**Hashmap**:

Key, value pair

Key should be unique

Default initial capacity: 16

Load factor : 0.75

It internally array only

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  | | --- | | 1, Payal | | 17, Payal | |  |  |  |  |  | 7 kirti |  |  |  | 11 payal |  | 13 parul |  |  |

Each array index is called a bucket and we have a linkedlist at each index

HashMap<Integer, String> map= new HashMap<>();

map.put(1, “Payal”);

map.put(11, “Payal”);

map.put(13, “Parul”);

map.put(7, “Kirti”);

map.put(1, “Payal”);

map.put(17, “Payal”);: remainder: 1

1/16: hashcode: bucket in which my element should be placed. I will try to write such a algotithm such that each element is placed at a unique index

So then it will run equals method to find whether it is a unique key

**Contract between equals and hashcode:**

The elements which are equal should have same hashcode value but elements with same hashcode can be different.

Class Person{

Int id;

String name;

Float salary;

}

To use person as a key in hashmap:

No duplicate records should be key. It should return same hashcode value for duplicates. And equals should return true for same person objects (id).