Basic

> Take file name as input.
>
> Combine text of all the files.
>
> Open the file, read its content, and store it in one variable.
>
> Find out the number of lines.
>
> Find out the number of words.
>
> What is the total number of consumers for Branch1?
>
> What are the beverages available on Branch10, Branch8, and Branch1?
>
> How many times was the Icy Cappuccino ordered in Branch 5?
>
> What are the total number of people who ordered the MILD COFFEE?

In [1]:
```python
# Take file name as input

import os

from sympy.integrals.intpoly import distance_to_side

file_1 = 'Bev_BranchA.txt'
file_2 = 'Bev_BranchB.txt'
file_3 = 'Bev_BranchC.txt'

# file_1= input("Enter the name of the first file: ")
# file_2= input("Enter the name of the first file: ")
# file_3= input("Enter the name of the first file: ")

files=[file_1, file_2, file_3]
files
```

Out[1]: ['Bev_BranchA.txt', 'Bev_BranchB.txt', 'Bev_BranchC.txt']

In [2]:
```python
# Combine text of all the files.

file_4 = 'Bev_Branch_All.txt'

with open(file_4, 'w') as out_file:
    for file in files:
        if os.path.exists(file):
            with open(file, 'r') as in_file:
                out_file.write(in_file.read())
```

```python
In [3]:  # Open the file, read its content, and store it in one variable.

         with open(file_4, 'r') as file:
             file_content = file.read()

         print(file_content)
```

```
Special_Lite,Branch6
MED_LATTE,Branch2
Triple_cappuccino,Branch9
ICY_LATTE,Branch5
SMALL_Espresso,Branch1
Double_cappuccino,Branch6
LARGE_Espresso,Branch2
Mild_Espresso,Branch9
Cold_cappuccino,Branch5
Special_Coffee,Branch1
MED_Coffee,Branch6
Triple_LATTE,Branch2
ICY_Coffee,Branch9
SMALL_Lite,Branch5
Double_Espresso,Branch1
LARGE_Lite,Branch6
Mild_Lite,Branch2
Cold_Espresso,Branch9
Special_MOCHA,Branch5
MED_MOCHA,Branch1
Triple_Coffee,Branch6
ICY_MOCHA,Branch2
SMALL_cappuccino,Branch9
Double_Lite,Branch5
LARGE_cappuccino,Branch1
Mild_cappuccino,Branch6
Cold_Lite,Branch2
Special_cappuccino,Branch9
MED_cappuccino,Branch5
Triple_MOCHA,Branch1
ICY_cappuccino,Branch6
SMALL_LATTE,Branch2
Double_cappuccino,Branch9
LARGE_LATTE,Branch5
Mild_LATTE,Branch1
Cold_cappuccino,Branch6
Special_Espresso,Branch2
MED_Espresso,Branch9
Triple_cappuccino,Branch5
ICY_Espresso,Branch1
SMALL_Coffee,Branch6
Double_LATTE,Branch2
LARGE_Coffee,Branch9
Mild_Coffee,Branch5
Cold_LATTE,Branch1
Special_Lite,Branch6
MED_Lite,Branch2
Triple_Espresso,Branch9
ICY_Lite,Branch5
SMALL_MOCHA,Branch1
Double_Coffee,Branch6
LARGE_MOCHA,Branch2
Mild_MOCHA,Branch9
Cold_Coffee,Branch5
Special_cappuccino,Branch1
MED_cappuccino,Branch6
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```
Triple_Lite,Branch2
ICY_cappuccino,Branch9
SMALL_cappuccino,Branch5
Double_MOCHA,Branch1
LARGE_cappuccino,Branch6
Mild_cappuccino,Branch2
Cold_MOCHA,Branch9
Special_LATTE,Branch5
MED_LATTE,Branch1
Triple_cappuccino,Branch6
ICY_LATTE,Branch2
SMALL_Espresso,Branch9
Double_cappuccino,Branch5
LARGE_Espresso,Branch1
Mild_Espresso,Branch6
Cold_cappuccino,Branch2
Special_Coffee,Branch9
MED_Coffee,Branch5
Triple_LATTE,Branch1
ICY_Coffee,Branch6
SMALL_Lite,Branch2
Double_Espresso,Branch9
LARGE_Lite,Branch5
Mild_Lite,Branch1
Cold_Espresso,Branch6
Special_MOCHA,Branch2
MED_MOCHA,Branch9
Triple_Coffee,Branch5
ICY_MOCHA,Branch1
SMALL_cappuccino,Branch6
Double_Lite,Branch2
LARGE_cappuccino,Branch9
Mild_cappuccino,Branch5
Cold_Lite,Branch1
Special_cappuccino,Branch6
MED_cappuccino,Branch2
Triple_MOCHA,Branch9
ICY_cappuccino,Branch5
SMALL_LATTE,Branch1
Double_cappuccino,Branch6
LARGE_LATTE,Branch2
Mild_LATTE,Branch9
Cold_cappuccino,Branch5
Special_Espresso,Branch1
Special_Lite,Branch6
Double_cappuccino,Branch5
SMALL_Coffee,Branch7
LARGE_Espresso,Branch3
Triple_Lite,Branch8
MED_LATTE,Branch6
ICY_cappuccino,Branch5
Cold_Espresso,Branch7
Mild_cappuccino,Branch3
Special_cappuccino,Branch8
