

## 1 Exercises

**Exercise 1.** Consider inserting the following keys into an initially empty hash table of  $M = 5$  lists, using separate chaining. Use the hash function  $h(k) = k \bmod M$  to transform the  $k$ th letter of the alphabet into a table index, where  $1 \leq k \leq 26$ .

E   A   S   Y   Q   U   T   I   O   N

- a. What is the value of  $h(18)$ ?
- b. What is the state of the array `st`?

## 2 Solutions to Exercises

**Solution 1.**

- a. 3
- b. 

```
0: 0 -> T -> Y -> E -> null
1: U -> A -> null
2: Q -> null
3: null
4: N -> I -> S -> null
```