

## Exercise 1 - Multiply every number in the list by 2

Write a program that takes a list as an input and multiplies every number in the list by 2

Example:

```
- a = [1,2,3,4], output = [2,4,6,8]
```

Hint: to take a list from user as input:

```
- Python 2 : list_numbers = input('Enter a list of numbers ')\n- Python 3 : list_numbers = eval(input('Enter a list of numbers'))
```

## Exercise 2 - number is in list or not?

Write a program that takes as input a list of numbers and then a number. If the list of numbers contains this number print 'exists' otherwise print 'doesn't exist'.

Example:

```
- a = [1,2,3,4], element = 4, output => exists\n- b = [1,5,3,4], element = 2, output => doesn't exist
```

## Exercise 3 - Check if a string is a palindrome

Write a program that takes as input a string and checks whether it is a palindrome or not.

According to wikipedia "A palindrome is a word, phrase, number, or other sequence of characters which reads the same backward as forward"

Example:

```
- input= 'madam', output = 'palindrome'\n- input = 'hello', output = 'not palindrome'\n- input = 'lol', output = 'palindrome'
```

Hint: You can use the reverse function

## Exercise 4 - Print a pyramid

- Take as input a number n from user and print a pyramid shape with base n.
- Example:

```
input = 2
outputs:
*
**
```

```
input = 3
outputs:
*
**
***
```

```
input = 5
outputs:
*
**
***
****
*****
```

In [ ]: