Arrays An array is a Collection of Eelements of Same Data Types and Stored in a Continous Memory Allocation

			10	20	30	40	

Filled

10,20,30,40
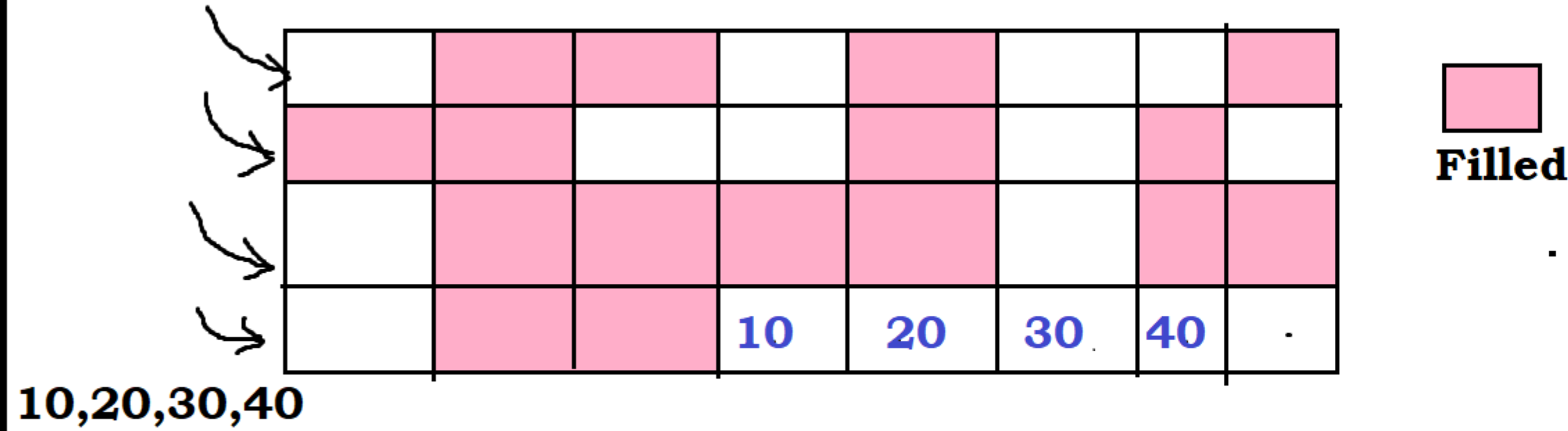
Modules And Package

Module Collection of Functions
Package Collection of Modules

Package

Module

Fun

. from

import

def
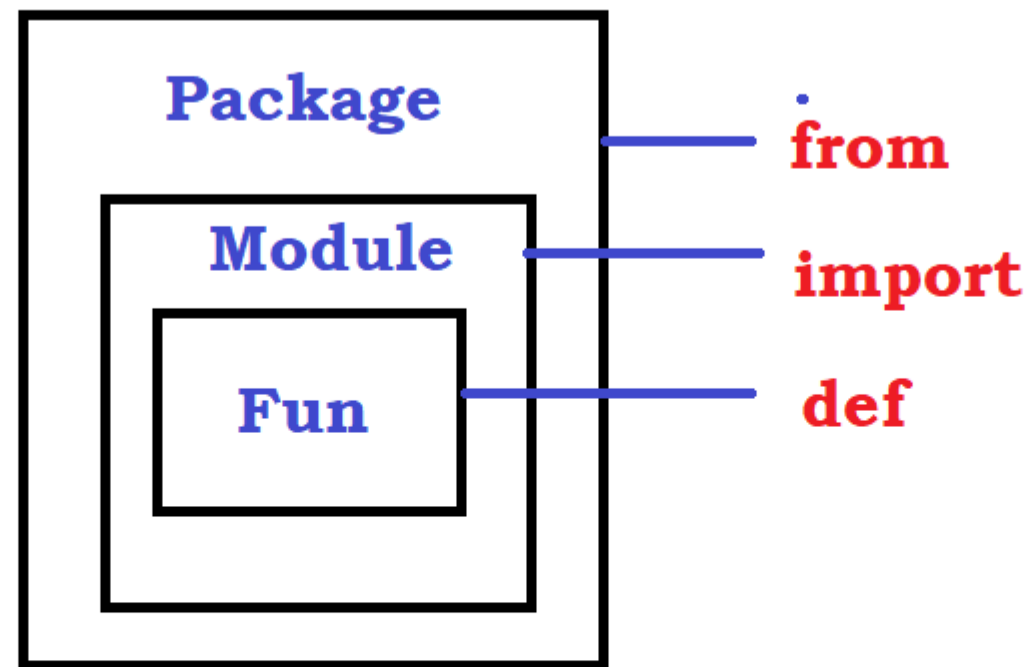
Creation of Array

Syntax

Array Package

Array Module

Array-Name = array(' Specifier ' , [V1 , V2 , V3])

Array-Name = array-obj . array(' Specifier ' , [V1 , V2 , V3])

Specifier

  - **Format Specifier for indicates the array contaion same Data**

i	-	**int**
I	-	**Long int**
f	-	**Float**
b	-	**Character**

Package   **array**

Module   **array**

Function   **array( )**

Using Array Package

```
from array import array
a=array('i',[1,20,30])
print(a)
#array('i', [10, 20, 30])
for i in a:
    print(i)

1
20
30
```
