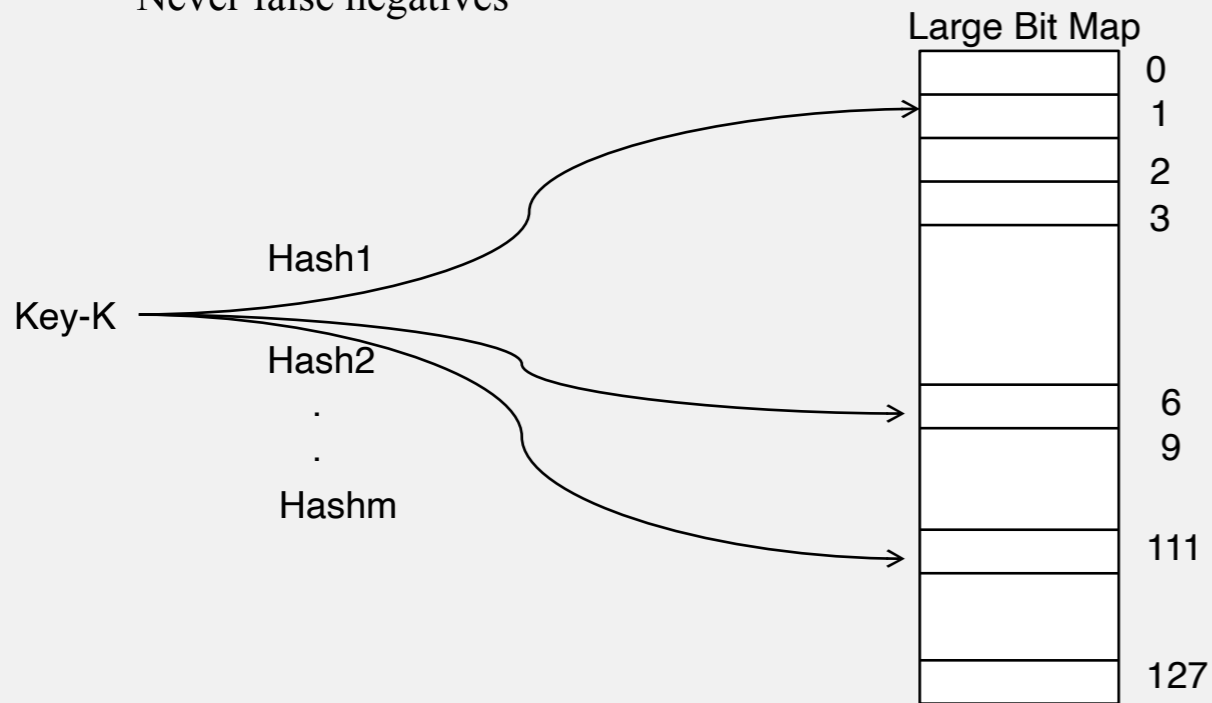# Bloom Filter

- Compact way of representing a set of items
- Checking for existence in set is cheap
- Some probability of false positives: an item not in set may check true as being in set
- Never false negatives

Large Bit Map

On insert, set all hashed bits.

On check-if-present, return true if all hashed bits set.
- False positives

False positive rate low
- m=4 hash functions
- 100 items
- 3200 bits
- FP rate = 0.02%

22