Program to find the length of a list using recursion

Program logic

1. Define funtion to find length of list using recursion.
    A. Pass one parameter as list
    B. Check if it is valid list or not, if not returns 0
    C. Otherwise, it is indexed & call function recursively, incremente by 1 and return as output
2. In driver code
    A. Declare list
    B. Call the function and print the length of list

Define function to calculate length of list recursively

In [18]:

```python
def find_length(L1):
    if not L1:
        return 0
    return 1 + find_length(L1[1::2]) + find_length(L1[2::2])
```

Declare list,call function and print length

In [19]:

```python
L1 = [2,22,44,88,166,99,1]

print("Odd indexing/slicing",L1[1::2])      #to get odd index
print("Even indexing/slicing",L1[2::2])      #to get even index

print("List = ",L1)
print("Length of list using recursion = ", find_length(L1))
```

```
Odd indexing/slicing [22, 88, 99]
Even indexing/slicing [44, 166, 1]
List =  [2, 22, 44, 88, 166, 99, 1]
Length of list using recursion =  7
```