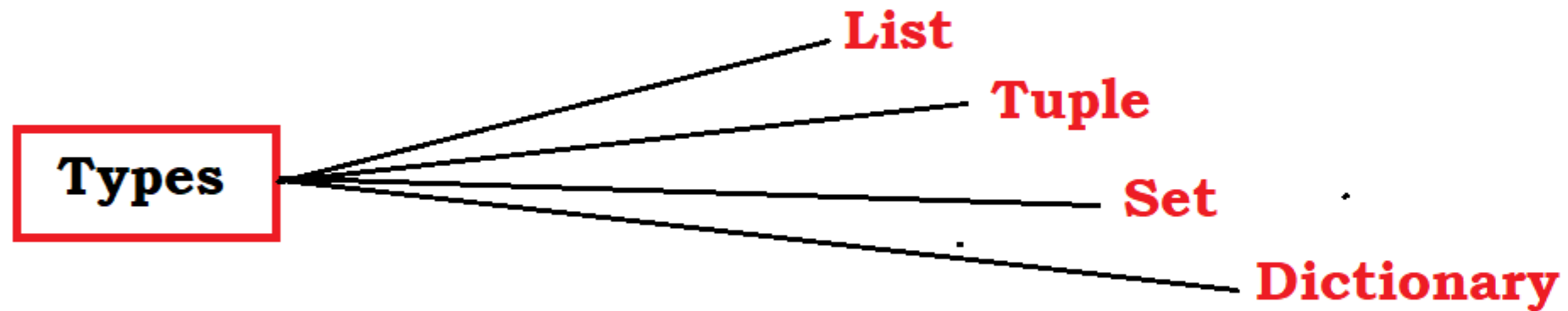
Using Array Module

```
import array as ai
a=ai.array('i',[1,20,30])
print(a)
print(type(a))
#array('i', [1, 20, 30])
#<class 'array.array'>
```

Python Collections

A Collection is a Group of Elements which are may be Same Data Type of Different Data Type and we are not sure those Elements are Stored in a Cotginous Memory Locations.

Types
- List
- Tuple
- Set
- Dictionary

Properties of a Collection

Collection Name	Ordered / UnOrdered	Mutable / Immutable	Allow Duplicates / Not Allow Duplicates
List	Ordered	Mutable	Allow Dups
Tuple	Oredred	Immutable	Allow Dups
Set	UnOredred	Immutable	Not Allow Dups
Dictionary	Ordered	Mutable	Not Allow Dups

Ordered [10 , 20 , 30]

OP 10 20 30

OP 20 30 10

Allow Duplicates / Not

[10 20 30 40 20]

Mutable (Changable)

[10,20,30]

3

Elements   **Structure**

4

[10 20 30]   40 20 30 50

40 ↗

[40 20 30] 3