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Lesson 3: Working with Lists

1. Create a list of 5 of your favorite tv shows.

```
▶ favtvshows = ['stranger things', 'money heist', 'dark', 'game of thrones', 'never have i ever']
```

2. Print the list in its original order.

```
favtvshows = ['stranger things', 'money heist', 'dark', 'game of thrones', 'never have i ever']  
print(favtvshows)
```

```
['stranger things', 'money heist', 'dark', 'game of thrones', 'never have i ever']
```

3. Use the sorted() function to print the list in alphabetical order. How is sorted() different from sort()?

```
▶ favtvshows = ['stranger things', 'money heist', 'dark', 'game of thrones', 'never have i ever']  
print(favtvshows)  
print(sorted(favtvshows))
```

```
['stranger things', 'money heist', 'dark', 'game of thrones', 'never have i ever']  
['dark', 'game of thrones', 'money heist', 'never have i ever', 'stranger things']
```

The sorted() function sorts the lists temporarily, whereas the sort() function sorts the list permanently.

4. Print out your original list.

```
▶ favtvshows = ['stranger things', 'money heist', 'dark', 'game of thrones', 'never have i ever']  
print(favtvshows)  
print(sorted(favtvshows))  
print(favtvshows)
```

```
|
```

```
➡ ['stranger things', 'money heist', 'dark', 'game of thrones', 'never have i ever']  
   ['dark', 'game of thrones', 'money heist', 'never have i ever', 'stranger things']  
   ['stranger things', 'money heist', 'dark', 'game of thrones', 'never have i ever']
```

5. Used sorted() to print your list in reverse alphabetical order.

```
▶ favtvshows = ['stranger things', 'money heist', 'dark', 'game of thrones', 'never have i ever']  
print(favtvshows)  
print(sorted(favtvshows))  
favtvshows.sort(reverse=True)  
print(favtvshows)
```

```
['stranger things', 'money heist', 'dark', 'game of thrones', 'never have i ever']  
['dark', 'game of thrones', 'money heist', 'never have i ever', 'stranger things']  
['stranger things', 'never have i ever', 'money heist', 'game of thrones', 'dark']
```

6. Create a message indicating how many favorite TV shows you have – use the len() function.

```
▶ favtvshows = ['stranger things', 'money heist', 'dark', 'game of thrones', 'never have i ever']  
print(favtvshows)  
message = " I have {} favorite tv shows!"  
print(message.format(len(favtvshows)))
```

```
❏ ['stranger things', 'money heist', 'dark', 'game of thrones', 'never have i ever']  
   I have 5 favorite tv shows!
```

Lesson 4 – Looping:

1. Create a list that holds 5 data variables.

```
planets = ['venus', 'mars', 'saturn', 'jupiter', 'mercury']
```

2. Print out those variables by using a for loop.

```
▶ planets = ['venus', 'mars', 'saturn', 'jupiter', 'mercury']  
for planet in planets:  
    print(planet)
```

```
venus  
mars  
saturn  
jupiter  
mercury
```

3. Modify your for loop to add a message to your for loop.

```
▶ planets = ['venus', 'mars', 'saturn', 'jupiter', 'mercury']  
for planet in planets:  
    print(planet.title() + " is one of my favorite planets")
```

```
Venus is one of my favorite planets  
Mars is one of my favorite planets  
Saturn is one of my favorite planets  
Jupiter is one of my favorite planets  
Mercury is one of my favorite planets
```

4. Use a for loop to print even numbers from 1-20.

```
▶ for num in range(2,21,2):  
    print(num)
```

```
2  
4  
6  
8  
10  
12  
14  
16  
18  
20
```

5. Sort your list in alphabetic order.

```
▶ planets = ['venus', 'mars', 'saturn', 'jupiter', 'mercury']  
planets.sort()  
print(planets)  
  
['jupiter', 'mars', 'mercury', 'saturn', 'venus']
```

6. Print out the first three elements of your list.

```
▶ planets = ['venus', 'mars', 'saturn', 'jupiter', 'mercury']  
planets[0:3]  
  
['venus', 'mars', 'saturn']
```

7. Create a loop to print the last 2 elements of your list.

```
▶ planets = ['venus', 'mars', 'saturn', 'jupiter', 'mercury']  
for planet in planets[-2:]:  
    print(planet)  
  
jupiter  
mercury
```