

EXPERIMENT N0-4

AIM: Write a menu driven python program to implement the following. a) Find if two input lists are disjoint or not. b) Count the frequency of each character in the given input string.c) Accept a comma separated sequence of words as input and prints the unique words in sorted form (alphanumerically).

CODE:

```
def areDisjoint():  
    l1 = []  
    l2 = []  
    x = int(input("enter the number of element of l1:"))  
    for i in range(x):  
        a = int(input("enter the value:"))  
        l1.append(a)  
    y = int(input("enter the number of element of l2:"))  
    for i in range(y):  
        b = int(input("enter the value:"))  
        l2.append(b)  
    s1=set(l1)  
    s2=set(l2)  
    if (s1.isdisjoint(s2)):  
        print("lists are disjoint")  
    else:  
        print("lists are not disjoint")  
  
def count():  
    line = input("Enter a string: ")  
    count = {i: line.count(i) for i in set(line)}
```

```
print("Frequency of characters are as follows: "+str(count))
```

```
def sort():
```

```
    line = input("Enter a comma separated words string: ")
```

```
    line = set(line.split(','))
```

```
    x=list(line)
```

```
    for i in x:
```

```
        print(i)
```

```
    print("The sorted unique words are ")
```

```
    x.sort()
```

```
    for i in x:
```

```
        print(i)
```

```
if __name__ == "__main__":
```

```
    while (True):
```

```
        print("***** MENU *****")
```

```
        print("1: CHECK LISTS ARE DISJOINT OR NOT")
```

```
        print("2: COUNT FREQUENCY OF CHARACTER IN STRING")
```

```
        print("3: SORT THE WORDS")
```

```
        op = int(input("ENTER YOUR CHOICE:"))
```

```
        if op == 1:
```

```
            areDisjoint()
```

```
        elif op == 2:
```

```
            count()
```

```
        elif op == 3:
```

```
            sort()
```

else:

```
    print("wrong input")
```

```
print("Press q to quit and c to continue:", end=" ")
```

```
ch = ""
```

```
while (ch != "c" and ch != "q"):
```

```
    ch = input()
```

```
    if ch == "q":
```

```
        exit()
```

```
    elif ch == "c":
```

