Unit4_Assessment

April 11, 2024

1 Unit 4 Career Preparation: Technical Assessment

1.1 Problem 1

Write a script that: * Reads the file `problem1.txt`. * Adds each line to a new list. * Prints the new list.

[104]:
```
data = []
with open("/home/labsuser/problem1.txt", 'r') as file:
    for line in file.readlines():
        line = line.replace("\n"," ")
        data.append(line)
print("Here is the new list", data)
```

```
Here is the new list ['item1 ', 'item2 ', 'item3 ', 'item4 ', 'item5 ']
```

1.2 Problem 2

Write a script that: * Reads the file `problem2.txt`. * Counts how many times 192.168.1.1 appears in the file. * Prints the result.

[103]:
```
with open ("/home/labsuser/problem2.txt", 'r') as file:
    content = file.read()

count = content.count('192.168.1.1')

print(" Here is the results of how many 192.168.1.1 appears in the file" ,␣
 ↪count)
```

```
 Here is the results of how many 192.168.1.1 appears in the file 5
```

1.3 Problem 3

Write a script using a function (`dedupe`) that: * Takes a list `l = [1,5,7,2,4,3,5,1,6,2,6]`. * Returns a new list that contains all of the elements from the first list, excluding duplicates.

[39]:
```
def dedupe(x):
  y = []
  z = []
  for i in x:
```

```
    if i not in y:
      z.append(i)
      y.append(i)
  return z
def main():
    l = [1,5,7,2,4,3,5,1,6,2,6]
    print(dedupe(l))
main()
```

```
[1, 5, 7, 2, 4, 3, 6]
```

1.4 Problem 4

Write a program (using a function) that: * Asks the user for a long string containing multiple words. * Prints back the same string, except with the words in reverse order.

For example, if the user types the string: 'My name is robert', it will print 'robert is name My'.

[35]:
```
def reverse():
    word_list = input("Doing everything in reverse when you type it ").split()
    reverse = " ".join(word_list[::-1])
    print(reverse)
reverse()
```

```
Doing everything in reverse when you type it  My name is robert

robert is name My
```

1.5 Problem 5

Write a script that: * Opens the file `problem5.txt`. * Counts each port and puts the results in a dictionary.

[102]:
```
import re
with open("/home/labsuser/problem5.txt") as f:
    dict_1 = {}
    for line in f.readlines():
        match = re.search("\d{0,4}", line)

        if match:
            port = match.group(0)
            if port in dict_1:
                dict_1[port] += 1
            else:
                dict_1[port] = 1
        else:
            pass

    print("This is the type of ports and how many",dict_1)
```

```
This is the type of ports and how many {'80': 7, '443': 3, '22': 5, '21': 2,
'25': 3, '389': 1, '3389': 1, '445': 3, '': 1}
```

[ ]: