

Lab 02 Solutions

PSTAT 5A, compiled by Ethan
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1 Task 1

```
[1]: list1 = [1, "hi", 3.4, "PSTAT 5A"]
```

2 Task 2

```
[2]: type(list1)
```

```
[2]: list
```

3 Task 3

```
[3]: x = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

```
[4]: x[1]
```

```
[4]: 2
```

```
[5]: x[0]
```

```
[5]: 1
```

4 Task 4

```
[6]: x = [1, "two", 3.5, "four", "five"]
```

```
[7]: # a) type(x) should be 'list'  
# b) x[1] is the element "two", so type(x[1]) should be "str"  
# c) x[0] is the first element of x, namely 1
```

```
[8]: type(x)
```

```
[8]: list
```

```
[9]: type(x[1])
```

```
[9]: str
```

```
[10]: x[0]
```

```
[10]: 1
```

5 Task 5

```
[11]: # answers may vary
```

6 Task 6

```
[12]: from datascience import * # remember that Table() comes from the datascience_
      ↪ module!
```

```
[13]: profs = Table().with_columns(
      "Professor", ["Dr. Swenson", "Dr. Wainwright", "Dr. Mouti"],
      "Office", ["South Hall", "Old Gym", "Old Gym"],
      "Course", ["PSTAT 130", "PSTAT 120A", "PSTAT 126"]
    )
```

```
[14]: profs # just to make sure the table looks correct
```

```
[14]: Professor      | Office      | Course
      Dr. Swenson    | South Hall | PSTAT 130
      Dr. Wainwright | Old Gym    | PSTAT 120A
      Dr. Mouti      | Old Gym    | PSTAT 126
```

```
[15]: profs.select("Course")
```

```
[15]: Course
      PSTAT 130
      PSTAT 120A
      PSTAT 126
```

```
[16]: profs = profs.append(
      ["Dr. Ravat", "South Hall", "PSTAT 120B"]
    )
```

```
[17]: profs # check to make sure the appending was successful
```

```
[17]: Professor      | Office      | Course
      Dr. Swenson    | South Hall | PSTAT 130
      Dr. Wainwright | Old Gym    | PSTAT 120A
      Dr. Mouti      | Old Gym    | PSTAT 126
      Dr. Ravat      | South Hall | PSTAT 120B
```

7 Task 7

```
[18]: my_list = [1, 2, 3]
      my_array = make_array(1, 2, 3)
```

```
[19]: sum(my_list)
```

```
[19]: 6
```

```
[20]: sum(my_array)
```

```
[20]: 6
```

```
[21]: my_list + 2
```

```
-----
TypeError                                Traceback (most recent call last)
Cell In[21], line 1
----> 1 my_list + 2

TypeError: can only concatenate list (not "int") to list
```

```
[22]: my_array + 2
```

```
[22]: array([3, 4, 5])
```