functions assignment 2

August 2, 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)]

[1]:
```
list1=[('Sachin Tendulkar', 34357), ('Ricky Ponting', 27483), ('Jack Kallis',␣
↪25534), ('Virat Kohli', 24936)]
list1.sort(key=lambda a:a[1])
print(list1)
```

```
[('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]

[2]:
```
list1=[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
newlist=list(map(lambda x:x**2,list1))
print(newlist)
```

```
[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')

[3]:
```
list1=[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
new_output=tuple(map(lambda x:str(x),list1))
print(new_output)
```

```
('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.

[4]:
```
import functools
list1=[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25]
productValue=functools.reduce(lambda a,b:a*b,list1)
print(productValue)
```

```
15511210043330985984000000
```

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]

[5]:
```
list1=[2, 3, 6, 9, 27, 60, 90, 120, 55, 46]
result=filter(lambda x: x%2==0 and x%3==0,list1)
print(list(result))
```

```
[6, 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']

[6]:
```
list1=['python', 'php', 'aba', 'radar', 'level']
result=filter(lambda x:x[::-1]==x,list1)
print(list(result))
```

```
['php', 'aba', 'radar', 'level']
```

[ ]:
```

```