



# CSc 110

## Lists

Adriana (she/her/hers)

What types have been covered in class so far?

What types have been covered in class so far?

**integer**

**float**

**boolean**

**string**

# Lists

- A **list** is another type
- Lists are **sequences** of zero or more values
- A list is a type of **Data Structure**

# Data Structure

“In computer science, a **data structure** is a data organization, management and storage format that enables efficient access and modification. More precisely, a data structure is a collection of data values, the relationships among them, and the functions or operations that can be applied to the data.”

[https://en.wikipedia.org/wiki/Data\\_structure](https://en.wikipedia.org/wiki/Data_structure)

# Creating Lists

```
no_numbers = []
```

```
numbers = [1, 5, 2, 10, 7]
```

```
names = ['ron', 'joe', 'kyle']
```

```
values = [1, 1.15, 7, 1.75, 'those']
```

```
print(type(values))
```

# What would this print?

```
values = ['the', 'bear', 'in', 'the', 'tree']  
print(values[3] + values[4] + values[1])
```

Print each value in the list using **while** loop

```
values = ['those', '123', '5i', 'those', '4']
```

**Should Print:**

those

123

5i

those

4



Print each value in the list using **while** loop

```
values = ['those', '123', '5i', 'those', '4']
```

```
i = 0
```

```
while i < 5:
```

```
    print(values[i])
```

```
    i += 1
```

Print each value in the list using **while** loop

```
values = ['those', '123', '5i', 'those', '4']
```

```
i = 0
```

```
while i < len(values):
```

```
    print(values[i])
```

```
    i += 1
```

# Check the word lengths

```
values = ['those', 'hi', 'incomprehensibilities', 'yo', 'instrumental']
```

**Should Print:**

**3** regular word(s)

**2** large word(s)

# Check the word lengths

```
values = ['those', 'hi', 'incomprehensibilities', 'yo', 'instrumental']
```

```
i = 0
regular = 0
large = 0
while i < len(values):
    word = values[i]
    if len(word) > 7:
        large += 1
    else:
        regular += 1
    i += 1
```

```
print(regular, 'regular word(s)')
```

```
print(large, 'large word(s)')
```