Extra Practice #5

- These problems are designed to remind you of things you may need to know for the homework. They are for your use only, and should not be turned in. Possible solutions are provided on the next page if you want to check yourself, or can't figure it out.

1. You have a file containing a list of numbers. This list could be all on one line, separated by spaces, or one number per-line. You know that the numbers aren't separated by commas or any other value, though. How would you read the entire file into a list of floating point numbers ?

2. Prompt the user to enter a filename, then check to make sure you can read from the file. If you can't (permissions, or the file doesn't exist), prompt the user again until they enter a valid name.

3. Subdivide a range of values into n subregions. Generate a list of tuples with the minimum and maximum values for each region. eg - if the range was 2 - 6 with 4 regions, you would produce [(2,3),(3,4),(4,5),(5,6)].

Extra Practice #5

- Solutions:

1. Read number file:

```
data=file("file.txt","r").read()     # reads the entire file
data2=data.split()     #splits into a list based on whitespace
result=[float(i) for i in data2]   # convert to float
- or -
result=[float(i) for i in file("file.txt","r").read().split()]   # all in one, hard to read, line
```

2. Get a filename:

```
while 1:
    try: in=file(raw_input("Enter filename: "),"r")
    except:
        print "I can't seem to read that file. Try again"
        continue
    break
```

Extra Practice #5

- Solutions:

  3. Subdivide range:

```
def subdiv(mn,mx,bins):
    step=(mx-mn)/bins
    return [(i*step+mn,(i+1)*step+mn) for i in range(bins)]
```