

Generating Decision Tree for Monks1 Test Dataset for depth : 1

0:-1=-1 => 5:[-1, -1, -1, -1, -1, -1]

1:5=1 => 1:[-1, -1, -1, -1, -1, 1, -1]

1:5=2 => 4:[-1, -1, -1, -1, -1, 2, -1]

1:5=3 => 6:[-1, -1, -1, -1, -1, 3, -1]

1:5=4 => 1:[-1, -1, -1, -1, -1, 4, -1]

Generating Decision Tree for Monks1 Test Dataset for depth : 2

0:-1=-1 => 5:[-1, -1, -1, -1, -1, -1]

1:5=1 => 1:[-1, -1, -1, -1, -1, 1, -1]

1:5=2 => 4:[-1, -1, -1, -1, -1, 2, -1]

1:5=3 => 6:[-1, -1, -1, -1, -1, 3, -1]

1:5=4 => 1:[-1, -1, -1, -1, -1, 4, -1]

2:1=1 => 2:[-1, 1, -1, -1, -1, 1, -1]

2:1=2 => 2:[-1, 2, -1, -1, -1, 1, -1]

2:1=3 => 2:[-1, 3, -1, -1, -1, 1, -1]

2:4=1 => 1:[-1, -1, -1, -1, 1, 2, -1]

2:4=3 => 3:[-1, -1, -1, -1, 3, 2, -1]

2:4=2 => 2:[-1, -1, -1, -1, 2, 2, -1]

2:6=1 => 4:[-1, -1, -1, -1, -1, 3, 1]

2:6=2 => 3:[-1, -1, -1, -1, -1, 3, 2]

2:1=1 => 2:[-1, 1, -1, -1, -1, 4, -1]

2:1=2 => 2:[-1, 2, -1, -1, -1, 4, -1]

2:1=3 => 2:[-1, 3, -1, -1, -1, 4, -1]

## Generating Decision Tree for Monks1 Test Dataset for depth : 3

0:-1=-1 => 5:[-1, -1, -1, -1, -1, -1]

1:5=1 => 1:[-1, -1, -1, -1, -1, 1, -1]

1:5=2 => 4:[-1, -1, -1, -1, -1, 2, -1]

1:5=3 => 6:[-1, -1, -1, -1, -1, 3, -1]

1:5=4 => 1:[-1, -1, -1, -1, -1, 4, -1]

2:1=1 => 2:[-1, 1, -1, -1, -1, 1, -1]

2:1=2 => 2:[-1, 2, -1, -1, -1, 1, -1]

2:1=3 => 2:[-1, 3, -1, -1, -1, 1, -1]

2:4=1 => 1:[-1, -1, -1, -1, 1, 2, -1]

2:4=3 => 3:[-1, -1, -1, -1, 3, 2, -1]

2:4=2 => 2:[-1, -1, -1, -1, 2, 2, -1]

2:6=1 => 4:[-1, -1, -1, -1, -1, 3, 1]

2:6=2 => 3:[-1, -1, -1, -1, -1, 3, 2]

2:1=1 => 2:[-1, 1, -1, -1, -1, 4, -1]

2:1=2 => 2:[-1, 2, -1, -1, -1, 4, -1]

2:1=3 => 2:[-1, 3, -1, -1, -1, 4, -1]

3:2=1 => 3:[-1, 1, 1, -1, -1, 1, -1]

3:2=2 => 3:[-1, 1, 2, -1, -1, 1, -1]

3:2=3 => 3:[-1, 1, 3, -1, -1, 1, -1]

3:2=1 => 3:[-1, 2, 1, -1, -1, 1, -1]

3:2=2 => 3:[-1, 2, 2, -1, -1, 1, -1]

3:2=3 => 3:[-1, 2, 3, -1, -1, 1, -1]

3:2=1 => 3:[-1, 3, 1, -1, -1, 1, -1]

