.000000	15.000000	4.000000	1.0
50%	134.330000	3.000000	1.000000	232.000000	2.000000	18.670000	12.000000	2.0
75%	179.100000	4.480000	2.000000	290.000000	4.480000	22.390000	14.000000	3.0
max	440.000000	12.120000	9.090000	787.880000	30.300000	68.000000	20.900000	3.0

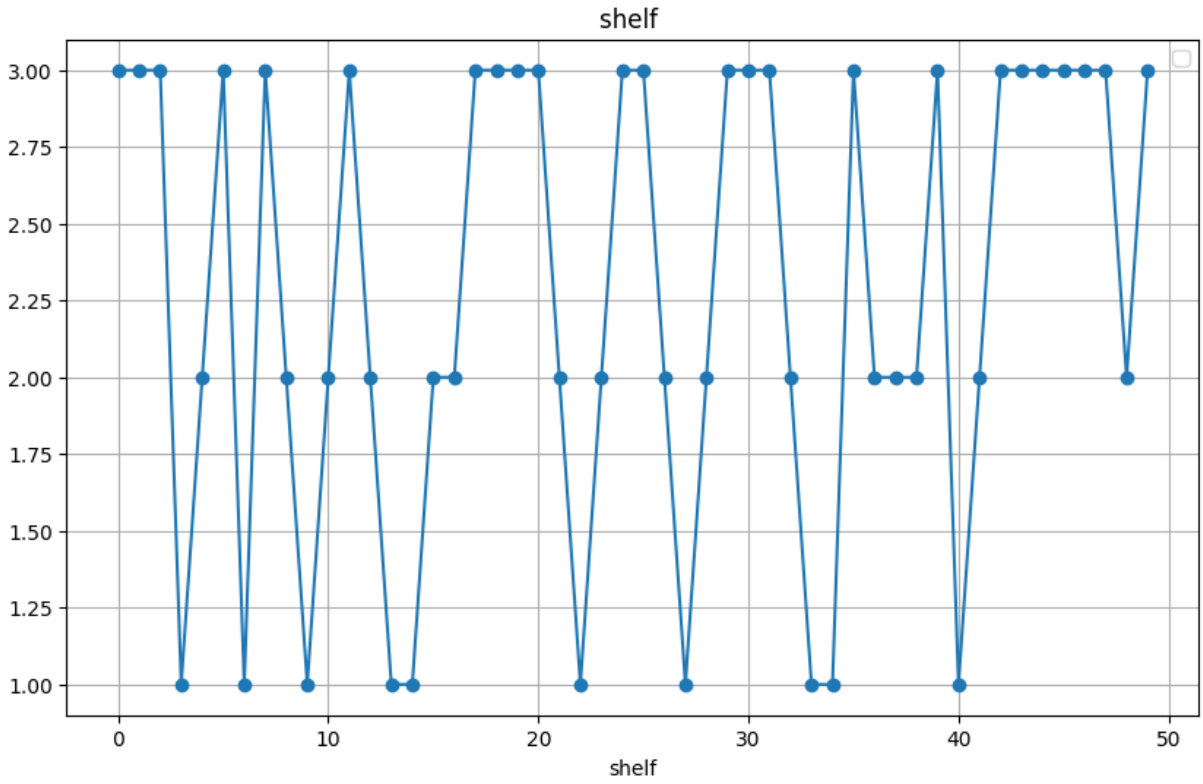
In [ ]:
```
a=df.set_index(['sugars'], inplace=True)
b=a.sort_index()
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_24908\1719195257.py in ?()
----> 1 a=df.set_index(['sugars'], inplace=True)
      2 b=a.sort_index()

~\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.9_qbz5n2kfra8p0\LocalCache\local-packages\Python39\site-packages\pandas\core\frame.py in ?(self, keys, drop, append, inplace, verify_integrity)
   5855                     if not found:
   5856                         missing.append(col)
   5857
   5858         if missing:
-> 5859             raise KeyError(f"None of {missing} are in the columns")
   5860
   5861         if inplace:
   5862             frame = self

KeyError: "None of ['sugars'] are in the columns"
```

