Map Reduce and Filter Operations in Python

* map() function returns a map object (which is an iterator) of the results after applying the given function to each item of a given iterable (list, tuple, etc.)

Syntax: Map (fun, iter)

* The filter() method filters the given sequence with the help of a function that tests. each element in the sequence to be true or not.

Syntax: filter (function, Sequence).

* The reduce (fun, seq) function is used to apply a particular function passed in its argument to all the list elements mentioned in the sequence passed along. This function is defined in "functools" module.

map() Assignment

```
Q1. Using Het map function create two power list where is power of 2nd.
-> from math import *
Ls = [4,9,16, 25,36]
asf = map(lambda a: math.sqrt(a), ls)
print (list (asf))
output: [2,3,4,5,6]
```

```
Q2. Create list of numbers using map find out even or odd numbers (using lambda).
-> wc = [2,4S, 37, 38, 100]
asf = map ((lambda a: str (a) + "is Even Number" if a%2 == 0 else
str(a) + " is Odd Number ", wc)
print(list(asf))
```

filter() Assignment

```
Q 1. using filter find out even numbers in loop (use lambda)
```
```
-> ab = [12,33,4 4, 3, 2, 43, 65, 867, 908]
```
```
filter (lambda a: 1 if a %2== 0 else 0 ab)
```
```
print (list (ls))
```
```
#2. Using filter find all find all fruits in list Starting with A (use Lambda)
```
```
-> ab = ["Guava", "Mango" "Banana", "Pomegranates", ”Chiku”, "Lichi"]
```
```
Ls = filter (lambda a : 1 if “e” in a else o, ab).
```
```
print (list ((s))
```

reduce() Assignment

Q1. Using reduce find out biggest between two numbers in list (uses lambda)

->from functools import reduce.

-> ab = [13,2]

Is = reduce (lambda a,b: "A is Big" if a>b else "B is Big", ab)

Print(ls).

list using

Q2 find out smallest number in list using reduce

-> def asf(a, b):

ls = [a,b]

return min (ls)

ak =[12, 14, 1, 56,77]

redu = reduce (asf, ac)

print (redu)

Q3. Using reduce find out palindrome strings (use lambda).

→ This question is removed by faculty.