05902:双端队列

```
def cs05902(t):
      for i in range(t):
             for j in range(int(input())):
                   k1, k2 = map(int, input().split())
                   if k1 == 1:
                          lt.append(k2)
                   else:
                          lt.pop(-1 * k2)
            if It:
                   for j in lt[:-1]:
                          print(j, end=" ")
                   print(It[-1])
             else:
                   print("NULL")
 #44270137提交状态
                                                               查看
                                                                    提交
                                                                         统计
                                                                               提问
 状态: Accepted
                                                         基本信息
 源代码
                                                             #: 44270137
                                                            题目: 05902
  def cs05902(t):
                                                          提交人: 22n2200011358
     for i in range(t):
                                                            内存: 3692kB
        lt = []
for j in range(int(input())):
                                                            时间: 40ms
           k1, k2 = map(int, input().split())
                                                            语言: Python3
           if k1 == 1:
                                                         提交时间: 2024-03-17 16:21:02
             lt.append(k2)
           else:
             lt.pop(-1 * k2)
           for j in lt[:-1]:
             print(j, end=" ")
          print(lt[-1])
          print("NULL")
  cs05902(int(input()))
```

## 02694:波兰表达式

```
def cs02694(s):
      s.reverse()
      || = ||
      for i in s:
            if i in ("+", "-", "*", "/"):
                   tmp = eval(str(lt.pop()) + i + str(lt.pop()))
                   It.append(tmp)
            else:
                   lt.append(i)
      print(f'{|t[0]:.6f}')
#44271821提交状态
状态: Accepted
                                                        基本信息
源代码
                                                            #: 44271821
                                                          题目: 02694
 def cs02694(s):
                                                         提交人: 22n2200011358
                                                          内存: 25124kB
    for i in s:
                                                           时间: 95ms
       if i in ("+", "-", "*", "/"):
                                                           语言: PyPy3
         tmp = eval(str(lt.pop()) + i + str(lt.pop()))
                                                        提交时间: 2024-03-17 17:05:37
          lt.append(tmp)
          lt.append(i)
    print(f'{1t[0]:.6f}')
 cs02694(input().split())
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                                                                      English 帮助 关于
24591:中序表达式转后序表达式
```

```
def cs24591(n):
    for i in range(n):
        s = input()
        tmp = ""
```

```
It, ans = [], []
         for j in range(len(s)):
              if s[j] in ("+", "-", "*", "/", ")", "("):
                   if tmp:
                        ans.append(tmp)
                        tmp = ""
              else:
                   tmp += s[j]
              if s[j] == "(":
                   lt.append(s[j])
              elif s[j] in ("+", "-", "*", "/"):
                   while It and not (s[j] in ("*", "/") and
It[-1] in ("+", "-") or It[-1] == "("):
                        ans.append(lt.pop())
                   lt.append(s[j])
              elif s[j] == ")":
                   a = It.pop()
                   while a != "(":
                        ans.append(a)
                        a = lt.pop()
         if ans:
              for j in ans[:-1]:
```

```
print(j, end=" ")
                     if It:
                              print(ans[-1], end=" ")
                              if tmp:
                                       print(tmp, end=" ")
                              while len(lt) > 1:
                                       print(It.pop(), end=" ")
                              print(It[0])
                      elif tmp:
                              print(ans[-1], tmp)
                      else:
                              print(ans[-1])
              else:
                      print(tmp)
#44279244提交状态
状态: Accepted
                                                                     基本信息
源代码
                                                                          #: 44279244
                                                                        题目: 24591
def cs24591(n):
                                                                       提交人: 22n2200011358
    for i in range(n):
                                                                        内存: 3740kB
        s = input()
                                                                        时间: 30ms
       tmp = '
        lt, ans = [], []
                                                                        语言: Python3
        for j in range (len(s)):

if s[j] in ("+", "-", "*", "/", ")", "("):
                                                                      提交时间: 2024-03-17 21:25:15
               if tmp:
                  ans.append(tmp)
                  tmp =
            tmp += s[j]
if s[j] == "(":
    lt.append(s[j])
elif s[j] in ("+", "-", "*", "/"):
    while lt and not (s[j] in ("*", "/") and lt[-1] in ("+",
                  ans.append(lt.pop())
               lt.append(s[j])
            elif s[j] == ")":
a = lt.pop()
                  ans.append(a)
                  a = lt.pop()
           for j in ans[:-1]:
           print(j, end=" ")
if lt:
               print(ans[-1], end="")
               if tmp:
                   print(tmp, end=" ")
               while len(lt) > 1:
```

print(lt.pop(), end=" ")

