In [ ]:
```
# Problem 3.1 a
```

In [62]:
```
def myreduce(func,a):
    if a ==[]:
        return None
    if len(a) ==1:
        return a[0]
    x =a[0]
    for i in range(1,len(a)):
        x=(func(x,a[i]))
        return x
```

In [63]:
```
def sumofxy(x,y):
      return x+y
a = [1,2,3,4,5,6,7,8]
myReduce(sumofxy,a)
```

Out[63]: 36

In [ ]:
```
# Problem 3.1 b
```

In [64]:
```
def even(X):
    if not X % 2:
        return True
    return False
```

In [65]:
```
def myFilter(f, L):
    if not L:
        return []
    return [f(L[0])]+ myFilter(f, L[1:])
```

In [66]:
```
print(myFilter(even, a))
```

```
[False, True, False, True, False, True, False, True]
```