Double_LATTE,Branch6
SMALL_MOCHA,Branch5
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```
LARGE_Lite,Branch7
Triple_cappuccino,Branch3
MED_Coffee,Branch8
ICY_Espresso,Branch6
Cold_Lite,Branch5
Mild_LATTE,Branch7
Special_LATTE,Branch3
Double_Coffee,Branch8
SMALL_cappuccino,Branch6
LARGE_cappuccino,Branch5
Triple_LATTE,Branch7
MED_MOCHA,Branch3
ICY_Lite,Branch8
Cold_cappuccino,Branch6
Mild_Coffee,Branch5
Special_Coffee,Branch7
Double_MOCHA,Branch3
SMALL_Espresso,Branch8
LARGE_LATTE,Branch6
Triple_Coffee,Branch5
MED_cappuccino,Branch7
ICY_cappuccino,Branch3
Cold_LATTE,Branch8
Mild_MOCHA,Branch6
Special_MOCHA,Branch5
Double_cappuccino,Branch7
SMALL_Lite,Branch3
LARGE_Coffee,Branch8
Triple_MOCHA,Branch6
MED_Espresso,Branch5
ICY_LATTE,Branch7
Cold_Coffee,Branch3
Mild_cappuccino,Branch8
Special_cappuccino,Branch6
Double_Espresso,Branch5
SMALL_cappuccino,Branch7
LARGE_MOCHA,Branch3
Triple_cappuccino,Branch8
MED_Lite,Branch6
ICY_Coffee,Branch5
Cold_MOCHA,Branch7
Mild_Espresso,Branch3
Special_Espresso,Branch8
Double_Lite,Branch6
SMALL_LATTE,Branch5
LARGE_cappuccino,Branch7
Triple_Espresso,Branch3
MED_cappuccino,Branch8
ICY_MOCHA,Branch6
Cold_cappuccino,Branch5
Mild_Lite,Branch7
Special_Lite,Branch3
Double_cappuccino,Branch8
SMALL_Coffee,Branch6
LARGE_Espresso,Branch5
Triple_Lite,Branch7
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```
MED_LATTE,Branch3
ICY_cappuccino,Branch8
Cold_Espresso,Branch6
Mild_cappuccino,Branch5
Special_cappuccino,Branch7
Double_LATTE,Branch3
SMALL_MOCHA,Branch8
LARGE_Lite,Branch6
Triple_cappuccino,Branch5
MED_Coffee,Branch7
ICY_Espresso,Branch3
Cold_Lite,Branch8
Mild_LATTE,Branch6
Special_LATTE,Branch5
Double_Coffee,Branch7
SMALL_cappuccino,Branch3
LARGE_cappuccino,Branch8
Triple_LATTE,Branch6
MED_MOCHA,Branch5
ICY_Lite,Branch7
Cold_cappuccino,Branch3
Mild_Coffee,Branch8
Special_Coffee,Branch6
Double_MOCHA,Branch5
SMALL_Espresso,Branch7
LARGE_LATTE,Branch3
Triple_Coffee,Branch8
MED_cappuccino,Branch6
ICY_cappuccino,Branch5
Cold_LATTE,Branch7
Mild_MOCHA,Branch3
Special_MOCHA,Branch8
Double_cappuccino,Branch6
SMALL_Lite,Branch5
LARGE_Coffee,Branch7
Triple_MOCHA,Branch3
MED_Espresso,Branch8
ICY_LATTE,Branch6
Cold_Coffee,Branch5
Mild_cappuccino,Branch7
Special_cappuccino,Branch3
Double_Espresso,Branch8
SMALL_cappuccino,Branch6
LARGE_MOCHA,Branch5
Triple_cappuccino,Branch7
MED_Lite,Branch3
ICY_Coffee,Branch8
Cold_MOCHA,Branch6
Mild_Espresso,Branch5
Special_Espresso,Branch7
Double_Lite,Branch3
SMALL_LATTE,Branch8
LARGE_cappuccino,Branch6
Triple_Espresso,Branch5
MED_cappuccino,Branch7
ICY_MOCHA,Branch3
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```
Cold_cappuccino,Branch8
Mild_Lite,Branch6
Special_Lite,Branch5
Double_cappuccino,Branch7
SMALL_Coffee,Branch3
LARGE_Espresso,Branch8
Triple_Lite,Branch6
MED_LATTE,Branch5
ICY_cappuccino,Branch7
Cold_Espresso,Branch3
Mild_cappuccino,Branch8
Special_cappuccino,Branch6
Double_LATTE,Branch5
SMALL_MOCHA,Branch7
LARGE_Lite,Branch3
Triple_cappuccino,Branch8
MED_Coffee,Branch6
ICY_Espresso,Branch5
Cold_Lite,Branch7
Mild_LATTE,Branch3
Special_LATTE,Branch8
Double_Coffee,Branch6
SMALL_cappuccino,Branch5
LARGE_cappuccino,Branch7
Triple_LATTE,Branch3
MED_MOCHA,Branch8
ICY_Lite,Branch6
Cold_cappuccino,Branch5
Mild_Coffee,Branch7
Special_Coffee,Branch3
Double_MOCHA,Branch8
SMALL_Espresso,Branch6
LARGE_LATTE,Branch5
Triple_Coffee,Branch7
MED_cappuccino,Branch3
ICY_cappuccino,Branch8
Cold_LATTE,Branch6
Mild_MOCHA,Branch5
Special_MOCHA,Branch7
Double_cappuccino,Branch3
SMALL_Lite,Branch8
LARGE_Coffee,Branch6
Triple_MOCHA,Branch5
MED_Espresso,Branch7
ICY_LATTE,Branch3
Cold_Coffee,Branch8
Mild_cappuccino,Branch6
Special_cappuccino,Branch5
Double_Espresso,Branch7
SMALL_cappuccino,Branch3
LARGE_MOCHA,Branch8
Triple_cappuccino,Branch6
MED_Lite,Branch5
ICY_Coffee,Branch7
Cold_MOCHA,Branch3
Mild_Espresso,Branch8
```

