



Python Programming

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Week 5: Lists and List Manipulation

```
bicycles = ['trek', 'cannondale', 'redline', 'specialized']
print(bicycles)

bicycles = ['trek', 'cannondale', 'redline', 'specialized']
print(bicycles[0])

bicycles = ['trek', 'cannondale', 'redline', 'specialized']
print(bicycles[0].title())

bicycles = ['trek', 'cannondale', 'redline', 'specialized']
print(bicycles[1])
print(bicycles[3])

bicycles = ['trek', 'cannondale', 'redline', 'specialized']
print(bicycles[-1])

bicycles = ['trek', 'cannondale', 'redline', 'specialized']
message = f"My first bicycle was a {bicycles[0].title()}."
print(message)

motorcycles = ['honda', 'yamaha', 'suzuki']
print(motorcycles)
motorcycles[0] = 'ducati'
print(motorcycles)

motorcycles = ['honda', 'yamaha', 'suzuki']
print(motorcycles)
motorcycles.append('ducati')
print(motorcycles)

motorcycles = []
motorcycles.append('honda')
motorcycles.append('yamaha')
motorcycles.append('suzuki')
print(motorcycles)

motorcycles = ['honda', 'yamaha', 'suzuki']
motorcycles.insert(0, 'ducati')
print(motorcycles)

motorcycles = ['honda', 'yamaha', 'suzuki']
print(motorcycles)
```



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```
del motorcycles[0]
print(motorcycles)

motorcycles = ['honda', 'yamaha', 'suzuki']
print(motorcycles)
popped_motorcycle = motorcycles.pop()
print(motorcycles)
print(popped_motorcycle)

motorcycles = ['honda', 'yamaha', 'suzuki']
first_owned = motorcycles.pop(0)
print(f"The first motorcycle I owned was a {first_owned.title()}")

motorcycles = ['honda', 'yamaha', 'suzuki', 'ducati']
print(motorcycles)
motorcycles.remove('ducati')
print(motorcycles)

motorcycles = ['honda', 'yamaha', 'suzuki', 'ducati']
print(motorcycles)
too_expensive = 'ducati'
motorcycles.remove(too_expensive)
print(motorcycles)
print(f"\nA {too_expensive.title()} is too expensive for me.")

cars = ['bmw', 'audi', 'toyota', 'subaru']
print(cars)
cars.sort()
print(cars)

cars = ['bmw', 'audi', 'toyota', 'subaru']
print(cars)
cars.sort(reverse=True)
print(cars)

cars = ['bmw', 'audi', 'toyota', 'subaru']
print("Here is the original list:")
print(cars)
print("\nHere is the sorted list:")
print(sorted(cars))
print("\nHere is the original list again:")
```



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```
print(cars)

cars = ['bmw', 'audi', 'toyota', 'subaru']
print(cars)
cars.reverse()
print(cars)

cars = ['bmw', 'audi', 'toyota', 'subaru']
print(len(cars))
```

['trek', 'cannondale', 'redline', 'specialized']

trek

Trek

cannondale

specialized

specialized

My first bicycle was a Trek.

['honda', 'yamaha', 'suzuki']

['ducati', 'yamaha', 'suzuki']

['honda', 'yamaha', 'suzuki']

['honda', 'yamaha', 'suzuki', 'ducati']

['honda', 'yamaha', 'suzuki']

['ducati', 'honda', 'yamaha', 'suzuki']

['honda', 'yamaha', 'suzuki']

['yamaha', 'suzuki']

['honda', 'yamaha', 'suzuki']



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```
['honda', 'yamaha']
```

```
suzuki
```

The first motorcycle I owned was a Honda.

```
['honda', 'yamaha', 'suzuki', 'ducati']
```

```
['honda', 'yamaha', 'suzuki']
```

```
['honda', 'yamaha', 'suzuki', 'ducati']
```

```
['honda', 'yamaha', 'suzuki']
```

A Ducati is too expensive for me.

```
['bmw', 'audi', 'toyota', 'subaru']
```

```
['audi', 'bmw', 'subaru', 'toyota']
```

```
['bmw', 'audi', 'toyota', 'subaru']
```

```
['toyota', 'subaru', 'bmw', 'audi']
```

Here is the original list:

```
['bmw', 'audi', 'toyota', 'subaru']
```

Here is the sorted list:

```
['audi', 'bmw', 'subaru', 'toyota']
```

Here is the original list again:

```
['bmw', 'audi', 'toyota', 'subaru']
```

```
['bmw', 'audi', 'toyota', 'subaru']
```

```
['subaru', 'toyota', 'audi', 'bmw']
```