binarysearch

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```python
In [27]: counter = 0

         def binarySearch(alist, item):
             global counter
             if len(alist) == 0:
                 return False
             else:
                 midpoint = len(alist)//2
                 print "midpoint:", midpoint
                 if alist[midpoint]==item:
                     print item, "found at alist[",midpoint,"], and counter: ", cou
                     return True
                 else:
                     if item<alist[midpoint]:
                         counter +=  1
                         return binarySearch(alist[:midpoint],item)
                     else:
                         counter +=  1
                         return binarySearch(alist[midpoint+1:],item)

         testlist = [0, 1, 2, 8, 13, 17, 19, 32, 42,50]
         binarySearch(testlist, 19)

midpoint: 5
midpoint: 2
midpoint: 1
midpoint: 0
19 found at alist[ 0 ], and counter:  3


Out[27]: True
```