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Special_Espresso,Branch6
Double_Lite,Branch5
SMALL_LATTE,Branch7
LARGE_cappuccino,Branch3
Triple_Espresso,Branch8
MED_cappuccino,Branch6
ICY_MOCHA,Branch5
Cold_cappuccino,Branch7
Mild_Lite,Branch3
Special_Lite,Branch8
Double_cappuccino,Branch6
SMALL_Coffee,Branch5
LARGE_Espresso,Branch7
Triple_Lite,Branch3
MED_LATTE,Branch8
ICY_cappuccino,Branch6
Cold_Espresso,Branch5
Mild_cappuccino,Branch7
Special_cappuccino,Branch3
Double_LATTE,Branch8
Special_Lite,Branch6
Double_Coffee,Branch9
SMALL_cappuccino,Branch4
LARGE_cappuccino,Branch7
Triple_LATTE,Branch2
MED_MOCHA,Branch6
ICY_Lite,Branch9
Cold_cappuccino,Branch4
Mild_Coffee,Branch7
Special_Coffee,Branch2
Double_MOCHA,Branch6
SMALL_Espresso,Branch9
LARGE_LATTE,Branch4
Triple_Coffee,Branch7
MED_cappuccino,Branch2
ICY_cappuccino,Branch6
Cold_LATTE,Branch9
Mild_MOCHA,Branch4
Special_MOCHA,Branch7
Double_cappuccino,Branch2
SMALL_Lite,Branch6
LARGE_Coffee,Branch9
Triple_MOCHA,Branch4
MED_Espresso,Branch7
ICY_LATTE,Branch2
Cold_Coffee,Branch6
Mild_cappuccino,Branch9
Special_cappuccino,Branch4
Double_Espresso,Branch7
SMALL_cappuccino,Branch2
LARGE_MOCHA,Branch6
Triple_cappuccino,Branch9
MED_Lite,Branch4
ICY_Coffee,Branch7
Cold_MOCHA,Branch2
Mild_Espresso,Branch6
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Special_Espresso,Branch9
Double_Lite,Branch4
SMALL_LATTE,Branch7
LARGE_cappuccino,Branch2
Triple_Espresso,Branch6
MED_cappuccino,Branch9
ICY_MOCHA,Branch4
Cold_cappuccino,Branch7
Mild_Lite,Branch2
Special_Lite,Branch6
Double_cappuccino,Branch9
SMALL_Coffee,Branch4
LARGE_Espresso,Branch7
Triple_Lite,Branch2
MED_LATTE,Branch6
ICY_cappuccino,Branch9
Cold_Espresso,Branch4
Mild_cappuccino,Branch7
Special_cappuccino,Branch2
Double_LATTE,Branch6
SMALL_MOCHA,Branch9
LARGE_Lite,Branch4
Triple_cappuccino,Branch7
MED_Coffee,Branch2
ICY_Espresso,Branch6
Cold_Lite,Branch9
Mild_LATTE,Branch4
Special_LATTE,Branch7
Double_Coffee,Branch2
SMALL_cappuccino,Branch6
LARGE_cappuccino,Branch9
Triple_LATTE,Branch4
MED_MOCHA,Branch7
ICY_Lite,Branch2
Cold_cappuccino,Branch6
Mild_Coffee,Branch9
Special_Coffee,Branch4
Double_MOCHA,Branch7
SMALL_Espresso,Branch2
LARGE_LATTE,Branch6
Triple_Coffee,Branch9
MED_cappuccino,Branch4
ICY_cappuccino,Branch7
Cold_LATTE,Branch2
Mild_MOCHA,Branch6
Special_MOCHA,Branch9
Double_cappuccino,Branch4
SMALL_Lite,Branch7
LARGE_Coffee,Branch2
Triple_MOCHA,Branch6
MED_Espresso,Branch9
ICY_LATTE,Branch4
Cold_Coffee,Branch7
Mild_cappuccino,Branch2
Special_cappuccino,Branch6
Double_Espresso,Branch9
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```
SMALL_cappuccino,Branch4
LARGE_MOCHA,Branch7
Triple_cappuccino,Branch2
MED_Lite,Branch6
ICY_Coffee,Branch9
Cold_MOCHA,Branch4
Mild_Espresso,Branch7
Special_Espresso,Branch2
Double_Lite,Branch6
SMALL_LATTE,Branch9
LARGE_cappuccino,Branch4
Triple_Espresso,Branch7
MED_cappuccino,Branch2
ICY_MOCHA,Branch6
Cold_cappuccino,Branch9
Mild_Lite,Branch4
Special_Lite,Branch7
Double_cappuccino,Branch2
SMALL_Coffee,Branch6
LARGE_Espresso,Branch9
Triple_Lite,Branch4
MED_LATTE,Branch7
ICY_cappuccino,Branch2
Cold_Espresso,Branch6
Mild_cappuccino,Branch9
Special_cappuccino,Branch4
