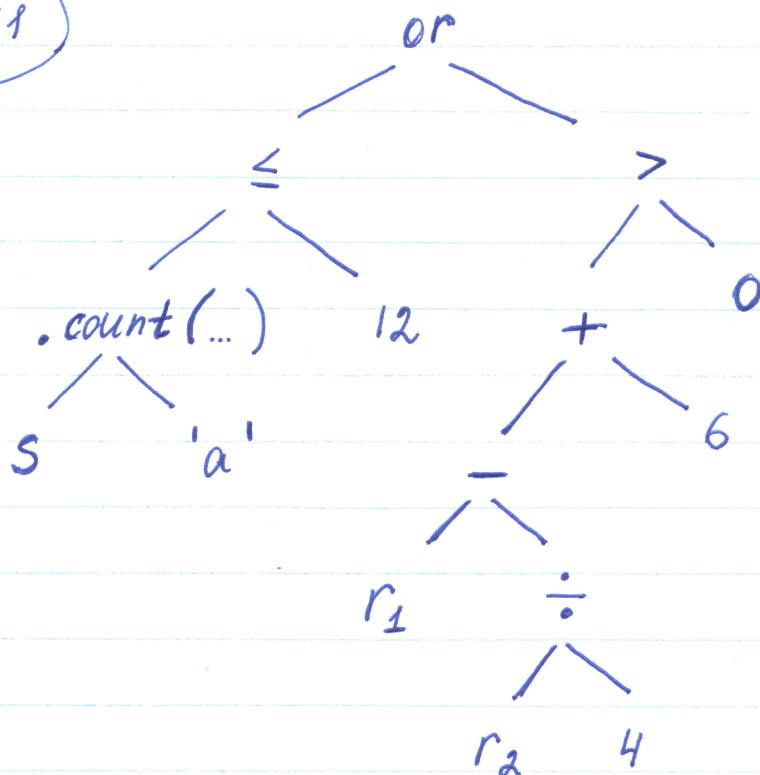


Nº 1



Nº 2

$v_1 = 15$ and $v_2 = 54$ initially,
at each iteration v_1 is decremented by 1
and v_2 value is divided by 2.

$$15 < 54 ? \text{ True}$$

$$1^{\text{st}} \text{ iter.} : v_1 = 15 - 1 = 14$$

$$v_2 = 54 \div 2 = 27$$

$$14 < 27 ? \text{ True}$$

$$2^{\text{nd}} \text{ iter.} : v_1 = 14 - 1 = 13$$

$$v_2 = 27 \div 2 = 13.5$$

$$13 < 13.5 ? \text{ True}$$

$$3^{\text{rd}} \text{ iter.} : v_1 = 13 - 1 = 12$$

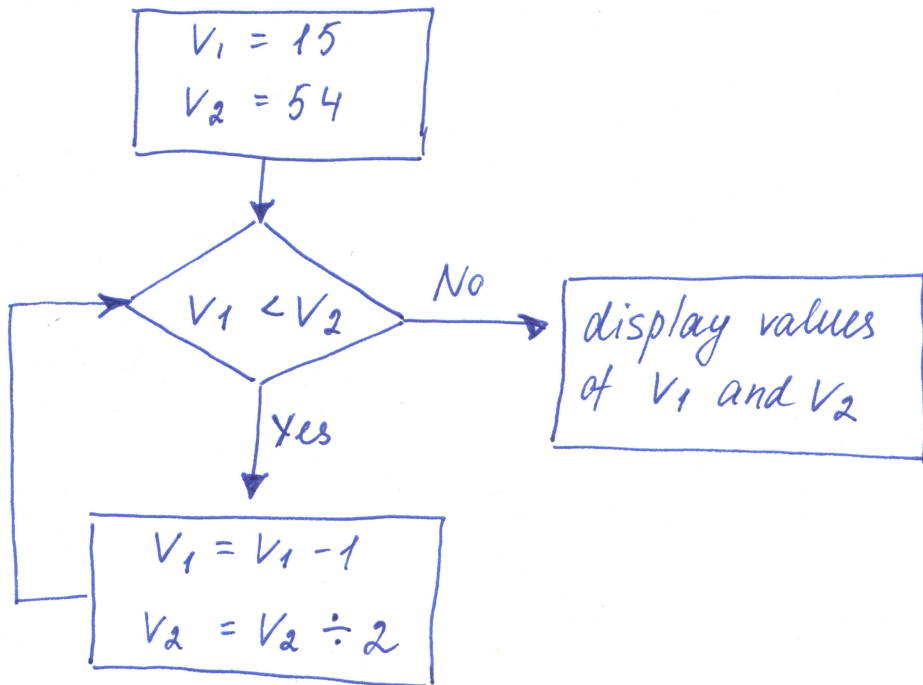
$$v_2 = 13.5 \div 2 = 6.75$$

$$12 < 6.75 ? \text{ False}$$

body of the while loop will
not be executed.

The following will be displayed: 12 6.75

Flowchart :



N^o 3

(a) 'thanks'.insert(1, 'g')

- **Attribute Error** is reported by the interpreter
- 'thanks' is a string, it is not a mutable object, therefore method insert is not provided for it.
'str' object has no attribute 'insert'

(b) 2/sqrt(3**2-12)

- **Value Error** is reported by the interpreter
- $3**2-12 = 3^2 - 12 = 9 - 12 = -3$
math library is for real-number operations only
 $\sqrt{-3}$ is undefined in this domain.
math domain error.

Nº4

$$L = \left[\frac{1}{(i \cdot i + 1)} \text{ for } i \text{ in range}(1, 14, 2) \text{ if } i < 12 \right]$$

$$\frac{1}{i^2 + 1}$$

i will iterate over
 $\{1, 3, 5, 7, 9, 11, 13\}$

only i 's
 less than
 12 will
 participate
 in

$$i = 1 \quad \frac{1}{1^2 + 1} = \frac{1}{2}$$

$$i = 7 \quad \frac{1}{7^2 + 1} = \frac{1}{50}$$

$$i = 3 \quad \frac{1}{3^2 + 1} = \frac{1}{10}$$

$$i = 9 \quad \frac{1}{9^2 + 1} = \frac{1}{82}$$

$$i = 5 \quad \frac{1}{5^2 + 1} = \frac{1}{26}$$

$$i = 11 \quad \frac{1}{11^2 + 1} = \frac{1}{122}$$

$$L = \left[\frac{1}{2}, \frac{1}{10}, \frac{1}{26}, \frac{1}{50}, \frac{1}{82}, \frac{1}{122} \right]$$

Nº5 -- init --

Nº6

a) `NameError` will be raised by `eval` method,
 and will be caught by our `try` block.
 "This is not a decimal number" will be printed,
 followed by "Terminating the program".

b) $6^2 = 36$

c) Our program will raise
`ValueError`: You entered a decimal that is not
 positive or is not less than 1000!