

Question1

Write a function that takes a list and a number as arguments. Add the number to the end of the list, then remove the first element of the list. The function should then return the updated list.

Examples

`next_in_line([5, 6, 7, 8, 9], 1) → [6, 7, 8, 9, 1]`

`next_in_line([7, 6, 3, 23, 17], 10) → [6, 3, 23, 17, 10]`

`next_in_line([1, 10, 20, 42], 6) → [10, 20, 42, 6]`

`next_in_line([], 6) → "No list has been selected"`

Question2

Create the function that takes a list of dictionaries and returns the sum of people's budgets.

Examples

`get_budgets([
 { "name": "John", "age": 21, "budget": 23000 },
 { "name": "Steve", "age": 32, "budget": 40000 },
 { "name": "Martin", "age": 16, "budget": 2700 }
) → 65700`

`get_budgets([
 { "name": "John", "age": 21, "budget": 29000 },
 { "name": "Steve", "age": 32, "budget": 32000 },
 { "name": "Martin", "age": 16, "budget": 1600 }
) → 62600`

Question3

Create a function that takes a string and returns a string with its letters in alphabetical order.

Examples

`alphabet_soup("hello") → "ehllo"`

`alphabet_soup("edabit") → "abdeit"`

`alphabet_soup("hacker") → "acehkr"`

`alphabet_soup("geek") → "eegk"`

`alphabet_soup("javascript") → "aacijprstv"`

Question4

Suppose that you invest \$10,000 for 10 years at an interest rate of 6% compounded monthly.

What will be the value of your investment at the end of the 10 year period?

Create a function that accepts the principal *p*, the term in years *t*, the interest rate *r*, and the number of compounding periods per year *n*. The function returns the value at the end of term rounded to the nearest cent.

For the example above:

`compound_interest(10000, 10, 0.06, 12) → 18193.97`

Note that the interest rate is given as a decimal and *n*=12 because with monthly compounding

there are 12 periods per year. Compounding can also be done annually, quarterly, weekly, or

daily.

Examples

`compound_interest(100, 1, 0.05, 1) → 105.0`

`compound_interest(3500, 15, 0.1, 4) → 15399.26`

`compound_interest(100000, 20, 0.15, 365) → 2007316.26`

Question5

Write a function that takes a list of elements and returns only the integers.

Examples

`return_only_integer([9, 2, 'space', 'car', 'lion', 16]) → [9, 2, 16]`

`return_only_integer(['hello', 81, 'basketball', 123, 'fox']) → [81, 123]`

`return_only_integer([10, '121', 56, 20, 'car', 3, 'lion']) → [10, 56, 20, 3]`

`return_only_integer(['String', True, 3.3, 1]) → [1]`

Question 1:

kotlin

```
def next_in_line(lst, num):  
    if not lst:  
        return "No list has been selected"  
    lst.append(num)  
    lst.pop(0)  
    return lst
```

Question 2:

python

```
def get_budgets(lst):  
    return sum(d['budget'] for d in lst)
```

Question 3:

python

```
def alphabet_soup(txt):  
    return ''.join(sorted(txt))
```

Question 4:

python

```
def compound_interest(p, t, r, n):
```

```
A = p * (1 + r/n) ** (n*t)
return round(A, 2)
```

Question 5:

python

```
def return_only_integer(lst):
    return [x for x in lst if type(x) == int]
```