Double_LATTE,Branch7
SMALL_MOCHA,Branch2
LARGE_Lite,Branch6
Triple_cappuccino,Branch9
MED_Coffee,Branch4
ICY_Espresso,Branch7
Cold_Lite,Branch2
Mild_LATTE,Branch6
Special_LATTE,Branch9
Double_Coffee,Branch4
SMALL_cappuccino,Branch7
LARGE_cappuccino,Branch2
Triple_LATTE,Branch6
MED_MOCHA,Branch9
ICY_Lite,Branch4
Cold_cappuccino,Branch7
Mild_Coffee,Branch2
Special_Coffee,Branch6
Double_MOCHA,Branch9
SMALL_Espresso,Branch4
LARGE_LATTE,Branch7
Triple_Coffee,Branch2
MED_cappuccino,Branch6
ICY_cappuccino,Branch9
Cold_LATTE,Branch4
Mild_MOCHA,Branch7
Special_MOCHA,Branch2
Double_cappuccino,Branch6
SMALL_Lite,Branch9
LARGE_Coffee,Branch4
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Triple_MOCHA,Branch7
MED_Espresso,Branch2
ICY_LATTE,Branch6
Cold_Coffee,Branch9
Mild_cappuccino,Branch4
Special_cappuccino,Branch7
Double_Espresso,Branch2
SMALL_cappuccino,Branch6
LARGE_MOCHA,Branch9
Triple_cappuccino,Branch4
MED_Lite,Branch7
ICY_Coffee,Branch2
Cold_MOCHA,Branch6
Mild_Espresso,Branch9
Special_Espresso,Branch4
Double_Lite,Branch7
SMALL_LATTE,Branch2
LARGE_cappuccino,Branch6
Triple_Espresso,Branch9
MED_cappuccino,Branch4
ICY_MOCHA,Branch7
Cold_cappuccino,Branch2
Mild_Lite,Branch6
Special_Lite,Branch9
Double_cappuccino,Branch4
SMALL_Coffee,Branch7
LARGE_Espresso,Branch2
Triple_Lite,Branch6
MED_LATTE,Branch9
ICY_cappuccino,Branch4
Cold_Espresso,Branch7
Mild_cappuccino,Branch2
Special_cappuccino,Branch6
Double_LATTE,Branch9
SMALL_MOCHA,Branch4
LARGE_Lite,Branch7
Triple_cappuccino,Branch2
MED_Coffee,Branch6
ICY_Espresso,Branch9
Cold_Lite,Branch4
Mild_LATTE,Branch7
Special_LATTE,Branch2
Double_Coffee,Branch6
SMALL_cappuccino,Branch9
LARGE_cappuccino,Branch4
Triple_LATTE,Branch7
MED_MOCHA,Branch2
ICY_Lite,Branch6
Cold_cappuccino,Branch9
Mild_Coffee,Branch4
Special_Coffee,Branch7
Double_MOCHA,Branch2
SMALL_Espresso,Branch6
LARGE_LATTE,Branch9
Triple_Coffee,Branch4
MED_cappuccino,Branch7
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ICY_cappuccino,Branch2
Cold_LATTE,Branch6
Mild_MOCHA,Branch9
Special_MOCHA,Branch4
Double_cappuccino,Branch7
SMALL_Lite,Branch2
LARGE_Coffee,Branch6
Triple_MOCHA,Branch9
MED_Espresso,Branch4
ICY_LATTE,Branch7
Cold_Coffee,Branch2
Mild_cappuccino,Branch6
Special_cappuccino,Branch9
Double_Espresso,Branch4
SMALL_cappuccino,Branch7
LARGE_MOCHA,Branch2
Triple_cappuccino,Branch6
MED_Lite,Branch9
ICY_Coffee,Branch4
Cold_MOCHA,Branch7
Mild_Espresso,Branch2
Special_Espresso,Branch6
Double_Lite,Branch9
SMALL_LATTE,Branch4
LARGE_cappuccino,Branch7
Triple_Espresso,Branch2
MED_cappuccino,Branch6
ICY_MOCHA,Branch9
Cold_cappuccino,Branch4
Mild_Lite,Branch7
Special_Lite,Branch2
Double_cappuccino,Branch6
SMALL_Coffee,Branch9
LARGE_Espresso,Branch4
Triple_Lite,Branch7
MED_LATTE,Branch2
ICY_cappuccino,Branch6
Cold_Espresso,Branch9
Mild_cappuccino,Branch4
Special_cappuccino,Branch7
Double_LATTE,Branch2
SMALL_MOCHA,Branch6
LARGE_Lite,Branch9
Triple_cappuccino,Branch4
MED_Coffee,Branch7
ICY_Espresso,Branch2
Cold_Lite,Branch6
Mild_LATTE,Branch9
Special_LATTE,Branch4
Double_Coffee,Branch7
SMALL_cappuccino,Branch2
LARGE_cappuccino,Branch6
Triple_LATTE,Branch9
MED_MOCHA,Branch4
ICY_Lite,Branch7
Cold_cappuccino,Branch2
```

