Question 1

Create a function that takes a list of non-negative **integers** and **strings** and return a new list without the strings.

Examples

```
filter_list([1, 2, "a", "b"]) ➞ [1, 2]

filter_list([1, "a", "b", 0, 15]) ➞ [1, 0, 15]

filter_list([1, 2, "aasf", "1", "123", 123]) ➞ [1, 2, 123]
```

Question 2

The "Reverser" takes a string as input and returns that string in reverse order, with the opposite case.

Examples

```
reverse("Hello World") ➞ "DLROw OLLEh"

reverse("ReVeRsE") ➞ "eSrEvEr"

reverse("Radar") ➞ "RADAr"
```

Question 3

You can assign variables from lists like this:

```
lst = [1, 2, 3, 4, 5, 6]
first = lst[0]
middle = lst[1:-1]
last = lst[-1]

print(first) ➞ outputs 1
print(middle) ➞ outputs [2, 3, 4, 5]
print(last) ➞ outputs 6
```

With Python 3, you can assign variables from lists in a much more succinct way. Create variables `first`, `middle` and `last` from the given list using **destructuring assignment** (check the **Resources** tab for some examples), where:

```
first  ➞ 1

middle ➞ [2, 3, 4, 5]

last ➞ 6
```

Your task is to unpack the list `writeyourcodehere` into three variables, being `first`, `middle`, and `last`, with `middle` being everything in between the first and last element. Then print all three variables.

Question 4

Write a function that calculates the **factorial** of a number **recursively**.

Examples

```
factorial(5) ➡ 120

factorial(3) ➡ 6

factorial(1) ➡ 1

factorial(0) ➡ 1
```

Question 5

Write a function that moves all elements of one type to the **end** of the list.

Examples

```
move_to_end([1, 3, 2, 4, 4, 1], 1) ➡ [3, 2, 4, 4, 1, 1]
# Move all the 1s to the end of the array.

move_to_end([7, 8, 9, 1, 2, 3, 4], 9) ➡ [7, 8, 1, 2, 3, 4, 9]

move_to_end(["a", "a", "a", "b"], "a") ➡ ["b", "a", "a", "a"]
```