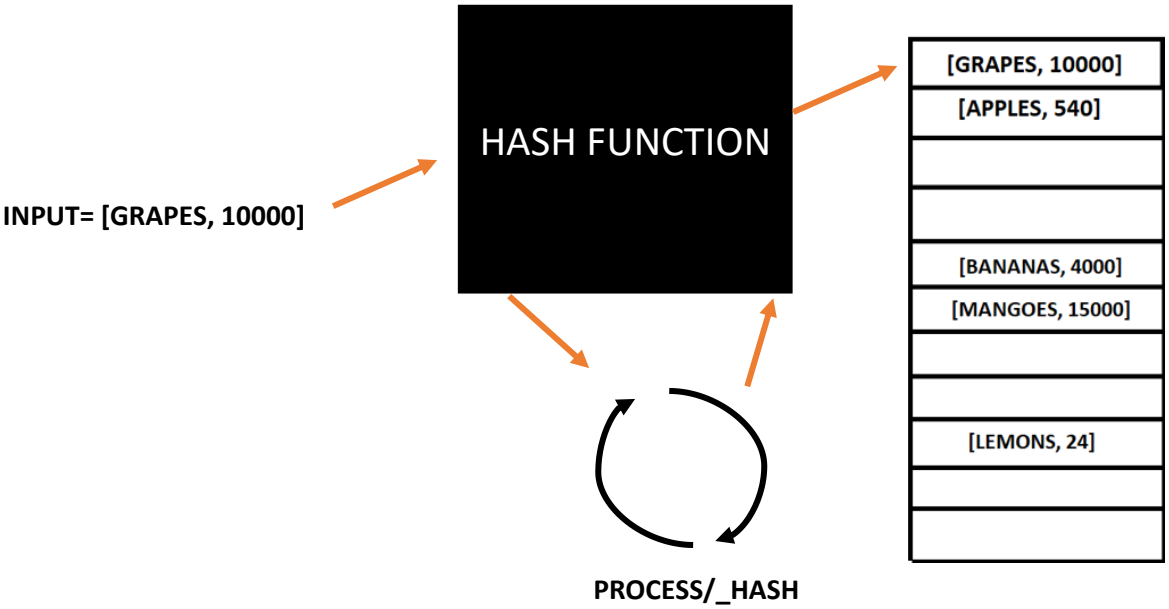
# HASH TABLE IMPLEMENTATION

## How it works?

| | | |
|---|---|---|
| [GRAPES, 10000] | [GRAPESS, 1000] | [GRAAPES, 5000] |
| [APPLES, 540] | | |
| | | |
| | | |
| [BANANAS, 4000] | | |
| [MANGOES, 15000] | | |
| | | |
| | | |
| [LEMONS, 24] | | |
| | | |
| | | |

## How to implement

LIST/ARRAY= [[1], [4], [5], [2] , [3], ]




**ALOGRITHM:**

**HASH FUNCTION (EXAMPLE):**

**_Hash ():**

**take to full key variable.**

**Iterate through each variable.**

**Initialize hash =0.**

**Add has to the starting and then add UTF-8/UTF-16 character code to it % the length of the hash table which will already be specified by now.**

**Return hash code.**

**HASH TABLE**

- Take and initial array of length specified
- The has table will have 2 functions
  - Set() – place the elements at the hashed address
  - Get() - will get the has address of the key and lookup for the element at the given address

- ## Constructor(length) :
    - Initialize the array with the length
    - Initialize the array element as blank array/list[]

- ## Set( key, value) :
    - Get the hash code consider it as the index of the array at which the key and value is to be stored.
    - If there is already a **[key, value]** pair at that index :
        - **Array[index][length]** = the list of key and value at the given index
    - else :
        - insert the list of key and value at the given index
- ## Get( key ) :
    - Get the hash code of the address/ index at which the value is residing
    - Iterate through each key of residing at the address
    - if the key matches the desired key :
        - Return the value of the particular key
    - else :
        - return undefined/None/error message