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from random import choice
event = ['R1','R1','Y1','Y1','W1','W1','Up2','Down2','Down2','Down2']
actual = []
initial_price = []
red = []
yellow = []
white = []
color = [red, yellow, white]
rise_event = ['R1', 'Y1', 'W1']
double_event = ['Up2', 'Down2']
count = 0
confirm = ''
check = 'Y'
for k in range(2, 5):
    initial_price.append(k)
for i in range(0, 8):
    a = choice(event)
    actual.append(a)
    event.remove(a)
event.append('End')
for n in range(0,3):
    b=choice(event)
    actual.append(b)
    event.remove(b)
    c=choice(initial_price)
    if count == 0:
        red.append(c)
        initial_price.remove(c)
        count += 1
    elif count == 1:
        yellow.append(c)
        initial_price.remove(c)
        count += 1
    elif count == 2:
        white.append(c)
        initial_price.remove(c)
        count += 1

def Rise(i):
    for j in range(3):
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41          if actual[i] == rise_event[j]:
42              new_price = color[j][i] + 1
43              while any(new_price == lst[i] for lst
   in color) and new_price <= 7:
44                  new_price += 1
45              if new_price <= 7:
46                  color[j].append(new_price)
47              else:
48                  color[j].append(color[j][i])
49              for k in range(3):
50                  if len(color[k]) < i + 2:
51                      color[k].append(color[k][i])
52              return rise_event[j]
53
54 def Up(i, color_dict, latest_prices):
55      if actual[i] == 'Up2':
56          min_color_name, min_price = min(
   latest_prices.items(), key=lambda x: x[1])
57          min_color = color_dict[min_color_name]
58          new_price = min_price + 2
59          while any(new_price == lst[i] for lst in
   color) and new_price <= 7:
60              new_price += 1
61          if new_price <= 7:
62              min_color.append(new_price)
63          elif all(new_price - 1 != lst[i] for lst in
    color) and new_price - 1 <= 7:
64              min_color.append(new_price - 1)
65          else:
66              min_color.append(min_price)
67          for k in range(3):
68              if len(color[k]) < i + 2:
69                  color[k].append(color[k][i])
70          return actual[i]
71
72 def Down(i, color_dict, latest_prices):
73      if actual[i] == 'Down2':
74          max_color_name, max_price = max(
   latest_prices.items(), key=lambda x: x[1])
75          max_color = color_dict[max_color_name]
76          new_price = max_price - 2
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 77         while any(new_price == lst[i] for lst in
    color) and new_price >= 1:
 78             new_price -= 1
 79         if new_price >= 1:
 80             max_color.append(new_price)
 81         elif all(new_price + 1 != lst[i] for lst
    in color) and new_price + 1 >= 1:
 82             max_color.append(new_price + 1)
 83         else:
 84             max_color.append(max_price)
 85         for k in range(3):
 86             if len(color[k]) < i + 2:
 87                 color[k].append(color[k][i])
 88         return actual[i]
 89
 90 i = 0
 91 while i < len(actual) and actual[i] != 'End':
 92     color_dict = {'red': red, 'yellow': yellow, '
    white': white}
 93     latest_prices = {color: lst[i] for color, lst
    in color_dict.items()}
 94     a = Rise(i), Up(i, color_dict, latest_prices
    ), Down(i, color_dict, latest_prices)
 95     if check == 'Y':
 96         confirm = str(input("Start? (Input Y/N):"
    ))
 97         check = 'N'
 98     else:
 99         confirm = str(input("Next round? (Input Y/
    N):"))
100     if confirm == 'Y':
101         print('Round', i + 1)
102         for b in range(3):
103             if a[b] != None:
104                 print('Event:', a[b])
105         print('r:', red)
106         print('y:', yellow)
107         print('w:', white)
108     elif confirm == 'N':
109         break
110     else:
```

```
111          print("Wrong input")
112          break
113      confirm = 'W'
114      i += 1
115
116 print('End')
```