**Arrays from user input:**

Arrays are 2 types : single dimensional(one row multiple columns) and multi dimensional 2d or 3d or.. (multiple rows and multiple columns. Now we will discuss about a single dimensional array

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We will ask a user to input the values

From array import \*

Arr = array(‘i’,[])

Once after the array is created we will ask the user to input the values, what if user wants to enter multiple values so we will do something like this.

N = int(input(“enter the length of the array”)) # we are asking for the length from user, asking how many values user want to enter.

For i in range(5):

X = int(input(“enter the next value: ”))

Arr.append(x)

Print(arr)

* Run this program and it will ask user for value to be entered and we enter 3, so we enter 3 numbers and we have been asked for 5 values as we did a mistake by giving range(5)
* Correct the program by changing the value of 5 to n(as n is the user input), now the program will work as expected.

2) now we will ask the user to enter a values and then we will search for index

We can do it in two ways 1) manually 2)in built functions

Manual way: we need to create a loop so that it will check for the incremented value until it finds the value we have asked for, once it is found it will print the index value.

For i in range(5):

X = int(input(“enter the next value: ”))

Arr.append(x)

Print(arr)

Val = int(input(‘enter the value for search’))

K=0

For e in arr:

If e ==val:

Print(k)

Break

K +=1

2)second way is using inbuilt function, just add print(arr.index(val))

Let’s discuss about 2d array now, in python we cannot create a 2d array. An example

Vals = array(‘i’ , [1,2,3],[3,4,5]) # every square bracket represents a row so we are trying to create a multi dimensional array and it will return error as array package doesn’t support it. So we need to use another package which is called ‘Numpy’

This is not available by default so we need to install it.

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**Numpy:**

Why numpy ?

How to install numpy?

Text

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Windows > cmd> pip3 install numpy

First time installation might give some other terms, just give them ok and proceed.

Now we need to activate it on PyCharm with ctrl+alt+s

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Click on + and search for numpy and select and install the package, that’s it we are ready.

For VScode : <https://www.quora.com/How-do-I-install-Pythons-NumPy-library-in-Visual-Studio-Code>

follow the instructions above

1. From numpy import \*

Arr = array([1,2,3])

Print(arr)

Using numpy we do not need to use the type which is optional and it works.

:P we will look at multi dimensional arrays in next session, meanwhile complete the below tasks.

**Task :**

1. **Create an array with 5 values & delete the value at index no. 2 without using in-built function. 2) write a code to reverse an array without using in-built function.**

from array import \*

arr = array('i', [])

n = int(input('Enter the length of the array: '))

for i in range(n):

    x = int(input('enter the next value: '))

    arr.append(x)

    print(arr)

from array import \*

arr = array('i', [])

n = int(input('Enter the length of the array: '))

for i in range(n):

    x = int(input('enter the next value: '))

    arr.append(x)

print(arr)

val = int(input('enter the value to search: '))

k = 0

for e in arr:

    if e == val:

        print(k)

        break

    k+=1

print(arr.index(val))