

Problem 6 :Rabin karp

`rabin_karp(text, pattern):`

`indices = []`

`if not text or not pattern or len(pattern) > len(text):`

`return indices`

`prime = 101`

`d = 256`

`n = len(text)`

`m = len(pattern)`

`pattern_hash = 0`

`text_hash = 0`

`h = pow(d, m-1, prime)`

`for i in range(m):`

`pattern_hash = (d * pattern_hash + ord(pattern[i])) % prime`

`text_hash = (d * text_hash + ord(text[i])) % prime`

`for i in range(n - m + 1):`

`if pattern_hash == text_hash:`

`match = True`

`for j in range(m):`

`if text[i+j] != pattern[j]:`

```

        match = False

        break

    if match:

        indices.append(i)

    if i < n - m:

        text_hash = (d * (text_hash - ord(text[i]) * h) + ord(text[i + m])) % prime

        if text_hash < 0:

            text_hash += prime

    return indices

```

```
text = "ABABDABACDABABCABAB"
```

```
pattern = "ABABCABAB"
```

```
result = rabin_karp(text, pattern)
```

```
print("Pattern found at indices:", result)
```

```

12     pattern_hash = 0
13     text_hash = 0
14     h = pow(d, m-1, prime)
15
16     for i in range(m):

```

input

Longest Common Prefix: ap

...Program finished with exit code 0
Press ENTER to exit console.

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