Functions – 2

{ Debugging skills }

1. Recap
2. Default Arguments
3. Keyword Arguments
4. Library functions
5. Class and self ignore ⇒ Assignment + HW discuss.

Q) Write a function that takes a number 'x' as input and returns the absolute value of that number.

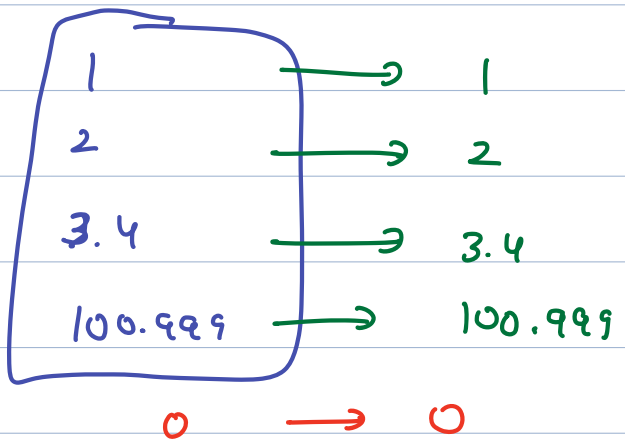
=> Can't use any inbuilt function.

```
def my_absolute (x):          # parameter
    # return absolute value of x.
    if x >= 0:
        return x
    else:
        return -1*x
```

```
y = my_absolute (1.7)     # 1.7
z = my_absolute (-19)     # 19
```

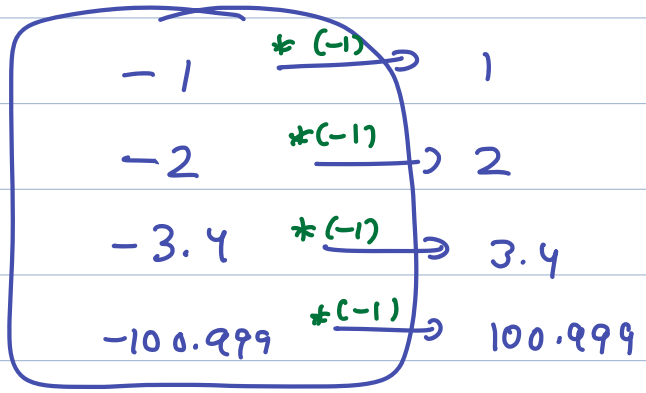
Observation 1:

Output remains +ve if the num is +ve.



Observation 2:

Output = (-1) * Inp -ve if the num (inp) is -ve.



⇒ Default Arguments

print ('abc')

print ('def')

abc

def.

default end ⇒ '\n'

escape Character

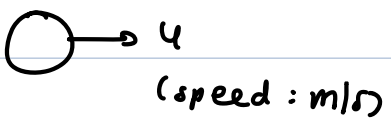
new line character.

Print in the same line?

print ('abc', end=' ')

print ('def', end='')

⇒ $g = 9.8\ m/s^2$



$$s = ut + \frac{1}{2} a t^2$$

$a = 9.8$

Q) Given u, t, a write a function that computes s.

In most of the cases, $a = 9.8$.

```
def distance_travelled( u, t, a ):
    s = u*t + 0.5*a*t*t
    return s
```

u=0, t=1 $\quad s = 0 + \frac{1}{2} \times 9.8 \times 1$

$= 4.9$ m.

```
res = distance_travelled( 0, 1 )
```

range (10) start = 0, end = 10 (excluded)

range (1, 5) start = 1

end = 5 (excluded)

step size

inc = 1

by default

range (1, 5, 2)

↑ ↑ ↑

s e inc.

Keyword

print('5', '3', '2')

5 3 2

5+3+2

print('5', '3', '2', sep='+')

keyword argument

Q3. Write a function to print the description of a book provided the foll. inputs:

- → title — The Lord of The Rings
- → author — J.R.R. Tolkien
- → publisher — George Allen & Win
- → year — 1954
- → version — 1.0
- → num_pages — 456

output

The book's title is : _____

The book's author is : _____

Difficult to remember parameter sequence & might lead to errors.

Keyword arguments or Named arguments

Library Functions

Library = collection of function

sqrt

Perfect square is the one whose sqrt is an integer.