Remove odds
Problem ID: a12p03removeodds

Write two functions for removing odd numbers from integer lists:

- `extract_evens(int_list)`:
  Returns a new list with only even integers from `int_list`, without modifying `int_list`.

- `remove_odds(int_list)`:
  Removes odd integers from `int_list`, thus modifying `int_list`.

Hint: Functions have the ability to modify mutable objects in the calling program. Lists are mutable objects.

The main file, which handles input and output, is already provided. - Please only submit your function definitions, without any code outside the functions!

Input

Each of the functions should accept one list l as a parameter. You may assume the elements of the list l will be integers.

In the samples below, the input consists of one line containing a sequence $x = (x_1, \ldots, x_n)$ of n numbers separated by a space. Gradescope will handle reading the input, splitting it, converting to integers and passing the resulting list as an argument to the functions.

In the tests, x will always satisfy $1 \le n \le 1\,000$ and $1 \le x_i < 100$ for all i with $1 \le i \le n$.

Output

The function `extract_evens()` should return a new list e containing all the even numbers appearing in l, in the same order as they appear in l, and no other numbers. After the function is called, the original list l should remain unchanged.

The function `remove_odds()` should return nothing (just `None`), but should modify the given list l, so that after the function is called, the list will have changed to a modified list l' containing all the even numbers appearing in l, in the same order as they appear in l, and no other numbers.

In each test case, Gradescope will call both of the functions with the given list as a parameter, in sequence, and will verify the results as well as the effects on the given list, and print the following four lines to the output, as seen in the samples below:

- "Original list before calling functions: {l}"

- "Resulting list after extracting evens: {e}"

- "Original list after extracting evens and before removing odds: {l}"

- "Original list after removing odds: {l'}"

Sample Input 1

```
1 1 2 3 4 5
```

Sample Output 1

```
Original list before calling functions: [1, 1, 2, 3, 4, 5]
Resulting list after extracting evens: [2, 4]
Original list after extracting evens and before removing odds: [1, 1, 2, 3, 4, 5]
Original list after removing odds: [2, 4]
```

Sample Input 2

```
10 7 7 7 7 1 10 9 9
```

Sample Output 2

```
Original list before calling functions: [10, 7, 7, 7, 7, 1, 10, 9, 9]
Resulting list after extracting evens: [10, 10]
Original list after extracting evens and before removing odds: [10, 7, 7, 7, 7, 1, 10, 9,
Original list after removing odds: [10, 10]
```

Sample Input 3

```
1 1 2 3 4 5 6 7 8 9 10
```

Sample Output 3

```
Original list before calling functions: [1, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
Resulting list after extracting evens: [2, 4, 6, 8, 10]
Original list after extracting evens and before removing odds: [1, 1, 2, 3, 4, 5, 6, 7, 8,
Original list after removing odds: [2, 4, 6, 8, 10]
```

Sample Input 4

```
9 1 3 3 52 7
```

Sample Output 4

```
Original list before calling functions: [9, 1, 3, 3, 52, 7]
Resulting list after extracting evens: [52]
Original list after extracting evens and before removing odds: [9, 1, 3, 3, 52, 7]
Original list after removing odds: [52]
```