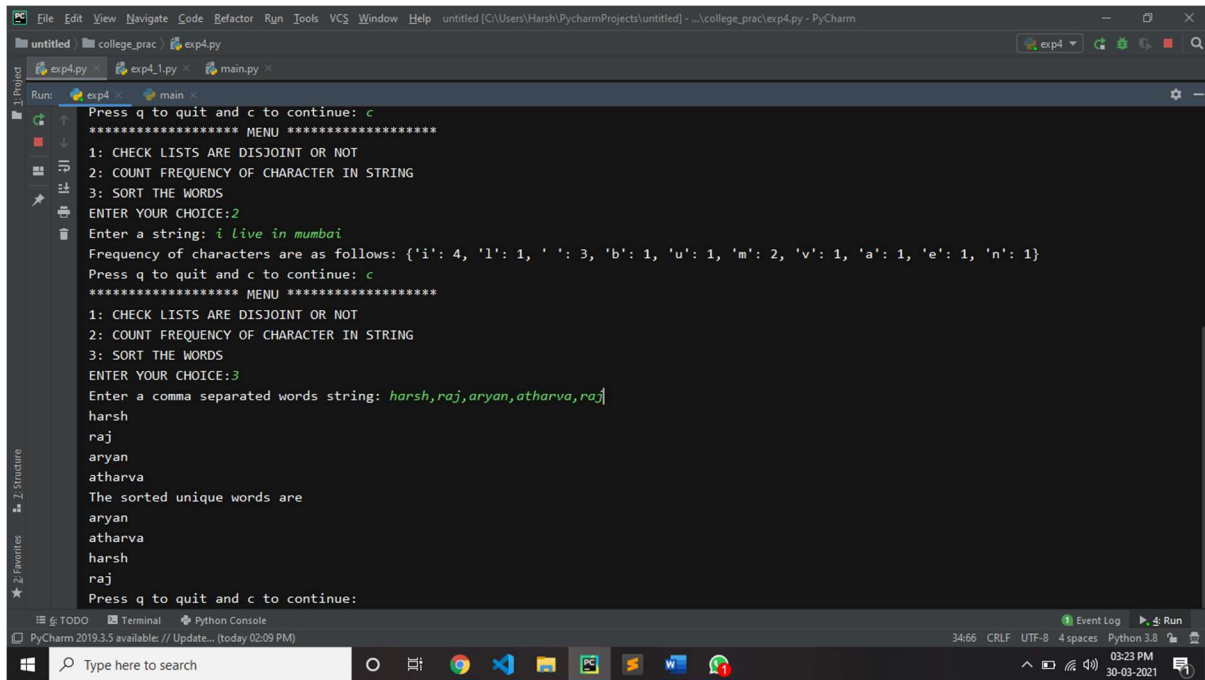
```
        continue
```

OUTPUT:

1: CHECK LISTS ARE DISJOINT OR NOT

```
File Edit View Navigate Code Refactor Run Tools VCS Window Help untitled [C:\Users\Harsh\PycharmProjects\untitled] - college_prac\exp4.py - PyCharm
untitled college_prac exp4.py
exp4.py exp4.1.py main.py
Run: exp4 main
C:\python38\python.exe C:/Users/Harsh/PycharmProjects/untitled/college_prac/exp4.py
***** MENU *****
1: CHECK LISTS ARE DISJOINT OR NOT
2: COUNT FREQUENCY OF CHARACTER IN STRING
3: SORT THE WORDS
ENTER YOUR CHOICE:1
enter the number of element of l1:5
enter the value:10
enter the value:20
enter the value:30
enter the value:40
enter the value:50
enter the number of element of l2:5
enter the value:1
enter the value:2
enter the value:3
enter the value:4
enter the value:50
lists are not disjoint
Press q to quit and c to continue:
```

