Lecture 7: lists and searching
Let \( l = \text{list}(\text{range}(10)) \). What does \( l \) equal after the following operations?

\[
l.\text{append}(11) \\
del \ l[0] \\
l.\text{remove}(1)
\]

Let \( l = \text{list}(\text{‘sub pop’}) \). What does \( l \) equal after the following operations?

\[
l.\text{insert}(3, \text{‘*’}) \\
l[\text{len}(l)-2] = \text{‘u’} \\
l.\text{append}(\text{‘!’}) \\
l.\text{append}(l.\text{pop}())
\]
linear search

```python
l = ['The Strokes', 'Bon Iver', 'Arcade Fire',
     'The Black Keys', 'Pixies', 'The White Stripes',
     'Neutral Milk Hotel', 'The National', 'Yo La Tengo']

def find_startswith(lst, searchstr):
    for s in lst:
        if s.startswith(searchstr):
            return s
    return None
```


def find_startswith(lst, searchstr):
    low = 0
    high = len(lst) - 1
    while (low < high):
        mid = (high + low) // 2
        if lst[mid].startswith(searchstr):
            return lst[mid]
        elif lst[mid] < searchstr:
            low = mid + 1
        else:
            high = mid - 1
    return None