Lists and loops

Lists, strings, and loops

Printing and changing list elements

In
```
emojixpress = [2.26, 19.1, 25.6, 233.0, 15.2]

# print element of emojixpress list with index 0
print(emojixpress[0])

# assign emojixpress list element with index 4 a new value
emojixpress[4] = 100500.0 # sample value selected just as an example
```

Out
```
2.26
```

Summing up elements of a list

In
```
emojixpress = [
2.26, 19.1, 25.6, 233.0, 15.2, 22.7, 64.6, 87.5, 6.81, 6.0,
4.72, 24.7, 21.7, 10.0, 118.0, 3.31, 23.1, 1.74, 4.5, 0.0333
]

total = 0
for count in emojixpress:
    total += count

print("{:.2f}".format(total))
```

Out
```
694.57
```

Calculating list or string length

In
```
emojixpress = [2.26, 6.8, 25.6, 233.0,
15.2, 22.7, 64.6, 87.5, 19.1, 3.31]

print(len(emojixpress))
```

Out
```
10
```

In
```
message = "I love you"


print(len(message))
```

Out
```
10
```

Formatting

Text alignment

In
```
print("|{: <20}|".format("Grinning"))
print("|{: >20}|".format("Grinning"))
print("|{: ^20}|".format("Grinning"))
```

Out
```
|Grinning            |
|            Grinning|
|      Grinning      |
```

Aligning and printing out text in specific format

In
```
print("|{: <20.2f}|".format(233.0))
print("|{: >20.1f}|".format(2270.0))
print("|{: ^20.1%}|".format(0.61))
```

Out
```
|233.00              |
|              2270.0|
|       61.0%        |
```

Glossary

Data structure
A system used to organize elements according to specific rules

List
A data structure that stores the sequence of values.
Index is the number of an element in a list.

Loop
A Python construction used for going through a sequence of elements

Loop body
Code that runs inside a loop