

Ans - Rabin Karp Algorithm

A good hash function is crucial for the Rabin - karp algorithm. It must be efficient to compute and should minimize collisions.

* Polynomial Rolling Hash -

$$h(s) = (S[0] \cdot d^{m-1} + S[1] \cdot d^{m-2} + \dots + S[m-1]) \bmod q$$

- ① Here, $S[i]$ is Ascii value of the i^{th} character of the string.
- ② d is constant (base, 256) say
- ③ $q \rightarrow$ large prime number (101) say

In form,
say

$$h = (h * d) \% q$$