**Python基础 第三天作业 2023.8.8**

1. **正则表达式测试 1**

字符串为MAC地址表内容: '166 54a2.74f7.0326 DYNAMIC Gi1/0/11'

使用正则表达式匹配，并且格式化打印后结果如下图:

文本

描述已自动生成

import re  
str1 = '166 54a2.74f7.0326 DYNAMIC Gi1/0/11'  
vlan\_id\_pattern =r'\d{1,4}'  
vlan\_id = re.match(vlan\_id\_pattern, str1).group() #166  
  
mac\_pattern = r'[0-9a-f]{4}.[0-9a-f]{4}.[0-9a-f]{4}'  
mac = re.search(mac\_pattern, str1).group() #54a2.74f7.0326  
  
type\_pattern = r'[A-Z]+'  
type = re.search(type\_pattern, str1).group() #DYNAMIC  
  
interface\_pattern = r'[A-Z]{1}[a-z]{1}\d{1,2}/\d{1,2}/\d{1,2}'  
interface = re.search(interface\_pattern, str1).group() #Gi1/0/11  
  
line1 = '{:<11}: {}'.format('VLAN ID', vlan\_id)  
line2 = '{:<11}: {}'.format('MAC', mac)  
line3 = '{:<11}: {}'.format('TYPE', type)  
line4 = '{:<11}: {}'.format('Interface', interface)  
print(line1)  
print(line2)  
print(line3)  
print(line4)

文本

描述已自动生成

1. **正则表达式测试 2**

字符串为ASA防火墙show conn（查看连接内容): 'TCP server 172.16.1.101:443 localserver 172.16.66.1:53710, idle 0:01:09, bytes 27575949, flags UIO'

使用正则表达式匹配，并且格式化打印后结果如下图:

文本

描述已自动生成

import re  
str1 = 'TCP server 172.16.1.101:443 localserver 172.16.66.1:53710, idle 0:01:09, bytes 27575949, flags UIO'  
protocol\_pattern = r'[UDPTCP]{3}'  
protocol = re.match(protocol\_pattern, str1).group() #TCP  
  
server\_pattern = r'\d{1,3}.\d{1,3}.\d{1,3}.\d{1,3}:\d{1,5}'  
server = re.findall(server\_pattern, str1)[0] #172.16.1.101:443  
localserver = re.findall(server\_pattern, str1)[1]  
  
idle\_pattern = r'\d{1,2}:\d{1,2}:\d{1,2}'  
idle = re.search(idle\_pattern, str1).group()  
idle\_h = re.findall(r'\d{1,2}', idle)[0]  
idle\_min = re.findall(r'\d{1,2}', idle)[1]  
idle\_sec = re.findall(r'\d{1,2}', idle)[2]  
  
bytes\_pattern = r'\d+'  
bytes = re.findall(bytes\_pattern, str1)[-1]  
  
flags\_pattern = r'[A-Z]+'  
flags = re.findall(flags\_pattern, str1)[-1]  
  
line1 = '{:<19}: {}'.format('protocol', protocol)  
line2 = '{:<19}: {}'.format('server', server)  
line3 = '{:<19}: {}'.format('localserver', localserver)  
line4 = '{:<19}: {:<2}小时 {:<2}分钟 {:<2}秒'.format('idle', idle\_h, idle\_min, idle\_sec)  
line5 = '{:<19}: {}'.format('bytes', bytes)  
line6 = '{:<19}: {}'.format('flags', flags)  
  
print(line1)  
print(line2)  
print(line3)  
print(line4)  
print(line5)  
print(line6)

屏幕上有字

描述已自动生成