Assignment\_7

December 12, 2022

1. **Write a python function that returns the index of the smallest element in a list of integers. If the number of such elements is greater than 1, return the smallest index**

[ ]:

**def**

indexOfSmallestElement

(

L

):

smallestIndex

=

0

smallestElement

=

L[

0

]

**for**

i

**in**

range

(

1

,

len

(L)):

**if**

L[i]

<

smallestElement:

smallestElement

=

L[i]

smallestIndex

=

i

**return**

smallestIndex

L

=

list

(

map

(

int

,

input

(

'

Enter list of numbers:

'

)

.

split()))

smallestIndex

=

indexOfSmallestElement(L)

print

(

'

Smallest index is:

'

, smallestIndex)

Enter list of numbers: 1 2 3 4 5

Smallest index is: 0

1. **Write the python function isPalindromicList(a) that takes a list and returns True if it is the same forwards as backwards and False otherwise.**

[ ]:

**def**

isPalindrome

(

str

):

**for**

i

**in**

range

(

0

,

int

(

len

(

str

)

/

2

)):

**if**

str

[

i

]

!=

str

[

len

(

str

)

-

i

-

1

]:

**return**

**False**

**return**

**True**

s

=

"

madam

"

1

ans

=

isPalindrome(s)

**if**

(

ans

):

print

(

"

It is a Palindrome

"

)

**else**

:

print

(

"

Sorry! Try again

"

)

It is a Palindrome

1. **Write the python function mostCommonName, that takes a list of names (such as [”Jane”, ”Aaron”, ”Cindy”, ”Aaron”], and returns the most common name in this list (in this case, ”Aaron”).**

If there is more than one such name, return a set of the most common names. So mostCommonName([”Jane”, ”Aaron”, ”Jane”, ”Cindy”, ”Aaron”]) returns the set {”Aaron”, ”Jane”}. If the set is empty, return None. Also, treat names case sensitive, so ”Jane” and ”JANE” are different names.

[ ]:

**def**

most\_common\_name

(

name\_list

):

max\_frequency

=

0

common\_name

=

name\_list[

0

]

**for**

name

**in**

name\_list:

frequency

=

name\_list

.

count(name)

**if**

frequency

>

max\_frequency:

max\_frequency

=

frequency

common\_name

=

name

**return**

name

print

(

most\_common\_name

([

"

Jane

"

,

"

Aaron

"

,

"

Jane

"

,

"

Cindy

"

,

"

Aaron

"

]))

Aaron

2