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:
  ```python
text = 'abc:def:ghi:jkl:mno'
words = text.split(':')
print(words)
→ ['abc', 'def', 'ghi', 'jkl', '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):

```python
code]
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 too can we use it on a list!

```python
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?

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