Functions in python
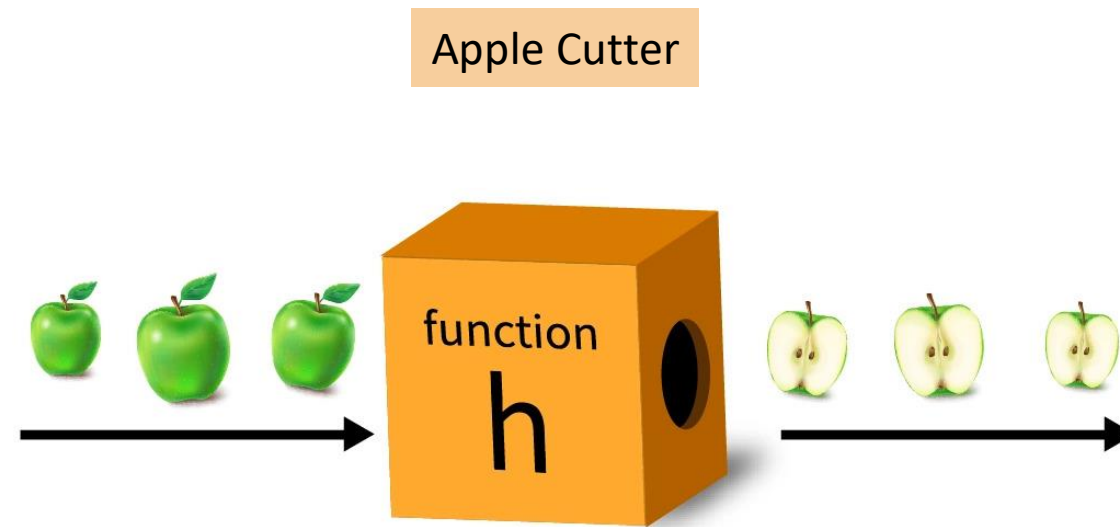
UTKARSH GAIKWAD

CLASS STARTING SHARP AT 9:03 AM

What is function?