```
Mild_Coffee,Branch6
Special_Coffee,Branch9
Double_MOCHA,Branch4
SMALL_Espresso,Branch7
LARGE_LATTE,Branch2
Triple_Coffee,Branch6
MED_cappuccino,Branch9
ICY_cappuccino,Branch4
Cold_LATTE,Branch7
Mild_MOCHA,Branch2
Special_MOCHA,Branch6
Double_cappuccino,Branch9
SMALL_Lite,Branch4
LARGE_Coffee,Branch7
Triple_MOCHA,Branch2
MED_Espresso,Branch6
ICY_LATTE,Branch9
Cold_Coffee,Branch4
Mild_cappuccino,Branch7
Special_cappuccino,Branch2
Double_Espresso,Branch6
SMALL_cappuccino,Branch9
LARGE_MOCHA,Branch4
Triple_cappuccino,Branch7
MED_Lite,Branch2
ICY_Coffee,Branch6
Cold_MOCHA,Branch9
Mild_Espresso,Branch4
Special_Espresso,Branch7
Double_Lite,Branch2
SMALL_LATTE,Branch6
LARGE_cappuccino,Branch9
Triple_Espresso,Branch4
MED_cappuccino,Branch7
ICY_MOCHA,Branch2
Cold_cappuccino,Branch6
Mild_Lite,Branch9
Special_Lite,Branch4
Double_cappuccino,Branch7
SMALL_Coffee,Branch2
```

In [4]:
```python
# Find out the number of lines.

