***lambda , map, reduce, filter Function Assignment***

**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)]**

**list=[('Sachin Tendulkar', 34357), ('Ricky Ponting', 27483), ('Jack Kallis', 25534), ('Virat Kohli', 24936)]**

**list1=sorted(list, key=lambda x:x[1], reverse=True)**

**print(list1)**

**Output:- [('Sachin Tendulkar', 34357), ('Ricky Ponting', 27483), ('Jack Kallis', 25534), ('Virat Kohli', 24936)]**

**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]**

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

**squares = map(lambda x: x\*\*2, l)**

**print(list(squares))**

**Output:-**

**[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')**

**Given\_String= [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]**

**use=tuple(map(lambda x:str(x),Given\_String))**

**print(use)**

**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.**

**from functools import reduce**

**my\_list = list(range(1, 26))**

**product = reduce(lambda x, y: x\*y, my\_list)**

**print(product)**

**Output**

**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]**

**my\_list = [2, 3, 6, 9, 27, 60, 90, 120, 55, 46]**

**filtered\_list = list(filter(lambda x: x%2 == 0 and x%3 == 0, my\_list))**

**print(filtered\_list)**

**Output**

**[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']**

**my\_list = ['python', 'php', 'aba', 'radar', 'level']**

**palindrome\_list = list(filter(lambda x: x == x[::-1], my\_list))**

**print(palindrome\_list)**

**Output**

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

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