

SelfAssessment75

October 18, 2015

1 Exercise 7.5

In our third try, we examined elements of the list from the end to the beginning in order to avoid the “out of range” error. Can you change the code to start from the beginning to the end but also avoid the range error? [Hint: how about building a new list consisting of only valid digits?]

Answer appears after one blank page (so you don't peek).

Are you sure you're ready to peek?

2 Possible Solutions

```
In [1]: #3rd try (Example7.6.py)
tlist = list(raw_input('Enter telephone number >'))
good_list = list()

print tlist

print 'will examine ', len(tlist), ' elements:', range(len(tlist))

for i in range(len(tlist)):

    if tlist[i].isdigit():
        print 'element', i, 'of tlist -', tlist[i], '- is good.'
        good_list.append(tlist[i])
    else:
        print 'element', i, 'of tlist -', tlist[i], '- is not very good.'

print good_list
```

```
Enter telephone number >435-234-2321
['4', '3', '5', '-', '2', '3', '4', '-', '2', '3', '2', '1']
will examine 12 elements: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11]
element 0 of tlist - 4 - is good.
element 1 of tlist - 3 - is good.
element 2 of tlist - 5 - is good.
element 3 of tlist - - - is not very good.
element 4 of tlist - 2 - is good.
element 5 of tlist - 3 - is good.
element 6 of tlist - 4 - is good.
element 7 of tlist - - - is not very good.
element 8 of tlist - 2 - is good.
element 9 of tlist - 3 - is good.
element 10 of tlist - 2 - is good.
element 11 of tlist - 1 - is good.
['4', '3', '5', '2', '3', '4', '2', '3', '2', '1']
```

Pretty good hint right? I've added an if/else block here just to make the text output a bit cleaner. We could also try a while loop:

```
In [2]: tlist = list(raw_input('Enter telephone number >'))

print tlist

print 'will examine ', len(tlist), ' elements:', range(len(tlist))

i = 0

while i < len(tlist):
    if not tlist[i].isdigit():
        print 'element', i, 'of tlist -', tlist[i], '- is not good.'
        del(tlist[i])
    else:
        print 'element', i, 'of tlist -', tlist[i], '- is good.'
    i += 1
```

```
print tlist
```

```
Enter telephone number >545-232-1231
['5', '4', '5', '-', '2', '3', '2', '-', '1', '2', '3', '1']
will examine 12 elements: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11]
element 0 of tlist - 5 - is good.
element 1 of tlist - 4 - is good.
element 2 of tlist - 5 - is good.
element 3 of tlist - - - is not good.
element 4 of tlist - 3 - is good.
element 5 of tlist - 2 - is good.
element 6 of tlist - - - is not good.
element 7 of tlist - 2 - is good.
element 8 of tlist - 3 - is good.
element 9 of tlist - 1 - is good.
['5', '4', '5', '2', '3', '2', '1', '2', '3', '1']
```

The while loop re-evaluates the equality argument `i < len(tlist)` each time it loops, so we're okay.