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Experiment 7

Aim: Program to implement Bloom Filter.

Code:

```
word_1 = input()
l=[]
for i in word_1:
    l.append(ord(i))
val=sum(l)*2
n = 10
filter = [0] * n
hash_fn_1 = lambda val, n: (val * 1 + 2 - 3) % n
hash_fn_2 = lambda val, n: (val * 2 + 3 - 1) % n
filter[hash_fn_1(val, n)] = 1
filter[hash_fn_2(val, n)] = 1
print(filter)
word_2 = input()
m=[]
for i in word_2:
    m.append(ord(i))
val1=sum(m)*2
if filter[hash_fn_1(val1, n)] == 1 and filter[hash_fn_2(val1, n)] ==
1:
    print('Spam')
else:
    print('Not a spam')
```

Output:

```
plant
[0, 0, 0, 0, 1, 1, 0, 0, 0, 0]
goa
Not a spam
>>>
```

```
========== RESTART: C:\Users\asus\Downloads\bloom.py ==========
plant
[0, 0, 0, 0, 1, 1, 0, 0, 0, 0]
plane
Spam
>>>
```