

← [course home \(/table-of-contents#section_array-and-string-manipulation_concept_slice\)](/table-of-contents#section_array-and-string-manipulation_concept_slice)

Array Slicing

Array slicing involves taking a subset from an array and **allocating a new array with those elements**.

In Python 2.7 you can create a new list of the elements in `my_list`, from `start_index` to `end_index` (exclusive), like this:

```
my_list[start_index:end_index]
```

Python 2.7

You can also get everything from `start_index` onwards by just omitting `end_index`:

```
my_list[start_index:]
```

Python 2.7

Careful: there's a hidden time and space cost here! It's tempting to think of slicing as just "getting elements," but in reality you are:

1. allocating a new list
2. copying the elements from the original list to the new list

This takes $O(n)$ time and $O(n)$ space, where n is the number of elements in the *resulting* list.

That's a bit easier to see when you save the result of the slice to a variable:

```
tail_of_list = my_list[1:]
```

Python 2.7

But a bit harder to see when you don't save the result of the slice to a variable:

```
return my_list[1:]  
  
# Whoops, I just spent O(n) time and space!
```

Python 2.7

```
for item in my_list[1:]:  
    # Whoops, I just spent O(n) time and space!  
    pass
```

Python 2.7

So keep an eye out. Slice wisely.

← [course home \(/table-of-contents\)](/table-of-contents)

Next up: In-Place Algorithms → ([/concept/in-place?
course=fc1§ion=array-and-string-manipulation](/concept/in-place?course=fc1§ion=array-and-string-manipulation))

Want more coding interview help?

Check out **interviewcake.com** for more advice, guides, and practice questions.