## 22068:合法出栈序列

def cs22068(x):
try:
while True:
l = len(x)
st = []
it = input()
if   != len(it):
print("NO")
else:
j, k = 0, 0
for i in range(1 * 2):
if st == [] or st[-1] != it[j]:
if k > I - 1:
st = True
break
st.append(x[k])
k += 1
else:
st.pop()
j += 1
if j > l - 1:

```
break
                                 if st:
                                          print("NO")
                                 else:
                                          print("YES")
      except:
               exit()
#44281513提交状态
状态: Accepted
源代码
                                                                                  #: 44281513
                                                                                 题目: 22068
 def cs22068(x):
                                                                                提交人: 22n2200011358
                                                                                 内存: 3604kB
         while True:
            1 = len(x)
st = []
it = input()
                                                                                 时间: 25ms
                                                                                 语言: Python3
                                                                              提交时间: 2024-03-18 00:06:37
             if 1 != len(it):
                print("N0")
             else:
                j, k = 0, 0
                 J, k = 0, 0
for i in range(1 * 2):
    if st == [] or st[-1] != it[j]:
        if k > 1-1:
        st = True
                            break
                         st.append(x[k])
                         k += 1
                        st.pop()
                        j += 1
if j > 1-1:
                            break
                    print("N0")
                    print("YES")
     except:
         exit()
 cs22068(input())
```

06646:二叉树的深度

def cs06646(n):

def k(ni):

```
I = Ist[ni][0] - 1
           if | > -1:
                  ans[l] = ans[ni] + 1
                  k(I)
           r = |st[ni][1] - 1
           if r > -1:
                  ans[r] = ans[ni] + 1
                  k(r)
     lst = []
     ans = [0] * n
     for i in range(n):
           lst.append(tuple(map(int, input().split())))
     k(0)
     print(max(ans) + 1)
#44298381提交状态
                                                               查看
                                                                     提交
                                                                          统计
状态: Accepted
源代码
                                                              #: 44298381
                                                            题目: 06646
 def cs06646(n):
                                                           提交人: 22n2200011358
    def k(ni):
      1 = lst[ni][0]-1
                                                            内存: 3624kB
                                                            时间: 22ms
         ans[1] = ans[ni] + 1
                                                            语言: Python3
         k(1)
                                                          提交时间: 2024-03-19 15:43:48
      r = lst[ni][1]-1
if r > -1:
         ans[r] = ans[ni] + 1
         k(r)
    for i in range(n):
      lst.append(tuple(map(int, input().split())))
    k(0)
    print(max(ans)+1)
 cs06646(int(input()))
```

## 02299:Ultra-QuickSort

```
def cs02299():
    def merge_sort(a):
         if len(a) == 1:
             return a, 0
         else:
              I = len(a) // 2
             rt, ans = [], 0
              left, la = merge_sort(a[:1])
              right, ra = merge_sort(a[l:])
              ans += la + ra
              left.reverse()
              right.reverse()
             for il in range(1):
                  while right and left[-1] > right[-1]:
                       rt.append(right.pop())
                       ans += len(left)
                  else:
                       rt.append(left.pop())
             for il in range(len(right)):
                  rt.append(right.pop())
             return rt, ans
```

状态: Accepted

```
源代码
 def cs02299():
      def merge sort(a):
                return a, 0
           else:
                1 = len(a) // 2
                rt, ans = [], 0
left, la = merge_sort(a[:1])
right, ra = merge_sort(a[1:])
ans += la + ra
                left.reverse()
                right.reverse()
for il in range(1):
                      while right and left[-1] > right[-1]:
                          rt.append(right.pop())
                          ans += len(left)
                      else:
                rt.append(left.pop())
for il in range(len(right)):
    rt.append(right.pop())
                 return rt, ans
      while True:
           n = int(input())
           lt = []
           if n:
                for i in range(n):
                     lt.append(int(input()))
                print(merge_sort(lt)[1])
           else:
                break
 cs02299()
```

#: 44282632 题目: 02299 提交人: 22n2200011358 内存: 34576kB 时间: 3089ms 语言: Python3 提交时间: 2024-03-18 09:43:06

总结:难度明显提升,归并排序和合法出栈是看了题解思路才会写,程序长了BUG也多;在做的过程中学了eval等内置函数,学了归并排序算法,递归是用得越来越熟了。