



Language Python 3  

main.py

```
1 def is_perfect(n):
2     sum_divisors = sum(i for i in range(1, n) if n % i == 0)
3     return sum_divisors == n
4
5 limit = 10000
6 for num in range(1, limit):
7     if is_perfect(num):
8         print(num)
9
```



input

```
28
496
8128
```

```
...Program finished with exit code 0
Press ENTER to exit console.
```



Language Python 3



main.py

```
1 def get_element(arr, index):
2     return arr[index]
3
4 arr = [1, 2, 3, 4, 5]
5 index = 3
6 print(get_element(arr, index))
7
8
```



Input

4

```
...Program finished with exit code 0
Press ENTER to exit console.
```



Run Debug Stop Share Save Beautify

Language Python 3

main.py

```
1 def merge_sort(arr):
2     if len(arr) > 1:
3         mid = len(arr) // 2
4         left_half = arr[:mid]
5         right_half = arr[mid:]
6
7         merge_sort(left_half)
8         merge_sort(right_half)
9
10        i = j = k = 0
11        while i < len(left_half) and j < len(right_half):
12            if left_half[i] < right_half[j]:
13                arr[k] = left_half[i]
14                i += 1
15            else:
16                arr[k] = right_half[j]
17                j += 1
18            k += 1
19
20        while i < len(left_half):
21            arr[k] = left_half[i]
22            i += 1
23            k += 1
24
25        while j < len(right_half):
26            arr[k] = right_half[j]
27            j += 1
28            k += 1
29    return arr
```



input

[5, 6, 7, 11, 12, 13]

...Program finished with exit code 0  
Press ENTER to exit console.



Run Debug Stop Share Save Beautify

Language Python 3

main.py

```
1 def reverse_number(number, reversed_number=0):
2     if number == 0:
3         return reversed_number
4     else:
5         return reverse_number(number // 10, reversed_number * 10 + number % 10)
6
7 number = 12345
8 print(reverse_number(number))
9
10
```



Input

54321

...Program finished with exit code 0  
Press ENTER to exit console.



```
1 def intersect(nums1, nums2):
2
3     counts = {}
4     for num in nums1:
5         counts[num] = counts.get(num, 0) + 1
6
7     result = []
8
9     for num in nums2:
10         if num in counts and counts[num] > 0:
11             result.append(num)
12             counts[num] -= 1
13
14     return result
15
16 nums1 = [1, 2, 2, 1]
17 nums2 = [2, 2]
18 print(intersect(nums1, nums2))
19
20 nums1 = [4, 9, 5]
21 nums2 = [9, 4, 9, 8, 4]
22 print(intersect(nums1, nums2))
23
24
```

input

```
[2, 2]
[9, 4]
```

```
...Program finished with exit code 0
Press ENTER to exit console.
```

Run

Debug

Stop

Share

Save

{ } Beauty

Language Python 3

main.py

```
1 def intersect(nums1, nums2):
2
3     counts = {}
4     for num in nums1:
5         counts[num] = counts.get(num, 0) + 1
6
7     result = []
8
9     for num in nums2:
10        if num in counts and counts[num] > 0:
11            result.append(num)
12            counts[num] -= 1
13
14    return result
15
16 nums1 = [1, 2, 2, 1]
17 nums2 = [2, 2]
18 print(intersect(nums1, nums2))
19
20 nums1 = [4, 9, 5]
21 nums2 = [9, 4, 9, 8, 4]
22 print(intersect(nums1, nums2))
23
24
```

input

```
[2, 2]
[9, 4]

...Program finished with exit code 0
Press ENTER to exit console.
```

Run

Debug

Stop

Share

Save

Beautify

Language Python 3

main.py

```
1 def intersection(nums1, nums2):
2
3     set1 = set(nums1)
4     set2 = set(nums2)
5
6     intersection_set = set1 & set2
7
8     return list(intersection_set)
9
10 nums1 = [1, 2, 2, 1]
11 nums2 = [2, 2]
12 print(intersection(nums1, nums2))
13
14 nums1 = [4, 9, 5]
15 nums2 = [9, 4, 9, 8, 4]
16 print(intersection(nums1, nums2))
17
18
```

Input

```
[2]
[9, 4]

...Program finished with exit code 0
Press ENTER to exit console.
```

Language Python 3  

```

1 def intersect(nums1, nums2):
2
3     counts = {}
4     for num in nums1:
5         counts[num] = counts.get(num, 0) + 1
6
7     result = []
8
9     for num in nums2:
10        if num in counts and counts[num] > 0:
11            result.append(num)
12            counts[num] -= 1
13
14    return result
15
16 nums1 = [1, 2, 2, 1]
17 nums2 = [2, 2]
18 print(intersect(nums1, nums2))
19
20 nums1 = [4, 9, 5]
21 nums2 = [9, 4, 9, 8, 4]
22 print(intersect(nums1, nums2))
23
24

```

[2, 2]  
[9, 4]

```
...Program finished with exit code 0
Press ENTER to exit console.
```





Run Debug Stop Share Save Beaulify

Language Python 3

main.py

```
1 def quicksort(nums):
2     def partition(low, high):
3         pivot = nums[high]
4         i = low - 1
5         for j in range(low, high):
6             if nums[j] < pivot:
7                 i += 1
8                 nums[i], nums[j] = nums[j], nums[i]
9         nums[i + 1], nums[high] = nums[high], nums[i + 1]
10        return i + 1
11
12    def quicksort_recursive(low, high):
13        if low < high:
14            pi = partition(low, high)
15            quicksort_recursive(low, pi - 1)
16            quicksort_recursive(pi + 1, high)
17
18    quicksort_recursive(0, len(nums) - 1)
19    return nums
20
21    nums = [3, 6, 8, 10, 1, 2, 1]
22    sorted_nums = quicksort(nums)
23    print(sorted_nums)
24
25
```



input

[1, 1, 2, 3, 6, 8, 10]

...Program finished with exit code 0  
Press ENTER to exit console.



Language Python 3

main.py

```
1 def sort_array_by_parity(nums):
2
3     odds = [num for num in nums if num % 2 != 0]
4     evens = [num for num in nums if num % 2 == 0]
5
6     result = [0] * len(nums)
7
8     odd_index = 1
9     even_index = 0
10
11     for num in evens:
12         result[even_index] = num
13         even_index += 2
14
15     for num in odds:
16         result[odd_index] = num
17         odd_index += 2
18
19     return result
20
21 nums = [4, 2, 5, 7]
22 sorted_nums = sort_array_by_parity(nums)
23 print(sorted_nums)
24
```

input

```
[4, 5, 2, 7]

...Program finished with exit code 0
Press ENTER to exit console.
```