```
1.Input S
  │
  ▼
2.k=26,alph={a,b,..,z}
  │
  ▼
3.i=0
  │
  ▼
4.poss_a=s[i] ◄─────────────┐
  │                         │
  ▼                         │ No
5.i+1<=len(S) ──No──► 7.poss_b=s[1]
  │                         │
  Yes                       │
  ▼                         ▼
6.poss_b=s[i+1]          8.sum=poss_a+poss_b
  │                         ▲
  └─────────────────────────┘
  ▼
8.sum=poss_a+poss_b
  │
  ▼
9.pos=sum%k
  │
  ▼
10.S_new[i]=alph[pos]
  │
  ▼
11.i++
  │
  ▼
12.i>len(S) ──No──► (back to 4)
  │
  Yes
  ▼
13.print(S_new)
```

Path coverage:

1,2,3,4,5,6,7,8,9,10,11,12,13(loop taken 0 time)

1,2,3,4,5,6,8,9,10,11,12,1,2,3,4,5,7,8,9,10,11,12,13(loop taken 1 time)

1,2,3,4,5,6,8,9,10,11,12,1,2,3,4,5,6,8,…,12,13(loop taken multiple times)