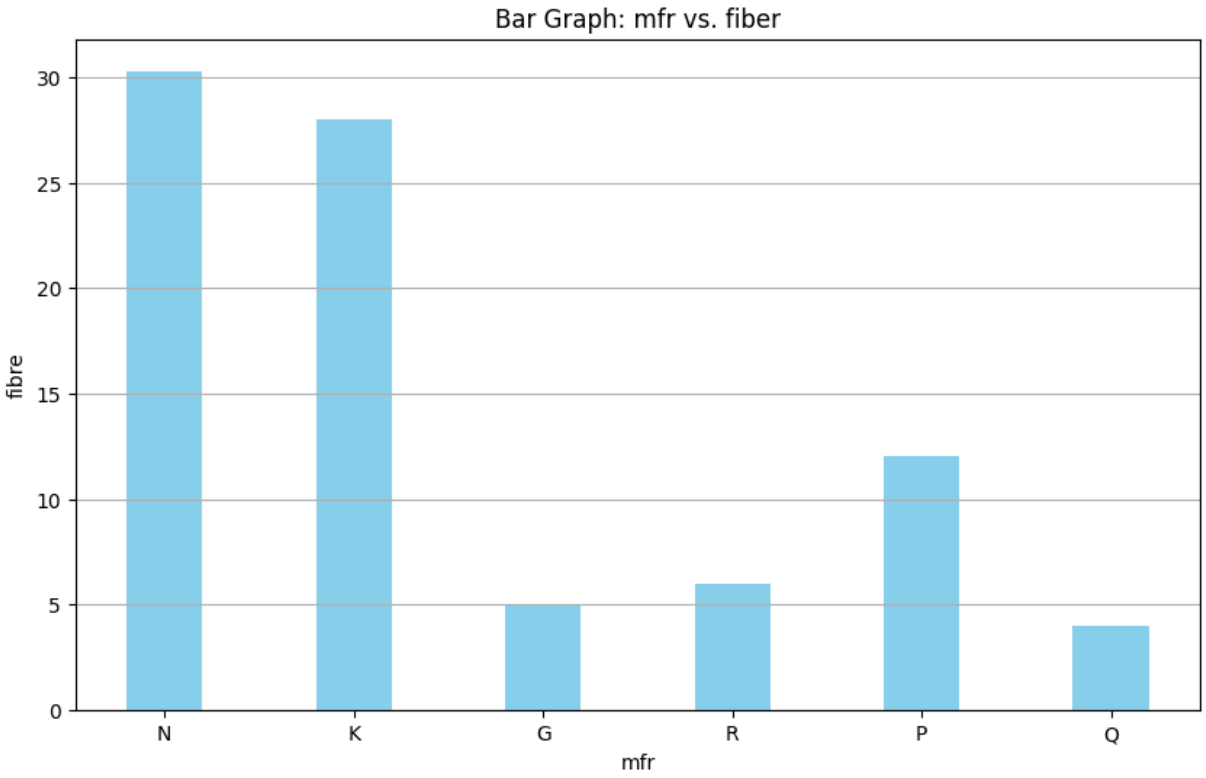
In [ ]:
```
import pandas as pd

df = pd.read_csv('university_canteen_data_with_nan.csv')


df.set_index(['Menu_Item_ID', 'Total_Cost'], inplace=True)
a=df.head(5)
b=a.sort_index()
b
```

In [ ]:
```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
data = 'UScereal.csv'
df = pd.read_csv(data)
df=df.head(50)
plt.figure(figsize=(10, 6))
plt.plot(df['shelf'],   marker='o')
plt.title('shelf ')
plt.xlabel('shelf')

plt.legend()
plt.grid()
plt.show()
```

