```
1 /usr/local/bin/python3.7 /Users/derektrom/Desktop/
  CSCI384/HW7-TromD/HW7-TromDQ1.py
             0.0049586776859504855
     gain :
 2 A
 3 B
     gain :
              0.0049586776859504855
 4 P
             0.0023612750885478317
     gain :
 5 R
     gain :
             0.03526170798898076
             0.04132231404958686
 6 G
     gain :
 7 V
     gain :
             0.04132231404958686
             0.22314049586776868
 8 1
     gain :
 9 2
             0.0049586776859504855
     gain :
             0.15495867768595045
10 3
     gain :
11 Best Gain: 0.22314049586776868 Best question:
                                                   Is
  0 dor = 1?
12 A
     gain :
             0.0
13 B
     gain :
              0.0
14 P
              0.0
     gain :
15 R
              0.0
     qain :
16 Best Gain: 0.0 Best question: Is Color = R?
17 A
             0.0
     qain :
              0.0
18 B
     gain :
19 P
     gain :
              0.008333333333333415
20 R
             0.008333333333333443
     gain :
21 G
             0.01785714285714285
     gain :
22 V
     gain :
              0.01785714285714285
23 2
     qain :
             0.07500000000000001
24 3
     gain :
              0.07500000000000001
25 Best Gain: 0.0750000000000001 Best guestion:
                                                   Is
  0 \text{dor} = 3?
26 A
     gain :
             0.0
27 B
     gain :
              0.0
     gain :
28 P
              0.0
29 R
     gain :
              0.0
30 Best Gain: 0.0 Best question: Is Color = R?
31 A
     gain: 0.013333333333333333
32 B
             0.0133333333333333
     gain :
33 P
             0.1799999999999994
     gain :
34 R
             0.0133333333333333
     gain :
35 G
     gain :
             0.079999999999996
36 V
     gain :
              0.079999999999996
37 Best Gain:
              0.179999999999999 Best question:
                                                  Is
  Color = P?
38 Best Gain: 0 Best question:
                                None
39 A
             0.125
     gain :
40 B
     gain :
              0.125
```

```
41 R
      gain :
                0.125
42 G
      gain :
                0.04166666666666685
      gain :
43 V
                0.04166666666666685
44 Best Gain: 0.125 Best question: Is Color = R?
45 A
      gain :
                0.5
46 B
      gain :
                0.5
47 Best Gain: 0.5 Best question:
                                        Is Shape = B?
48 Best Gain: 0 Best question:
                                     None
49 Best Gain: 0 Best question:
                                      None
50 A
      gain :
                0.0
51 B
      gain :
                0.0
      gain :
52 G
                0.0
53 V
                0.0
      gain :
54 Best Gain: 0.0 Best question: Is Color = V?
55 Is 0 \text{dor} = 1?
56 \longrightarrow True:
57
     Predict {'Yes': 3}
58 \longrightarrow False:
59
     Is 0 \text{dor} = 3?
60
     \longrightarrow True:
       Predict {'No': 3}
61
62
      \longrightarrow False:
63
        Is Color = P?
        \longrightarrow True:
64
          Predict {'Yes': 1}
65
66
        \longrightarrow False:
          Is Color = R?
67
68
          \longrightarrow True:
69
            Is Shape = B?
70
            \rightarrow True:
71
              Predict {'No': 1}
72
            \longrightarrow False:
              Predict {'Yes': 1}
73
74
          \longrightarrow False:
75
            Predict {'No': 2}
76
77 Process finished with exit code 0
78
```