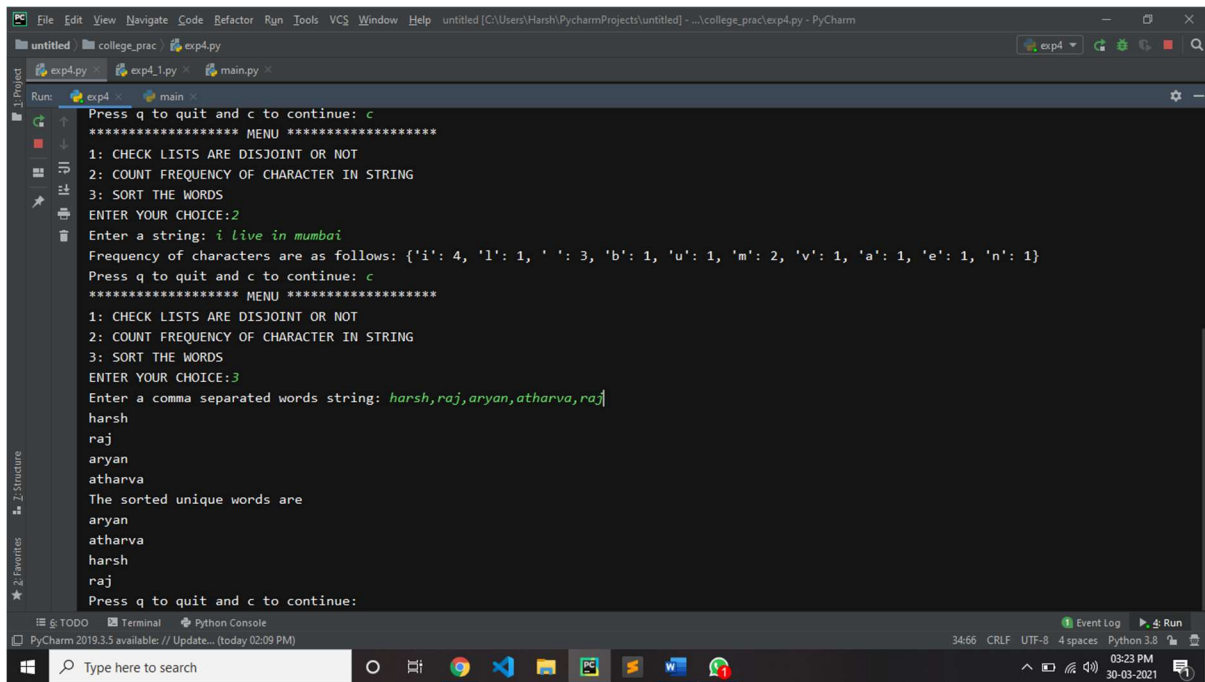
2: COUNT FREQUENCY OF CHARACTER IN STRING



The screenshot shows a PyCharm IDE with a Python script running. The script is a menu-driven program with three options: 1. CHECK LISTS ARE DISJOINT OR NOT, 2. COUNT FREQUENCY OF CHARACTER IN STRING, and 3. SORT THE WORDS. The user has selected option 2. They entered the string "i Live in mumbai". The program then displays the frequency of each character in the string: {'i': 4, 'l': 1, ' ': 3, 'b': 1, 'u': 1, 'm': 2, 'v': 1, 'a': 1, 'e': 1, 'n': 1}. The user then presses 'c' to continue. The program displays the same menu, and the user selects option 3. They enter a comma-separated string: "harsh,raj,aryan,atharva,raj". The program then displays the sorted unique words: harsh, raj, aryan, atharva. The user then presses 'c' to continue.

```
File Edit View Navigate Code Refactor Run Tools VCS Window Help untitled [C:\Users\Harsh\PycharmProjects\untitled] - ...college_prac\exp4.py - PyCharm
untitled college_prac exp4.py
exp4.py exp4_1.py main.py
Run: exp4 main
Press q to quit and c to continue: c
***** MENU *****
1: CHECK LISTS ARE DISJOINT OR NOT
2: COUNT FREQUENCY OF CHARACTER IN STRING
3: SORT THE WORDS
ENTER YOUR CHOICE:2
Enter a string: i Live in mumbai
Frequency of characters are as follows: {'i': 4, 'l': 1, ' ': 3, 'b': 1, 'u': 1, 'm': 2, 'v': 1, 'a': 1, 'e': 1, 'n': 1}
Press q to quit and c to continue: c
***** MENU *****
1: CHECK LISTS ARE DISJOINT OR NOT
2: COUNT FREQUENCY OF CHARACTER IN STRING
3: SORT THE WORDS
ENTER YOUR CHOICE:3
Enter a comma separated words string: harsh,raj,aryan,atharva,raj
harsh
raj
aryan
atharva
The sorted unique words are
aryan
atharva
harsh
raj
Press q to quit and c to continue:
PyCharm 2019.3.5 available: // Update... (today 02:09 PM)
34:66 CRLF UTF-8 4 spaces Python 3.8
03:23 PM
30-03-2021
```

3: SORT THE WORDS



The screenshot shows a PyCharm IDE with a Python script running. The script is a menu-driven program with three options: 1. CHECK LISTS ARE DISJOINT OR NOT, 2. COUNT FREQUENCY OF CHARACTER IN STRING, and 3. SORT THE WORDS. The user has selected option 3. They entered a comma-separated string: "harsh,raj,aryan,atharva,raj". The program then displays the sorted unique words: harsh, raj, aryan, atharva. The user then presses 'c' to continue.

```
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untitled college_prac exp4.py
exp4.py exp4_1.py main.py
Run: exp4 main
Press q to quit and c to continue: c
***** MENU *****
1: CHECK LISTS ARE DISJOINT OR NOT
2: COUNT FREQUENCY OF CHARACTER IN STRING
3: SORT THE WORDS
ENTER YOUR CHOICE:2
Enter a string: i Live in mumbai
Frequency of characters are as follows: {'i': 4, 'l': 1, ' ': 3, 'b': 1, 'u': 1, 'm': 2, 'v': 1, 'a': 1, 'e': 1, 'n': 1}
Press q to quit and c to continue: c
***** MENU *****
1: CHECK LISTS ARE DISJOINT OR NOT
2: COUNT FREQUENCY OF CHARACTER IN STRING
3: SORT THE WORDS
ENTER YOUR CHOICE:3
Enter a comma separated words string: harsh,raj,aryan,atharva,raj
harsh
raj
aryan
atharva
The sorted unique words are
aryan
atharva
harsh
raj
Press q to quit and c to continue:
PyCharm 2019.3.5 available: // Update... (today 02:09 PM)
34:66 CRLF UTF-8 4 spaces Python 3.8
03:23 PM
30-03-2021
```