

数据结构第五章作业

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题目一

```
#include "../front/jeason.h"

struct threeNumNode {
    int num;
    int x;
    int y;
};
typedef struct threeNumNode tnNode;

typedef struct OLNode {
    int x, y;
    int num;
    struct OLNode *right, *down;
} OLNode, *OLList;

int main(void) {
    int JZ[5][5] = {{1, 0, 0, 0, 2},
                    {0, 3, 0, 0, 4},
                    {0, 0, 0, 5, 0},
                    {0, 0, 0, 6, 0},
                    {0, 0, 0, 0, 7}};

    int result[15], k = 0;

    for (int i = 0; i < 5; i++) {
        for (int j = i; j < 5; j++) {
            result[k] = JZ[i][j];
            k++;
        }
    }
```

```

}

// The result is {1,0,0,0,2,3,0,0,4,0,5,0,6,0,7}
// k = 0 + j (i == 0)
// k = 5 + j - i (i == 1)
// k = 9 + j - i (i == 2)
// k = 12 + j - i (i == 3)
// k = 14 + j - i (i == 4)
// 此处 i,j,k 为数组下标, 都+1为结果
printf("Finished");

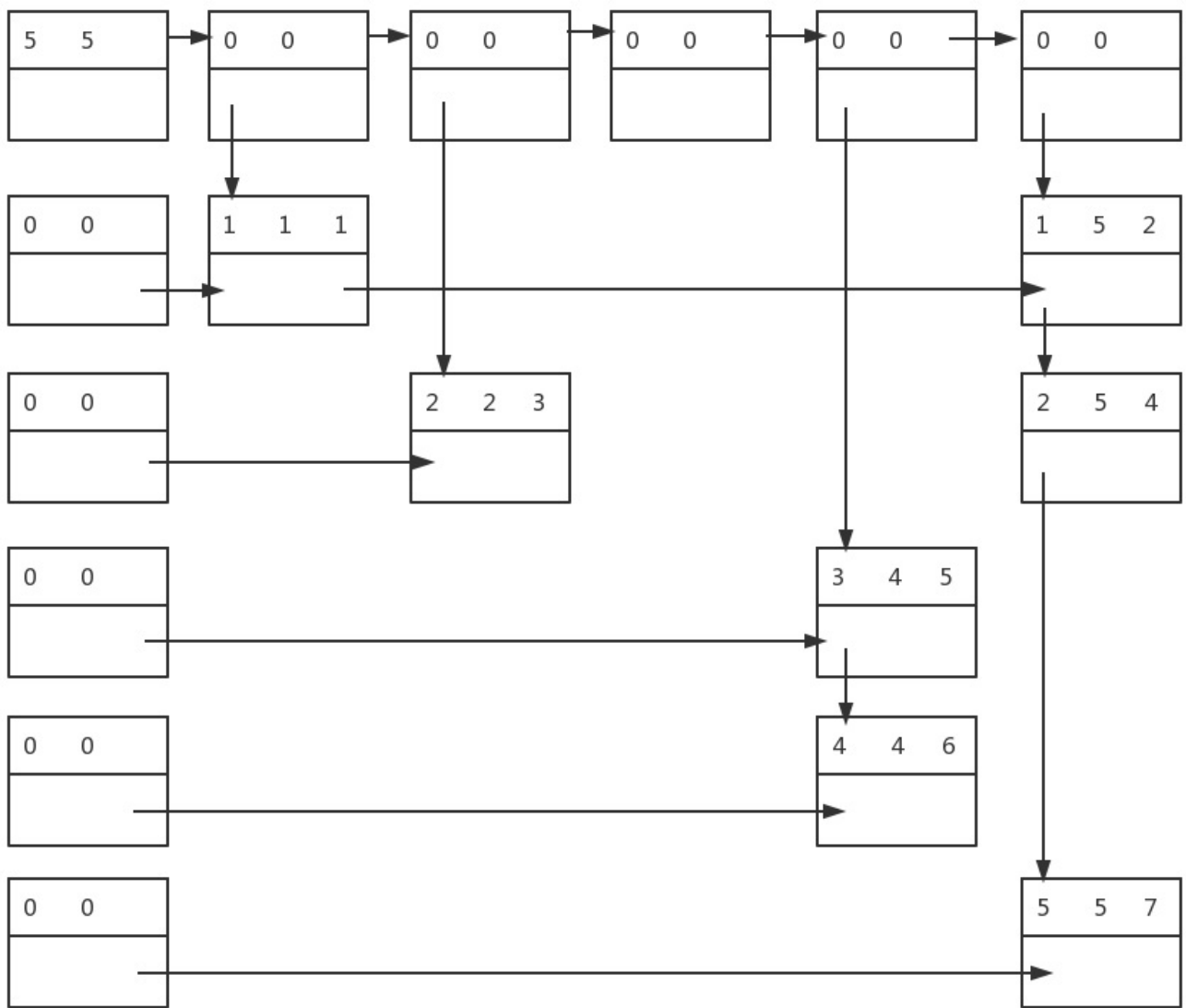
tnNode table[15];
int po = 0, zeroNum = 0, notZeroNum = 0;

for (int i = 0; i < 5; i++) {
    for (int j = 0; j < 5; j++) {
        if (JZ[i][j] != 0) {
            table[po].num = JZ[i][j];
            table[po].x = i;
            table[po].y = j;
            po++;
            notZeroNum++;
        } else {
            zeroNum++;
        }
    }
}

printf("Finished threeNumNode");
// 十字链表见图
}

```

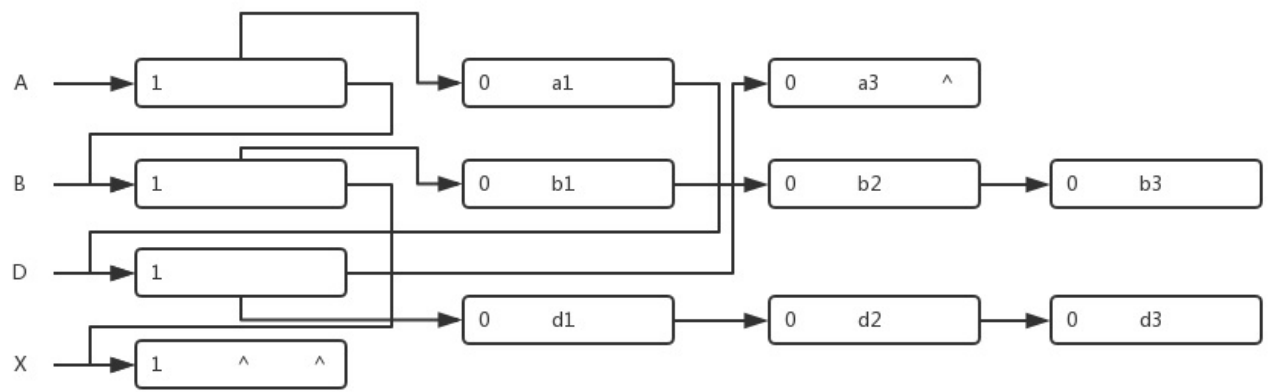
十字链表



题目二

广义表表示： $H=(A,B,b2)=((a1,D,a3),(b1,b2,b3),b2)=((a1,(d1,d2,d3),a3),(b1,b2,b3),b2)$

单链结构



双链结构