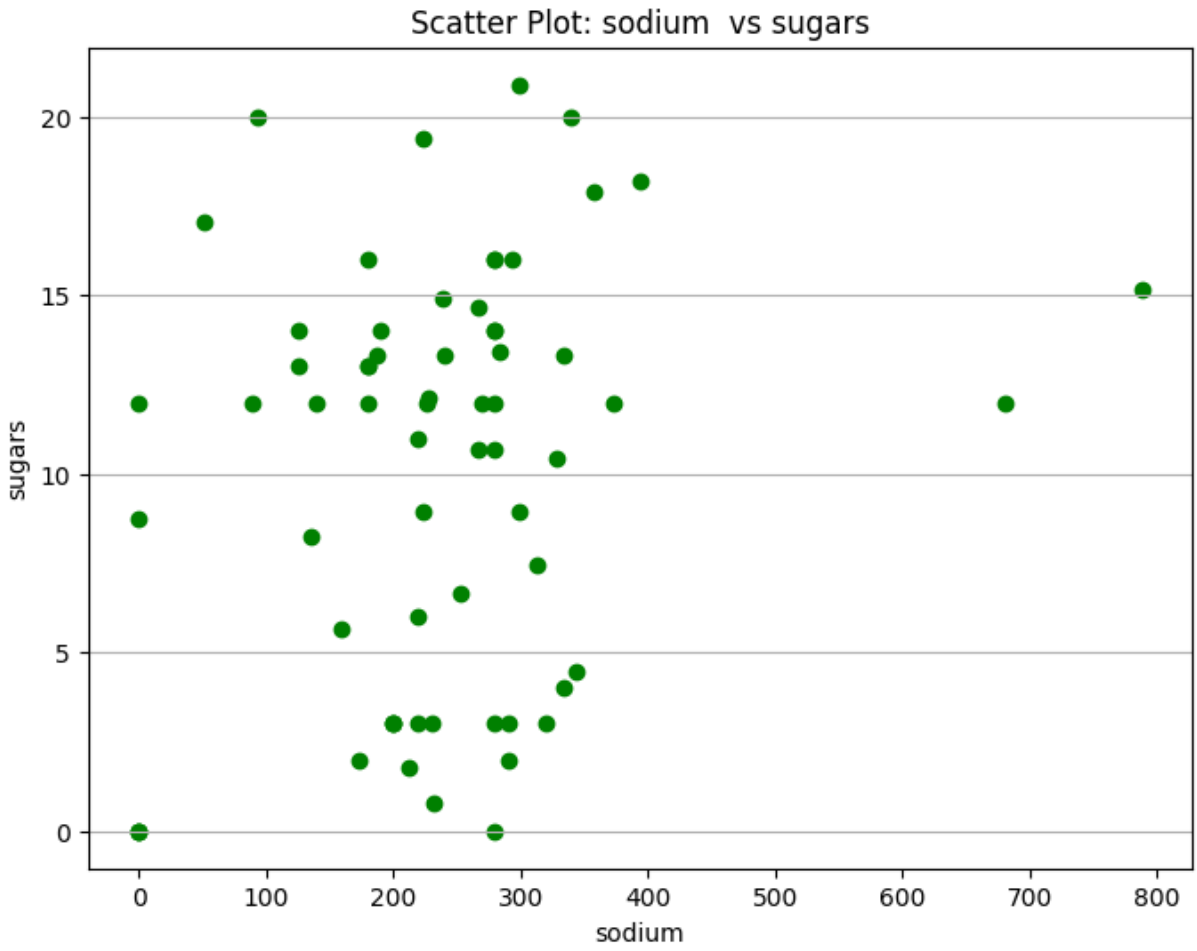
```
No artists with labels found to put in legend.  Note that artists whose label start with an underscore are ignored when legend() is called with no argument.
```



In [ ]:
```python
import pandas as pd
import matplotlib.pyplot as plt

# Load your dataset from the CSV file
data = 'Uscereal.csv'
df = pd.read_csv(data)

bar_width = 0.4

plt.figure(figsize=(10, 6))
plt.bar(df['mfr'], df['fibre'], color='skyblue', width=bar_width)
plt.title('Bar Graph: mfr vs. fiber')
plt.xlabel('mfr')
plt.ylabel('fibre')
plt.grid(axis='y')
plt.show()
```



In [ ]:
```
plt.figure(figsize=(8, 6))
plt.scatter(df['sodium'], df['sugars'], color='green', marker='o')
plt.title('Scatter Plot: sodium  vs sugars')
plt.xlabel('sodium')
plt.ylabel('sugars')
plt.grid(axis='y')
plt.show()
```


Scatter Plot: sodium vs sugars
sugars
sodium
0
5
10
15
20
0
100
200
300
400
500
600
700
800