

○ print(“Hello, World!”)

- NCSS Challenge - Beginners
- Week 5 Part 2





## ○ What will we cover?

- Splitting and joining;
- Lists of numbers and pairs;
- Number planes and coordinates;
- Working with multiple lists.

## ○ What does this cover?

- Design, modify and follow simple algorithms involving sequences of steps, branching, and **iteration (repetition)** ([ACTDIP019](#))
- Implement digital solutions as simple visual programs involving branching, **iteration (repetition)**, and user input ([ACTDIP020](#))
- Implement... **iteration** and functions in a **general-purpose programming language** ([ACTDIP030](#))
- Recognise **different types of data** and **explore how the same data can be represented in different ways** ([ACTDIK008](#))
- Implement modular programs, **applying selected algorithms and data structures** including using an object-oriented programming language ([ACTDIP041](#))



# 1 Splitting and joining

## ○ Many ways to build a list

- We can use the `list` builtin function
- This can be useful if we need to change a specific letter or substring! (How else could we solve this?)
- We can also split on non-whitespace characters:
  - ```
text = 'abc:def:ghi:ijkl:mno'  
words = text.split(':')  
print(words)  
→ ['abc', 'def', 'ghi', 'ijkl', 'mno']
```

## ○ Many ways to join a list

- Just as `split` splits on a string, `join` will join items on a string, often a space or empty string (two quotation marks with nothing between):

```
values = ['a', 'b', 'c', 'd', 'e']
```

```
sep = ':'
```

```
print(sep.join(values))
```

```
→ a:b:c:d:e
```

```
print(''.join(values))
```

```
→ abcde
```

## ○ Counting what's in a list

- Just as `len` works on a string, so to can us use it on a list!

```
colours = ['red', 'blue', 'green', 'yellow']  
print(len(colours))
```



# Test it out!

Try the first question now!



2

## Lists of numbers and pairs

## ○ Split - still deals with strings!

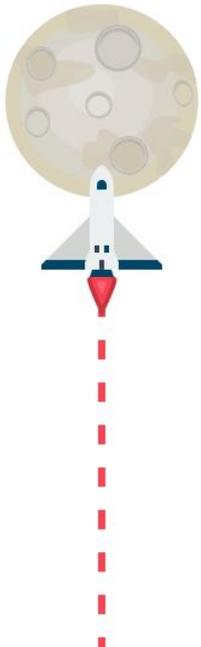
- Just as we had to learn to cast a value from `input` to a number (potentially), so too do we have to remember that `split` by default makes strings.
- How could we change the values to integers?

3 Turtle!





Let's jump into Turtle!



# Any Questions?

Find me at:

@groklearning

nicky@groklearning.com