

**6.00 Handout, Lecture 8**  
**(Not intended to make sense outside of lecture)**

```
i = x
answer = 1
while i > 1:
    answer = answer * i
    i = i - 1
```

```
def fact(n):
    # assume n >= 0
    if n <= 1: return 1
    else return n*fact(n - 1)
```

```
x = 0
for i in range(0, n):
    for j in range(0, n):
        x += 1
```

```
answer = 0
s = str(x)
for i in range(0, len(s)):
    answer = answer + int(s[i])
```

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```
def search(s, e):
    answer = False
    i = 0
    numCompares = 0
    while i < len(s):
        if e == s[i]:
            answer = True
            i += 1
            numCompares += 1
    print answer, numCompares
```

```
def bsearch(s, e, first, last):
    print first, last
    if (last - first) < 2: return s[first] == e or s[last] == e
    mid = first + (last - first)/2
    if s[mid] == e: return True
    if s[mid] > e: return bSearch(s, e, first, mid - 1)
    return bSearch(s, e, mid + 1, last)
```

```
def search1(s, e):
    print bsearch(s, 3, 0, len(s))
```

```
s = range(0,1000000)
```