files.append(file_4)
print(files)

for file in files:
    with open(file,'r') as simple_file:
        lines = simple_file.readlines()
        print(f"There are {len(lines)} in the file {file}.")
```

```
['Bev_BranchA.txt', 'Bev_BranchB.txt', 'Bev_BranchC.txt', 'Bev_Branch_All.txt']
There are 100 in the file Bev_BranchA.txt.
There are 200 in the file Bev_BranchB.txt.
There are 300 in the file Bev_BranchC.txt.
There are 600 in the file Bev_Branch_All.txt.
```

In [5]:
```python
# Find out the number of words.
import re

for file in files:
    if os.path.exists(file):
        with open(file, 'r') as simple_file:
            global words
            words = simple_file.read().strip()
            words = re.split(r'[,\s+]',words)
            #print(words)
            print(f'Number of words in {file}: {len(words)}')
```

```
Number of words in Bev_BranchA.txt: 200
Number of words in Bev_BranchB.txt: 400
Number of words in Bev_BranchC.txt: 600
Number of words in Bev_Branch_All.txt: 1200
```

In [6]:
```python
# What is the total number of consumers for Branch1?

count = 0
for i in words:
    if i == "Branch1":
        count+=1
print(f"The total number of consumers for Branch1 are {count}.")
```

```
The total number of consumers for Branch1 are 20.
```

In [7]:
```python
# What are the beverages available on Branch10, Branch8, and Branch1?

beverages = []

if os.path.exists(file_4):
    with open (file_4,"r") as simple_file:
        for i in simple_file.readlines():
            if "Branch10" in i or "Branch8" in i or "Branch1" in i:
                beverages.append(i.split(",")[0])

                # sort and remove repeated beverages
                beverages = sorted(set(beverages))

print(f"The beverages available on Branch10, Branch8, and Branch1 are:")
for i in range((len(beverages))):
    print(f"{i+1}. {beverages[i]}")
```

The beverages available on Branch10, Branch8, and Branch1 are:
1. Cold_Coffee
2. Cold_LATTE
3. Cold_Lite
4. Cold_cappuccino
5. Double_Coffee
6. Double_Espresso
7. Double_LATTE
8. Double_MOCHA
9. Double_cappuccino
10. ICY_Coffee
11. ICY_Espresso
12. ICY_Lite
13. ICY_MOCHA
14. ICY_cappuccino
15. LARGE_Coffee
16. LARGE_Espresso
17. LARGE_MOCHA
18. LARGE_cappuccino
19. MED_Coffee
20. MED_Espresso
21. MED_LATTE
22. MED_MOCHA
23. MED_cappuccino
24. Mild_Coffee
25. Mild_Espresso
26. Mild_LATTE
27. Mild_Lite
28. Mild_cappuccino
29. SMALL_Espresso
30. SMALL_LATTE
31. SMALL_Lite
32. SMALL_MOCHA
33. Special_Coffee
34. Special_Espresso
35. Special_LATTE
36. Special_Lite
37. Special_MOCHA
38. Special_cappuccino
39. Triple_Coffee
40. Triple_Espresso
41. Triple_LATTE
42. Triple_Lite
43. Triple_MOCHA
44. Triple_cappuccino

In [8]:
```python
# How many times was the Icy Cappuccino ordered in Branch 5?

count = 0

if os.path.exists(file_4):
    with open(file_4,'r') as simple_file:
        for i in simple_file.readlines():
            if "ICY_cappuccino" in i and "Branch5" in i:
                count+=1
```

```
print(f"The Icy Cappuccino was ordered {count} times in Branch 5.")
```

The Icy Cappuccino was ordered 3 times in Branch 5.

In [9]:
```python
# What are the total number of people who ordered the MILD COFFEE?

