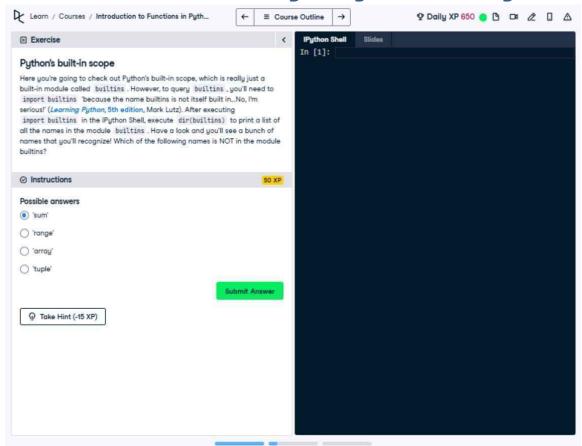
## Functions with Variable-Length Arguments (`\*args`)



## **Question:**

Flexible arguments enable you to pass a variable number of arguments to a function.

In this exercise, you will practice defining a function that accepts a variable number of string arguments.

The function you will define is `gibberish()` which can accept a variable number of string values.

Its return value is a single string composed of all the string arguments concatenated together in the order they were passed to the function call. You will call the function with a single string argument and see how the output changes with another call using more than one string argument.

Recall from the previous video that, within the function definition, `args` is a tuple.

- \*\*Instructions:\*\*
- 1. Complete the function header with the function name `gibberish`. It accepts a single flexible argument `\*args`.
- 2. Initialize a variable 'hodgepodge' to an empty string.
- 3. Concatenate the strings in `args` to `hodgepodge` using a `for` loop.
- 4. Return the variable `hodgepodge` at the end of the function body.
- 5. Call `gibberish()` with the single string `"luke"`. Assign the result to `one word`.
- 6. Call `gibberish()` with five strings: `"luke"`, `"leia"`, `"han"`, `"obi"`, `"darth"`. Assign the result to `many words`.
- 7. Print `one\_word` and `many\_words`.

## **Answer:**

```
# Define gibberish
def gibberish(*args):
  """Concatenate strings in *args together."""
  # Initialize an empty string: hodgepodge
  hodgepodge = ""
  # Concatenate the strings in args
  for word in args:
    hodgepodge += word
  # Return hodgepodge
  return hodgepodge
# Call gibberish() with one string: one word
one word = gibberish("luke")
# Call gibberish() with five strings: many words
many words = gibberish("luke", "leia", "han", "obi", "darth")
# Print one_word and many words
print(one word)
print(many words)
```

## **Explanation:**

1. def gibberish(\*args): - Defines a function `gibberish` that accepts a variable number of arguments stored in the tuple `args`.

- 2. hodgepodge = "" Initializes an empty string `hodgepodge` to store the concatenated result.
- 3. for word in args: Iterates over each element in `args`, where each element is a string passed to the function.
- 4. hodgepodge += word Concatenates each string in `args` to `hodgepodge`.
- 5. return hodgepodge Returns the final concatenated string stored in `hodgepodge`.
- 6. one\_word = gibberish("luke") Calls `gibberish` with a single argument `"luke"`. The returned value is `"luke"`.
- 7. many\_words = gibberish("luke", "leia", "han", "obi", "darth") Calls `gibberish` with multiple arguments.

The returned value is `"lukeleiahanobidarth"`.

- 8. print(one word) Prints the result of the single argument call, `"luke"`.
- 9. print(many\_words) Prints the result of the multiple argument call, `"lukeleiahanobidarth"`.