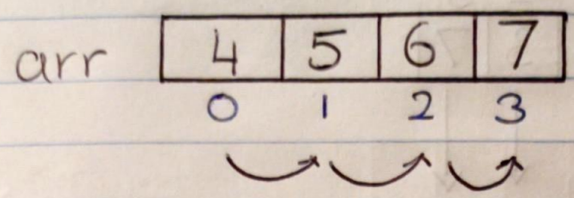
Lab 2

Write a function to find an element in an array and prints out the index



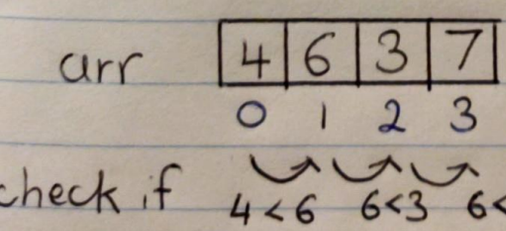
Start from index 0, for loop, and go through each index.

If 5 == arr[index] output index + ~~(return 1)~~ set return value = 1

~~(else return -1)~~

Need int value to return 1 or -1, initialise that value as -1, only change when number found.

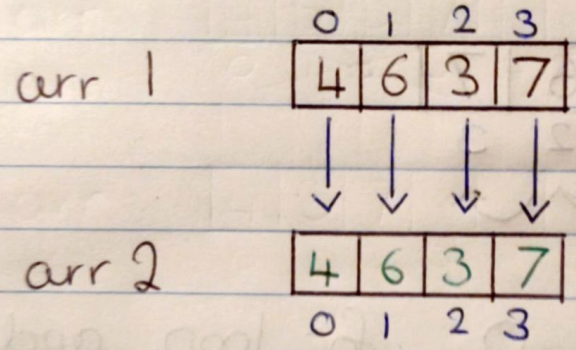
Write a function to find and return the second largest element in an array



6 = Largest 4 = Second
6 = Largest 4 = Second
7 = Largest 6 = Second

if/else needed for not there

Write a function to copy all elements from an array to another array. Both arrays are the same size.

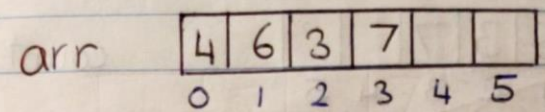


for loop

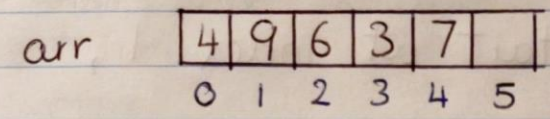
arr2[0] = arr1[0]

arr2 = 4 arr1 = 4

Write a function to insert an element in an array at a specified position.



insert 9 @ index 1



Section 1

for loop, shift index 1, 2, 3 ++

start for loop at index 3 and go backwards (- -).

insert 9 @ index 1

count ++ (moving creates error. why?)

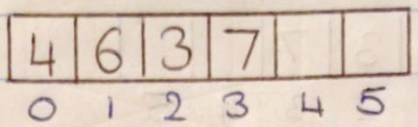
if count <= size (you can insert an element)

section 1 and true, element inserted

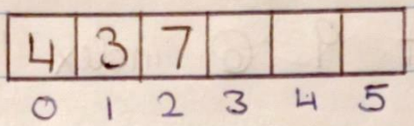
else

false, no element inserted

Write a function to delete an element from an array of size 12 at specified position

arr 

count = 4

arr 

count = 3

DeleteSection

for loop, start at index 1,

replace index 1 with index 2

repeat for array size

6 @ index 1 is deleted and all elements above are shifted left once

if count <= size (element can be deleted)

deleteSection

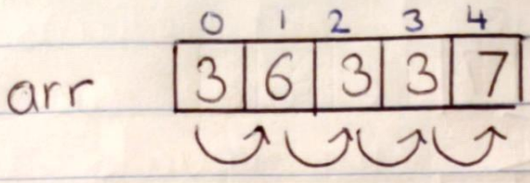
count--

true

else (no element has been deleted)

false

Write a function to count the frequency of an element in an array.

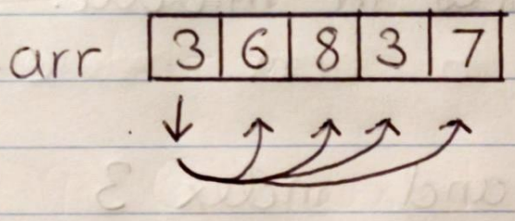


element 3 = 3
element 8 = 0

set count = 0

for loop, start at Index 0, check if each element matches the number, if so count++, else move on.

Write a function to count total number of duplicate elements in an array.

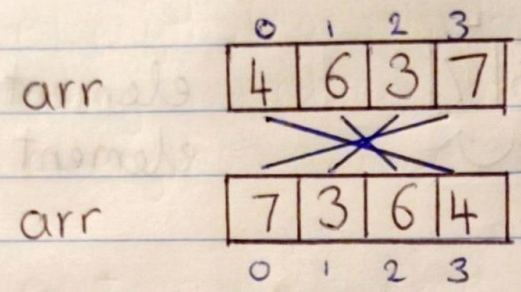


duplicates = 1

nested for loop, take out an element and compare it to the array, if == count ++.

array check must start one index position before the element being checked

Write a function to find the reverse of an array.



create temp variable and remove first element.

shift array.

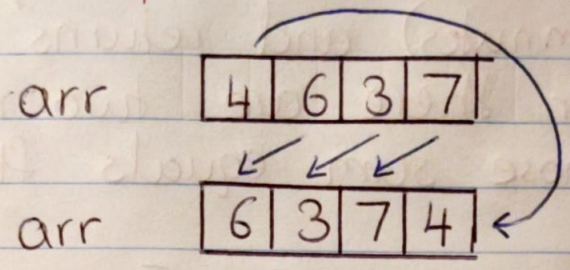
last array index = temp variable ✗

Nested loop, ~~meet~~ start at each end, swap elements until meet in middle. ✗

swap index 0 and index 3

swap index 1 and index 2

Write a function to left rotate an array by one position.



create temp variable to store first element.

shift each index element left once. Like in the delete function.

replace the last array element with the temp variable.

Write a function that takes an integer flightLength (in minutes) and an array of integer movieLengths (in minutes) and returns a boolean indicating whether there are two numbers in movieLengths whose sum equals flightLength.

movie1 + movie2 = time T or F
movie1 + movie3 = time T or F
movie1 + movie4 = time T or F

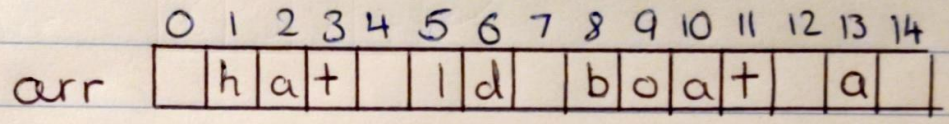
movie2 + movie3 = time T or F
movie2 + movie4 = time T or F

movie3 + movie4 = time T or F

Nested for loop to add movie times together.

if/else statements to return true or false.

Write a function which will take as an input an array of chars, and return the number of seperate words, where a word is one or more characters separated by spaces.



words = 3

for loop go through each index

check if index element <='A' || >='Z' X

error

need to check between two spaces. how?

if not space either letter or number