04 feb assignment

February 13, 2023

Q1. Create a python program to sort the given list of tuples based on integer value using a lambda function. [('Sachin Tendulkar', 34357), ('Ricky Ponting', 27483), ('Jack Kallis', 25534), ('Virat Kohli', 24936)]

ANS-

[1]:
```
cricketers = [("sachin tendulkar",34357) , ("ricky ponting",27483) , ("jack␣
↪kallis",25534) , ("virat kohli",24936)]
```

[2]:
```
cricketers.sort(key = lambda x : x[1])
```

[4]:
```
print("in-place sort: ",cricketers.sort(key = lambda x : x[1]))
print(cricketers)
```

```
in-place sort:  None
[('virat kohli', 24936), ('jack kallis', 25534), ('ricky ponting', 27483),
('sachin tendulkar', 34357)]
```

[ ]:
```

```

Q2. Write a Python Program to find the squares of all the numbers in the given list of integers using lambda and map functions. [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

ANS-

l=[1,2,3,4,5,6,7,8,9,10]

[9]:
```
list(map(sq , l ))
```

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

[10]:
```
list(map(lambda x : x**2 , l))
```

[10]:
```
[1, 4, 9, 16, 25, 36, 49, 64, 81, 100]
```

[ ]:
```

```

Q3. Write a python program to convert the given list of integers into a tuple of strings. Use map and lambda functions Given String: [1, 2, 3, 4, 5, 6, 7, 8, 9, 10] Expected output: ('1', '2', '3', '4', '5', '6', '7', '8', '9', '10')

ANS -

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

[6]:
```
list(map(lambda x : x ,s))
```

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

[ ]:

Q4. Write a python program using reduce function to compute the product of a list containing numbers from 1 to 25.

ANS-

[23]:
```
from functools import reduce
```

[24]:
```
l = [1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,1,7,18,19,20,21,22,23,24,25]
```

[25]:
```
reduce(lambda x, y : x+y , l)
```

[25]:
```
316
```

[ ]:

Q5. Write a python program to filter the numbers in a given list that are divisible by 2 and 3 using the filter function. [2, 3, 6, 9, 27, 60, 90, 120, 55, 46]

ANS-

[31]:
```
lis1 =[2,3,6,9,27,60,90,120,55,46]
```

[36]:
```
def is_even(x):
    return x % 2 == 0
```

[37]:
```
lis2 = list(filter(is_even , lis1))
print(lis2)
```

```
[2, 6, 60, 90, 120, 46]
```

[38]:
```
def is_even(x):
    return x % 3 ==0
```

[39]:
```
lis2 = list(filter(is_even , lis1))
print(lis2)
```

```
[3, 6, 9, 27, 60, 90, 120]
```

[ ]:

Q6. Write a python program to find palindromes in the given list of strings using lambda and filter function. [‘python’, ‘php’, ‘aba’, ‘radar’, ‘level’]

ANS-

[40]:
```
texts = ["python" ,"php" , "aba" , "radar" , "level"]
print ("orignal list of strings:")
print(texts)
result = list(filter(lambda x : ( x == "".join(reversed(x))),texts))
print("\nlists of palindromes:")
print(result)
```

```
orignal list of strings:
['python', 'php', 'aba', 'radar', 'level']

lists of palindromes:
['php', 'aba', 'radar', 'level']
```

[ ]:

[ ]:

[ ]: