07 Feb ASS

February 21, 2023

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Q1. You are writing code for a company. The requirement of the company is that you create a python
function that will check whether the password entered by the user is correct or not. The function should
take the password as input and return the string "Valid Password" if the entered password follows the
below-given password guidelines else it should return "Invalid Password".
Note: 1. The Password should contain at least two uppercase letters and at least two lowercase letters.
2. The Password should contain at least a number and three special characters.
3. The length of the password should be 10 characters long.
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[23]:

```
import re
password = "$HA_dab"
flag = 0
while True :
    if (len(password)<=8):
        flag = -1
        break
    elif not re.search( " [A-Z] " , password):
        flag = -1
        break
    elif not re.search( " [a-z] " , password):
        flag = -1
        break
    elif not re.search( " [0-9] " , password):
        flag = -1
        break
    elif not re.search( " [_@$] " , password):
        flag = -1
        break
    elif re.search("\s" , password):
        flag = -1
        break
    else:
        flag == 0
        print("valid password")
        break
    if flag == -1 :
        print ("invalid password")





valid()
```

```
enter a password $HA_dab
```

```
<class 'list'>
```

[23]:
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(0, 0, 0, 1)
```

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Q2. Solve the below-given questions using at least one of the following:
1. Lambda function
2. Filter function
3. map function
4. List ComprehensioI
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# Check if the string starts with a particular letter
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```
The startswith() Method returns True if the string starts with the specified␣
  ↪value , Otherewise false
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# Check if the string is numeric
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To check if the string contains numeric values , we implement the python string␣
  ↪isnumeric()function. isnumeric()
method returns True if all of the characters in the string are numeric(only␣
  ↪numbers).if not, it returns False.
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# Sort a list of tuples having fruit names and their quantity.␣
  ↪[("mango",99),("orange",80), ("grapes", 1000)-
```

[24]:
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def sort_tuple(fruit):
    fruit.sort(key = lambda x : x[1])
    return fruit
```

[25]:
```
fruit = [("mango",99) , ("orange",80) , ("grapes",1000)]
print(sort_tuple(fruit))
```

```
[('orange', 80), ('mango', 99), ('grapes', 1000)]
```

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```
#Find the squares of numbers from 1 to 10
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[1]:
```
num = [1,2,3,4,5,6,7,8,9,10]
```

[2]:
```
num = list(map(lambda x: x **2 , num))
```

[3]:
```
print(num)
```

```
[1, 4, 9, 16, 25, 36, 49, 64, 81, 100]
```

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# Find the cube root of numbers from 1 to 10
```

[9]:
```
num = [1,2,3,4,5,6,7,8,9,10]
```

[10]:
```
num = list(map(lambda x: x **3 , num))
```

[11]:
```
print(num)
```

```
[1, 8, 27, 64, 125, 216, 343, 512, 729, 1000]
```

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```
#Check if a given number is even
```

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```
A number is even if , when divided by two , the remainder is 0 . A number is␣
 ↪odd if , when divided by 2, the remainder is 1.
```

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# Filter odd numbers from the given list.
[1,2,3,4,5,6,7,8,9,10]
```

[10]:
```
a = [1,2,3,4,5,6,7,8,9,10]
```

[13]:
```
odd = filter(lambda x : x% 2 == 1 ,a)
```

[15]:

```
print('orignal list ;',a)
print ('filtered list:', list(odd))
```

```
orignal list ; [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
filtered list: [1, 3, 5, 7, 9]
```

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# Sort a list of integers into positive and negative integers lists.
[1,2,3,4,5,6,-1,-2,-3,-4,-5,0]
```

[16]:

```
list1 = [1,2,3,4,5,6,-1,-2,-3,-4,-5,0]
```

[22]:

```
list(filter(lambda x : x <0 , list1))
```

[22]:

```
[-1, -2, -3, -4, -5]
```

[23]:

```
list(filter(lambda x : x>0 , list1))
```

[23]:

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

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