

Assignment 05: 04 Feb 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)]

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]

Q3. Write a python program to convert the given list of integers into a tuple of strings. Use map and lambda functions

Given list: [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

Expected 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.

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]

Q6. Write a python program to find palindromes in the given list of strings using lambda and filter function.

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

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:

sorting tuple on basis of integer value

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

```
print("Original list of tuples: ")
```

```
print(subject_marks)
```

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

```
print("\nSorting the List of Tuples:")
```

```
print(subject_marks)
```

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:

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

```
print(square_nums)
```

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

Ans:

```
result_tuple = tuple(map(str,(1, 2, 3, 4, 5, 6, 7, 8, 9, 10)))
```

```
print("Tuple =",result_tuple)
```

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

Ans:

step 1

```
n=int(input("Enter no. of elements: "))
```

```
list=[]
```

```
for i in range(0,n):
```

```
    print("Enter element",i)
```

```
    a=int(input())
```

```
    list.append(a)
```

```
print ("list1= ",list)
```

step 2

```
list1 = [10, 20, 25,]
```

```
from functools import reduce
```

```
nums_product = reduce( (lambda x, y: x * y), list1 )
```

```
print("Product:",nums_product)
```

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:

```
nums = [2, 3, 6, 9, 27, 60, 90, 120, 55, 46]
```

```
two = list(filter(lambda x: x%2 == 0, nums))
```

```
print("Divisible by 2 : ",two)
```

```
three = list(filter(lambda x: x%3 == 0, nums))
```

```
print("Divisible by 3 : ",three)
```

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:

```
texts = ['python', 'php', 'aba', 'radar', 'level']
```

```
result = list(filter(lambda x: (x == "".join(reversed(x))), texts))
```

```
print("List of palindromes: ",result)
```