count = 0
if os.path.exists(file_4):
    with open(file_4,"r") as simple_file:
        for i in simple_file.readlines():
            if "Mild_Coffee" in i:
                count+=1

print(f"The total number of people who ordered the MILD COFFEE are {count}")
```

The total number of people who ordered the MILD COFFEE are 9

Advance Task

Find out the top 10 most frequent words.

Create a visualization of word frequencies.

What is the most consumed beverage per branch?

What is the most consumed beverage overall?

How many times was ￼Special Lite￼ ordered overall?

GUI to upload file.

Find the most important word.

In [10]:
```python
# Find out the top 10 most frequent words.

from nltk.tokenize import word_tokenize
from collections import Counter

if os.path.exists(file_4):
    with open(file_4,'r') as simple_file:
        t_words = simple_file.read().strip()
        t_words = word_tokenize(t_words)
        t_words = [word for word in t_words if word != ","]

        # Count the frequency of each word
        word_freq = Counter(t_words)
        top_10 = word_freq.most_common(10)

        print("Top 10 most frequent words:")
        for word, count in top_10:
            print(f"{word}: {count}")
```
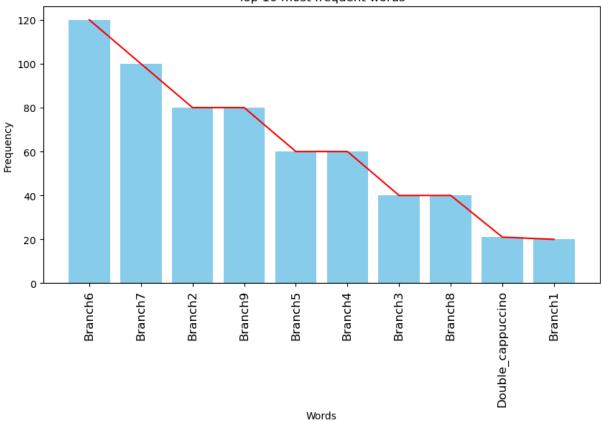
```
Top 10 most frequent words:
Branch6: 120
Branch7: 100
Branch2: 80
Branch9: 80
Branch5: 60
Branch4: 60
Branch3: 40
Branch8: 40
Double_cappuccino: 21
Branch1: 20
```

In [11]:
```python
# Create a visualization of word frequencies.
import matplotlib.pyplot as plt
import numpy as np

if os.path.exists(file_4):
    with open(file_4,'r') as simple_file:
        t_words = simple_file.read().strip()
        t_words = word_tokenize(t_words)
        t_words = [word for word in t_words if word != ","]

        # Count the frequency of each word
        word_freq = Counter(t_words)
        top_10 = word_freq.most_common(10)

        # Plot the top 10 words
        plt.figure(figsize=(10,5))
        plt.bar([word for word, count in top_10], [count for word, count in top_10]

        plt.xticks(rotation=90, fontsize=12)

        x = np.arange(len(top_10))
        y = [count for word, count in top_10]
        # Line plot for the top 10 words
        plt.plot(x, y, color='red')


        plt.xlabel("Words")
        plt.ylabel("Frequency")
        plt.title("Top 10 most frequent words")
        plt.show()
```

Top 10 most frequent words


```python
In [12]:  # What is the most consumed beverage per branch?

          branch = []
          beverage = []

          Branch1 = []
          Branch2 = []
          Branch3 = []
          Branch4 = []
          Branch5 = []
          Branch6 = []
          Branch7 = []
          Branch8 = []
          Branch9 = []

          # Check if the file exists
          if os.path.exists(file_4):
              with open(file_4, "r") as simple_file:
                  for words in simple_file.readlines():
                      words = words.strip()  # Remove leading/trailing whitespaces
                      beverage_name, branch_name = words.split(",")

                      branch.append(branch_name)
                      beverage.append(beverage_name)

                  # Distribute beverages into the respective branches
                  for i in range(len(branch)):
                      if branch[i] == "Branch1":
                          Branch1.append(beverage[i])
```

```python
        elif branch[i] == "Branch2":
            Branch2.append(beverage[i])
        elif branch[i] == "Branch3":
            Branch3.append(beverage[i])
        elif branch[i] == "Branch4":
            Branch4.append(beverage[i])
        elif branch[i] == "Branch5":
            Branch5.append(beverage[i])
        elif branch[i] == "Branch6":
            Branch6.append(beverage[i])
        elif branch[i] == "Branch7":
            Branch7.append(beverage[i])
        elif branch[i] == "Branch8":
            Branch8.append(beverage[i])
        elif branch[i] == "Branch9":
            Branch9.append(beverage[i])

