

Python

1. Write lambdas to:
 - a. Square a number x^2
 - b. Inverse a number $1/x$
 - c. Negate a number
2. Write a Function that returns the maximum number from a list or tuple of numbers passed to the function as argument. [Write the logic for finding max using a loop yourself]

```
def my_max(numbers):  
    # write the definition of the function here
```

3. Predict the output of following code:

```
from functools import reduce  
f = lambda x,y : x if x > y else y  
  
l = [10, 30, 50, 30, 10]  
num = reduce(f, l)  
print(num)
```

4. Write a function **map_multiple** that takes a list of functions as first argument and a sequence type as second argument. The function should apply each function from the list to each of the elements in the list and return the final resulting list.

```
def map_multiple(funcs, sequence):  
    # write definition here
```

5. Find output of following:

```
functs = [lambda x: x**0.5, lambda x: 1/x]  
l = [1, 4, 16, 64]  
ans = []  
for num in l:  
    res = num  
    for funct in functs:  
        res = funct(res)  
    ans.append(res)  
print(ans)
```

6. Use filter function to filter a list of numbers and strings such that the result contains only numbers.
7. Assume a list containing heights ft and inches in the form of a list of string
Example : `l = ['5ft10in', '5ft',]`
Write a function to convert the heights to *meter*. Use map function along with your function to convert everything to *m*.