User Defined Function in python

Fig: Function definition
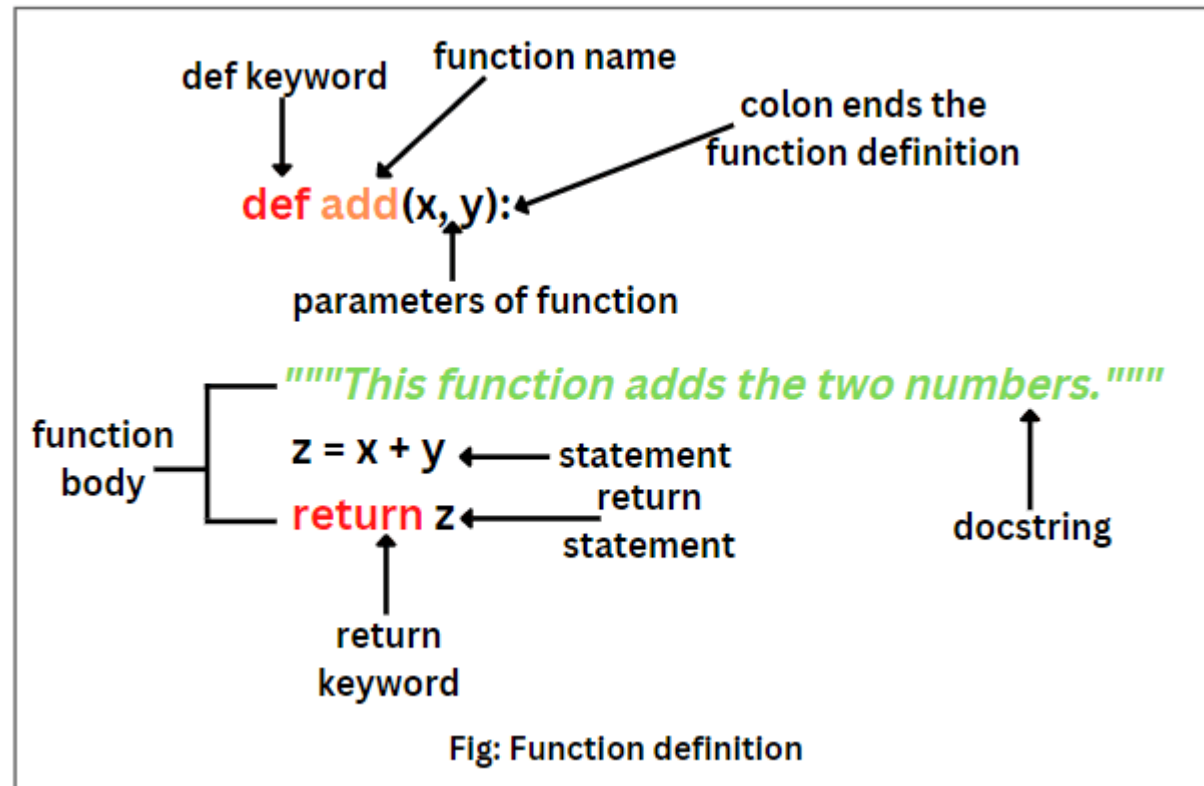
Functions

➢ Write a function in python to add 2 numbers

➢ Write a function in python to output cube of a given number.

➢ Write a function in python to output cube of given numbers from a list.

➢ Write a function in python to calculate sum of all elements inside a list

➢ Write a function in python to calculate product of all elements inside a list.

➢ Write a function in python to calculate hypotenuse of a right angled triangle.

➢Write a function in python which takes 3 sides and determines whether 3 sides form triangle or not .

➢ Write a function in python that calculates area of triangle when 3 sides are given.

➢ Write a function in python to calculate total words used in given sentence.

Assignments

➢ Write 2 functions to convert temperature to Celsius and Farenheit with names cel_to_far and far_to_cel.

➢ Write a function to calculate factorial of given number eg. 5 factorial = 5*4*3*2*1

➢ Write a function to count vowels from a given word or sentence (A , E, I , O, U)

➢ Write a function to calculate EMI for Given P INR, N Years and R %p.a.

➢ Write a function to output grade of a student based on below criteria

Take marks of students as list input [70, 95, 90, 55, 35]

• More than 90 : A
  • 80-89 : B
  • 70-79 : C
  • 60-69 : D
  • Below 60 : F
  [C, A, A, F, F]

Assignment continued

- ➢ Write a function to analyze student marks as below
  - Take a list of marks from 0-100 [70, 95, 90, 55, 35]
  - Find average marks
  - Find highest marks
  - Find Lowest marks
  - Find number of Students passed (Marks>=60)
  - Find number of Students failed (Marks<60)
  - Return above in DataFrame / Dictionary format

Generator function

➢ Write a function in python to generate Fibonacci Series

➢ Square for first n natural number : 1, 4, 9, 16, 25, 36, …….

