Prime number: what is a prime number?

Any examples of prime number and non prime numbers.

***Prime number it is divisible ONLY by 1 or itself***

A picture containing diagram

Description automatically generated

Let’s create a program for this:

**Arrays:**

In array we need to have the values of same value type(int or float). Arrays in python have no size which means we can expand and shrink it as per the requirement. So we can use append to add elements and we can use find as well, index to get a particular value.

Table

Description automatically generated

Unsigned integer starts with 0 and ends with a particular value(+):

Signed integer can store negative values as well.

Ex: we have list of students and their marks( uday got 25, rishi got 50 and bunny got 70) and when we create an array we need specify the proper type code.

To work with it we need to import a module called array.

How a array looks like

Import array

vals = array( ‘i’ , [1,12,-15,20])

print(vals)

or print(vals.buffer\_info())

output will be something like this : (5768567856, 5) 🡪 the first value is the address and the second value is size

print(vals.typecode)

to add a value we need to append

to reverse the values we have

vals = array( ‘i’ , [1,12,-15,20])

vals.reverse()

print(vals)

Q: can we print the values one by one? – if yes, how?

Hint: index values or range or

We can try len(vals)- but where?

Check this as well

For e in vals:

Print(e)

Below we are playing with characters – using UNICODE

Vals = array(‘u’, [‘a’, ‘e’, ‘i’])

For e in vals:

Print(e)

To create a new array from an existing array we can do like shown below:

vals = array( ‘i’ , [1,12,-15,20])

newArr = array(vals.typecode, (a for a in vals))

for e in newArr:

print(e)

* Can we modify the above program and create a square for the values?

Now we can see while loop instead of for loop

Graphical user interface, text, application

Description automatically generated with medium confidence

Task: write code to sort the array in ascending order.

num = 7

for i in range(2,num):

    if num % i == 0:

        print('not prime')

    else:

        print('prime')

# num = int(input('enter the number:'))

num = int(input('enter the number: '))

for i in range(2,num):

    if num % i == 0:

        print('not prime')

        break

else:

    print('prime number')

from array import \*

# vals = array('I',[10,-15,15,16,20])

# print(vals.typecode)

# print(vals)

vals = array('i',[5,4,10,12])

newArr = array(vals.typecode, (a\*\*2 for a in vals))

for i in newArr:

    print(i)

from array import \*

vals = array('i',[10,-15,15,16,20])

x = sorted(vals)

print(x)