    # Print frequency counts for each branch to debug
    # print("Branch1 frequencies:", Counter(Branch1))
    # print("Branch2 frequencies:", Counter(Branch2))
    # print("Branch3 frequencies:", Counter(Branch3))
    # print("Branch4 frequencies:", Counter(Branch4))
    # print("Branch5 frequencies:", Counter(Branch5))
    # print("Branch6 frequencies:", Counter(Branch6))
    # print("Branch7 frequencies:", Counter(Branch7))
    # print("Branch8 frequencies:", Counter(Branch8))
    # print("Branch9 frequencies:", Counter(Branch9))

    # Function to get the most common beverage
    def most_common_beverage(branch_list):
        if branch_list:
            return Counter(branch_list).most_common(1)[0][0]
        return None

    # Print the most common beverage for each branch
    print(f"The most common beverage in Branch1 is {most_common_beverage(Branch1)}"
    print(f"The most common beverage in Branch2 is {most_common_beverage(Branch2)}"
    print(f"The most common beverage in Branch3 is {most_common_beverage(Branch3)}"
    print(f"The most common beverage in Branch4 is {most_common_beverage(Branch4)}"
    print(f"The most common beverage in Branch5 is {most_common_beverage(Branch5)}"
    print(f"The most common beverage in Branch6 is {most_common_beverage(Branch6)}"
    print(f"The most common beverage in Branch7 is {most_common_beverage(Branch7)}"
    print(f"The most common beverage in Branch8 is {most_common_beverage(Branch8)}"
    print(f"The most common beverage in Branch9 is {most_common_beverage(Branch9)}"
```

```
The most common beverage in Branch1 is SMALL_Espresso
The most common beverage in Branch2 is Mild_cappuccino
The most common beverage in Branch3 is SMALL_cappuccino
The most common beverage in Branch4 is SMALL_cappuccino
The most common beverage in Branch5 is Cold_cappuccino
The most common beverage in Branch6 is Double_cappuccino
The most common beverage in Branch7 is MED_cappuccino
The most common beverage in Branch8 is Mild_cappuccino
The most common beverage in Branch9 is Triple_cappuccino
```

In [13]:
```python
#What is the most consumed beverage overall?

from collections import Counter
import os

if os.path.exists(file_4):
    with open (file_4,"r") as simple_file:
        beverages = simple_file.read().strip()
        beverages = word_tokenize(beverages)
        beverages = [word for word in beverages if word != ","]
        beverages = [i for i in beverages if "Branch" not in i]

        # Count the frequency of each beverage
        beverage_freq = Counter(beverages)
        most_common_beverage = beverage_freq.most_common(1)[0][0]
        print(f"The most common beverage overall is {most_common_beverage}")
```

The most common beverage overall is Double_cappuccino

In [14]:
```python
# How many times was Special Lite ordered overall?

count = 0
if os.path.exists(file_4):
    with open(file_4,"r") as simple_file:
        beverages = simple_file.read().strip()
        beverages = word_tokenize(beverages)
        beverages = [word for word in beverages if word != ","]

        for i in range(len(beverages)-1):
            if beverages[i] == "Special_Lite":
                count+=1
        print(f"The Special_Lite was ordered {count} times overall.")
```

The Special_Lite was ordered 12 times overall.

In [15]:
```python
#GUI to upload file.

import tkinter as tk
from tkinter import filedialog

def upload_file():
    file_path = filedialog.askopenfilename()
    print(f"File uploaded: {file_path}")

root = tk.Tk()
root.title("File Upload")
root.geometry("400x200")

upload_button = tk.Button(root, text="Upload File", command=upload_file)
upload_button.pack()

root.mainloop()
```

File uploaded: C:/Users/ROG/PycharmProjects/NLP/NLP_Lab_1/Bev_Branch_All.txt

In [16]:
```python
# Find the most important word.
```

```python
from nltk.corpus import stopwords
from nltk.tokenize import word_tokenize
from collections import Counter
import os

# Initialize set of stopwords
stop_words = set(stopwords.words("english"))

# Initialize dictionary to store words
word_freq = {}

# Check if the file exists
file_4 = 'Bev_Branch_All.txt'  # Replace with the actual file
if os.path.exists(file_4):
    with open(file_4, "r") as simple_file:
        text = simple_file.read().strip()
        words = word_tokenize(text)
        words = [word for word in beverages if word != ","]


        # Count the frequency of each word
        word_freq = Counter(words)

        # Find the most important word

        most_important_word = word_freq.most_common(1)[0][0]
        print(f"The most important word is \"{most_important_word}\".")
```

The most important word is "Branch6".