0, 1, 1, 2, 3, 5, 8, 13, 21, …
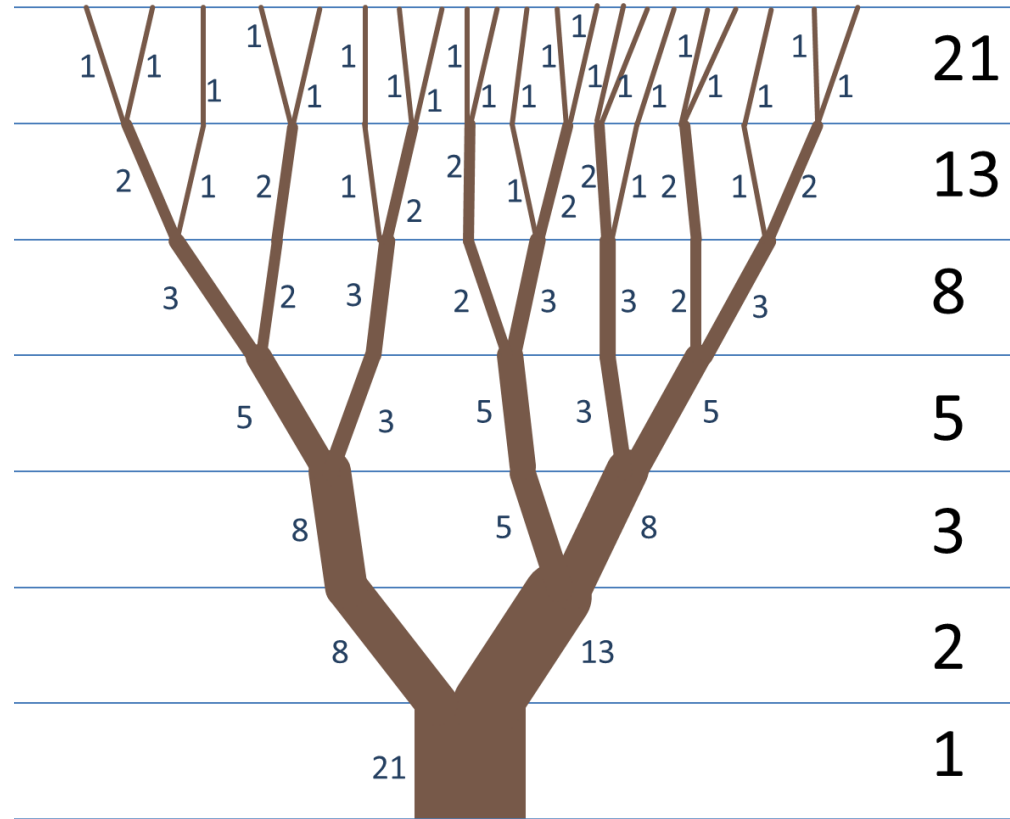
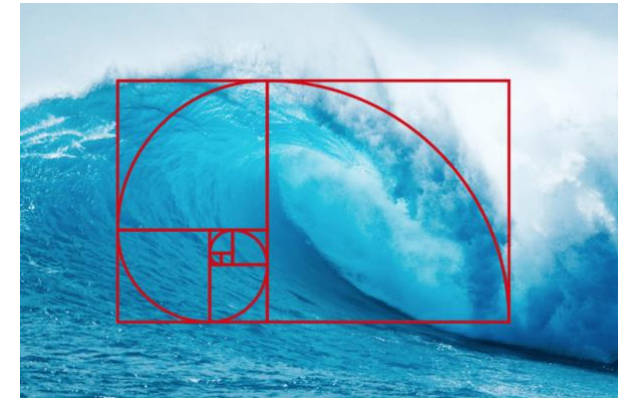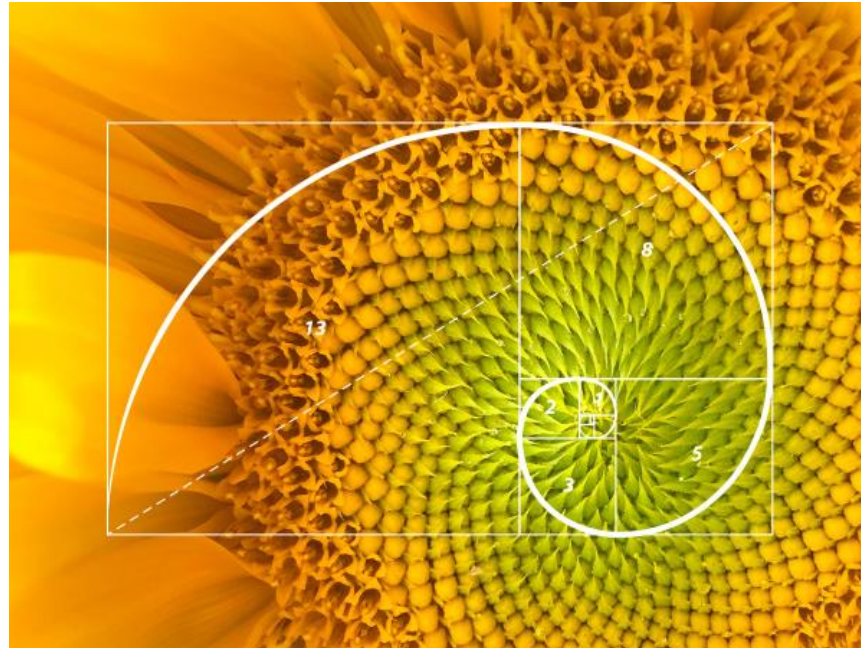$F(n) = F(n-1) + F(n-2)$
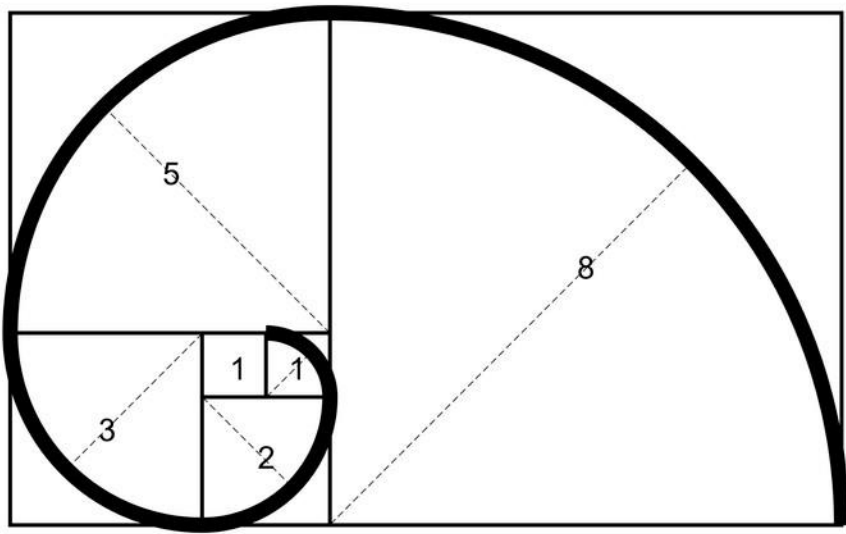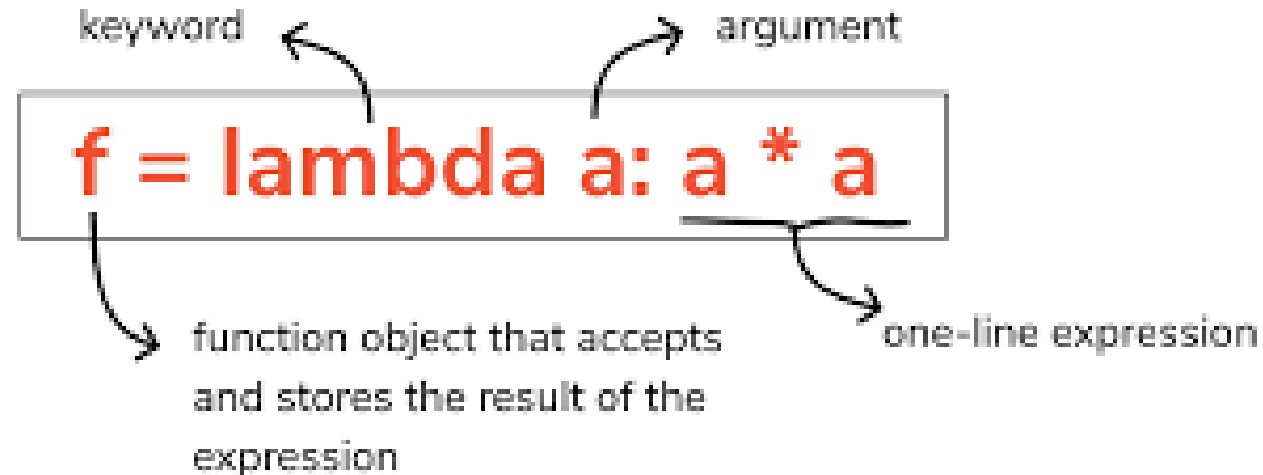
Fibonacci Sequences

1

Tree growth

Fibonacci Spiral

Application Solar power plant

Lambda Function Anonymous function

Example Lambda Function to check if given number is even or odd

Map Function (Generator function in python)

Thank you

FOR ANY QUERIES PING ME ON SKYPE CHAT

THOSE WHO HAVE COMPLETED THE PRACTICAL CAN LEAVE FOR THE DAY FOR TODAY