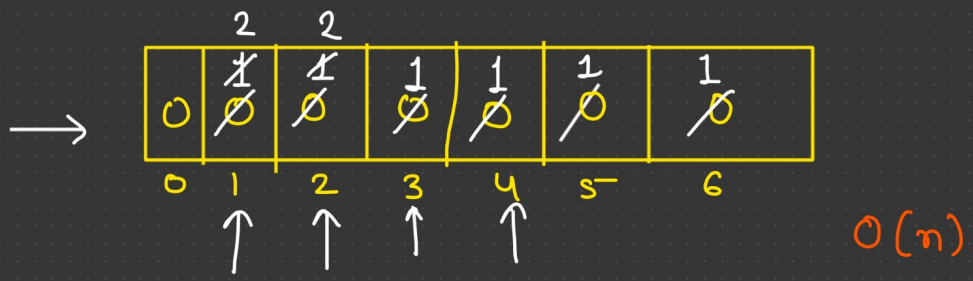
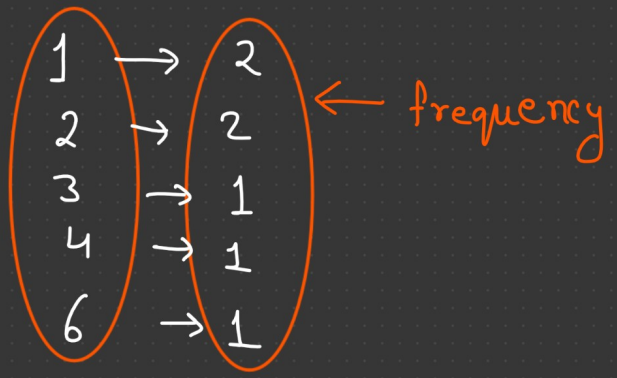
Hashing Technique

1, 2, 4, 3, 2, 1, 5, 6 . Count frequency of all the element.



O(n)



a[0] a[1] a[2] a[5] a[8]

```
int a[] = {2, 1, 2, 3, 1, 1, 4, 6, 2};
```

```
int hash[7] = {0};
```

0	1	2	3	4	5	6
0	3	3	1	1	0	1

array size

```
for(int i=0; i<9 ; i++)
{
    hash[a[i]]++;
}
```

i = 0	i = 1	i = 2
a[0] = 2	a[1] = 1	a[2] = 2
hash[2]++	hash[1]++	hash[2]++

1	3
2	3
3	1
4	1
6	1

hash size

```
for(int i=0; i<7; i++)
{
    if(hash[i] != 0)
    {
        cout<<i<<hash[i];
    }
}
```

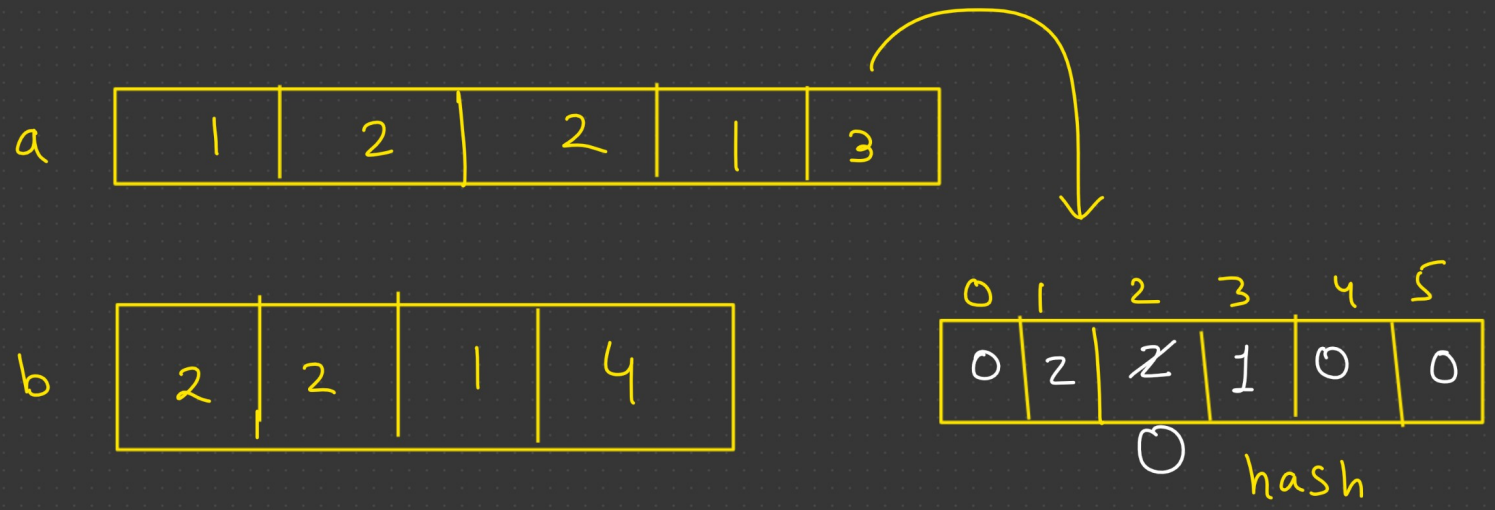
number frequency.

O(n)

Drawback :-

Memory usage.

not applicable for -ve no.




```
for( i=0; i<m; i++)
{ if( hash[b[i]] != 0)
      copy(b[i])
      hash[b[i]]=0;
}
```

O(n)