

数据结构作业

第二次

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1. 习题 4-3

- (1) 14
- (2) 4
- (3) "STUDENT"
- (4) "O"
- (5) "3"
- (6) 0
- (7) "I AM A WORKER"
- (8) "A GOOD STUDENT"

2. 习题 4-4

- (a) (1) "THIS SAMPLE IS"
- (b) (2) "A GOOD"
- (c) (3) "THIS SAMPLE IS A GOOD ONE"
- (d) (4) 14
- (e) (5) 2
- (f) (6) 0

3. 习题 4-8

解 nextval:

A	D	A	B	B	A	D	A	D	A
-1	0	0	1	0	0	1	2	3	2

match step 1:

A	D	B	A	D	A	B	B	A	A	B	A	D	A	B	B	A	D	A	D	A
A	D	A	B	B	A	D	A	D	A											

match step 2:

A	D	B	A	D	A	B	B	A	A	B	A	D	A	B	B	A	D	A	D	A
A	D	A	B	B	A	D	A	D	A											

match step 3:

A	D	B	A	D	A	B	B	A	A	B	A	D	A	B	B	A	D	A	D	A
		A	D	A	B	B	A	D	A	D	A									

match step 3:

A	D	B	A	D	A	B	B	A	A	B	A	D	A	B	B	A	D	A	D	A
			A	D	A	B	B	A	D	A	D	A								

match step 4:

A	D	B	A	D	A	B	B	A	A	B	A	D	A	B	B	A	D	A	D	A
			A	D	A	B	B	A	D	A	D	A								

match step 5:

A	D	B	A	D	A	B	B	A	A	B	A	D	A	B	B	A	D	A	D	A
								A	D	A	B	B	A	D	A	D	A			

match step 6:

A	D	B	A	D	A	B	B	A	A	B	A	D	A	B	B	A	D	A	D	A
									A	D	A	B	B	A	D	A	D	A		

match step 7:

A	D	B	A	D	A	B	B	A	A	B	A	D	A	B	B	A	D	A	D	A
									A	D	A	B	B	A	D	A	D	A		

match step 8:

A	D	B	A	D	A	B	B	A	A	B	A	D	A	B	B	A	D	A	D	A
										A	D	A	B	B	A	D	A	D	A	

match step 8:

A	D	B	A	D	A	B	B	A	A	B	A	D	A	B	B	A	D	A	D	A
											A	D	A	B	B	A	D	A	D	A

match step 8:

A	D	B	A	D	A	B	B	A	A	B	A	D	A	B	B	A	D	A	D	A
											A	D	A	B	B	A	D	A	D	A

matched.

4. 习题 5-1

(1) 288

(2) 1282

(3) 1060

(4) 1234

5. 习题 5-8

解 $k = (i - 1) * 2 + (1 - j \bmod 2)$

6. 习题 5-11

(1) $GetHead(GetTail(GetTail(L_1)))$

(2) $GetHead(GetHead(GetTail(L_2)))$

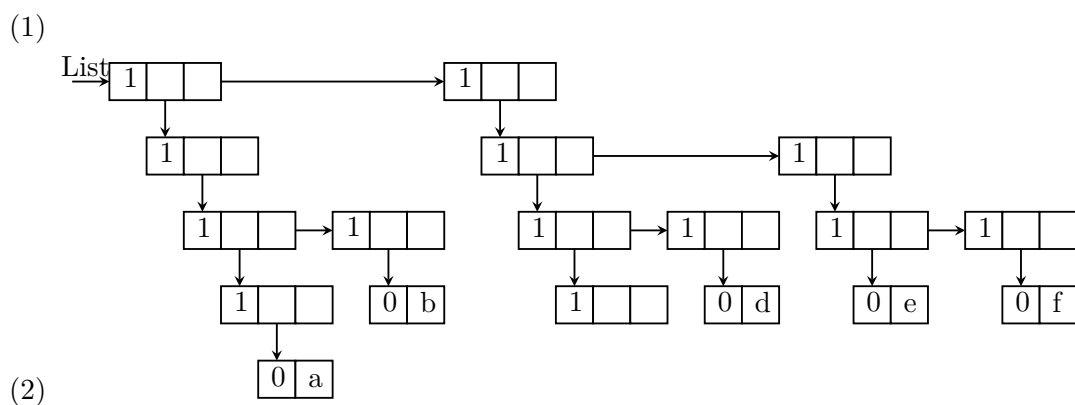
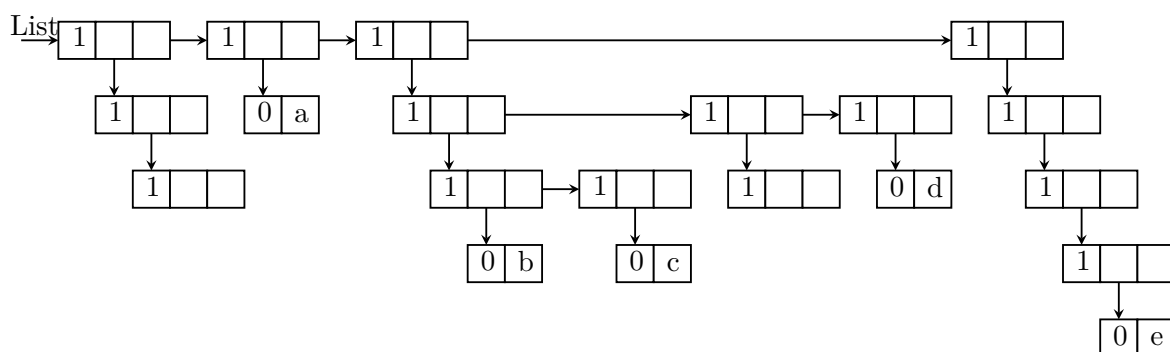
(3) $GetHead(GetHead(GetTail(GetTail(GetHead(L_3))))))$

(4) $GetHead(GetHead(GetHead(GetTail(GetTail(L_4))))))$

(5) $GetHead(GetHead(GetTail(GetTail(L_5))))$

(6) $GetHead(GetHead(GetTail(L_6)))$

(7) $GetHead(GetHead(GetTail(GetHead(GetTail(L_7))))))$



解 Haskell code:

```
1 power (x:xs) = if null xs
2               then [], [x]
3               else (power xs ++ (map ((:) x) (power xs)))
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