4th Feb Assignment

February 7, 2023

1 Assignment 5

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]: lst=[('Sachin Tendulkar', 34357), ('Ricky Ponting', 27483), ('Jack Kallis',␣
     ↪25534), ('Virat Kohli', 24936)]
```

```
[13]: a=sorted(lst,key=lambda x:x[1])
```

```
[15]: print(a)
```

```
[('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]

```
[18]: lst1=[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

```
[28]: sq=lambda a:a**2
```

```
[34]: print(list(map(sq,lst1)))
```

```
[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')

```
[47]: lst2=[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

```
[48]: convert_to_str=lambda x:str(x)
```

```
[49]: print(list(map(convert_to_str,lst2)))
```

```
['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.

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

```
[51]: lst3=[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]
```

```
[52]: reduce(lambda x,y:x*y,lst3)
```

```
[52]: 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. $[2, 3, 6, 9, 27, 60, 90, 120, 55, 46]$

```
[53]: lst4=[2, 3, 6, 9, 27, 60, 90, 120, 55, 46]
```

```
[54]: divisible_by_2=filter(lambda x:x%2==0,lst4)
      divisible_by_3=filter(lambda x:x%3==0,lst4)
```

```
[56]: print(list(divisible_by_2))
```

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

```
[57]: print(list(divisible_by_3))
```

```
[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']

```
[58]: lst5=['python', 'php', 'aba', 'radar', 'level']
```

```
[63]: check_palindrome=lambda string:string==string[::-1]
```

```
[65]: palindromes=filter(check_palindrome,lst5)
```

```
[66]: print(list(palindromes))
```

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