3:2=2 => 3: [-1, 3, 2, -1, -1, 1, -1]  
 3:2=3 => 3: [-1, 3, 3, -1, -1, 1, -1]  
 3:1=1 => 2: [-1, 1, -1, -1, 1, 2, -1]  
 3:1=2 => 2: [-1, 2, -1, -1, 1, 2, -1]  
 3:1=3 => 2: [-1, 3, -1, -1, 1, 2, -1]  
 3:3=1 => 1: [-1, -1, -1, 1, 3, 2, -1]  
 3:3=2 => 2: [-1, -1, -1, 2, 3, 2, -1]  
 3:2=1 => 1: [-1, -1, 1, -1, 2, 2, -1]  
 3:2=2 => 1: [-1, -1, 2, -1, 2, 2, -1]  
 3:2=3 => 1: [-1, -1, 3, -1, 2, 2, -1]  
 3:4=1 => 3: [-1, -1, -1, -1, 1, 3, 1]  
 3:4=3 => 1: [-1, -1, -1, -1, 3, 3, 1]  
 3:4=2 => 1: [-1, -1, -1, -1, 2, 3, 1]  
 3:3=1 => 4: [-1, -1, -1, 1, -1, 3, 2]  
 3:3=2 => 1: [-1, -1, -1, 2, -1, 3, 2]  
 3:2=1 => 3: [-1, 1, 1, -1, -1, 4, -1]  
 3:2=2 => 3: [-1, 1, 2, -1, -1, 4, -1]  
 3:2=3 => 3: [-1, 1, 3, -1, -1, 4, -1]  
 3:2=1 => 3: [-1, 2, 1, -1, -1, 4, -1]  
 3:2=2 => 3: [-1, 2, 2, -1, -1, 4, -1]  
 3:2=3 => 3: [-1, 2, 3, -1, -1, 4, -1]  
 3:2=1 => 3: [-1, 3, 1, -1, -1, 4, -1]  
 3:2=2 => 3: [-1, 3, 2, -1, -1, 4, -1]  
 3:2=3 => 3: [-1, 3, 3, -1, -1, 4, -1]

Generating Decision Tree for Monks2 Test Dataset for depth : 1

0:-1=-1 => 5: [-1, -1, -1, -1, -1, -1, -1]

1:5=1 => 3: [-1, -1, -1, -1, -1, 1, -1]

1:5=2 => 3: [-1, -1, -1, -1, -1, 2, -1]

1:5=3 => 3: [-1, -1, -1, -1, -1, 3, -1]

1:5=4 => 2: [-1, -1, -1, -1, -1, 4, -1]

Generating Decision Tree for Monks2 Test Dataset for depth : 2

0:-1=-1 => 5: [-1, -1, -1, -1, -1, -1, -1]

1:5=1 => 3: [-1, -1, -1, -1, -1, 1, -1]

1:5=2 => 3: [-1, -1, -1, -1, -1, 2, -1]

1:5=3 => 3: [-1, -1, -1, -1, -1, 3, -1]

1:5=4 => 2: [-1, -1, -1, -1, -1, 4, -1]

2:3=1 => 6: [-1, -1, -1, 1, -1, 1, -1]

2:3=2 => 4: [-1, -1, -1, 2, -1, 1, -1]

2:3=1 => 4: [-1, -1, -1, 1, -1, 2, -1]

2:3=2 => 2: [-1, -1, -1, 2, -1, 2, -1]

2:3=1 => 6: [-1, -1, -1, 1, -1, 3, -1]

2:3=2 => 4: [-1, -1, -1, 2, -1, 3, -1]

2:2=1 => 6: [-1, -1, 1, -1, -1, 4, -1]

2:2=2 => 1: [-1, -1, 2, -1, -1, 4, -1]

2:2=3 => 3: [-1, -1, 3, -1, -1, 4, -1]

Generating Decision Tree for Monks2 Test Dataset for depth : 3

0:-1=-1 => 5: [-1, -1, -1, -1, -1, -1, -1]

1:5=1 => 3: [-1, -1, -1, -1, -1, 1, -1]

$$1:5=2 \Rightarrow 3: [-1, -1, -1, -1, -1, 2, -1]$$

$$1:5=3 \Rightarrow 3: [-1, -1, -1, -1, -1, 3, -1]$$

$$1:5=4 \Rightarrow 2: [-1, -1, -1, -1, -1, 4, -1]$$

$$2:3=1 \Rightarrow 6: [-1, -1, -1, 1, -1, 1, -1]$$

$$2:3=2 \Rightarrow 4: [-1, -1, -1, 2, -1, 1, -1]$$

$$2:3=1 \Rightarrow 4: [-1, -1, -1, 1, -1, 2, -1]$$

$$2:3=2 \Rightarrow 2: [-1, -1, -1, 2, -1, 2, -1]$$

$$2:3=1 \Rightarrow 6: [-1, -1, -1, 1, -1, 3, -1]$$

$$2:3=2 \Rightarrow 4: [-1, -1, -1, 2, -1, 3, -1]$$

$$2:2=1 \Rightarrow 6: [-1, -1, 1, -1, -1, 4, -1]$$

$$2:2=2 \Rightarrow 1: [-1, -1, 2, -1, -1, 4, -1]$$

$$2:2=3 \Rightarrow 3: [-1, -1, 3, -1, -1, 4, -1]$$

$$3:6=1 \Rightarrow 1: [-1, -1, -1, 1, -1, 1, 1]$$

$$3:6=2 \Rightarrow 1: [-1, -1, -1, 1, -1, 1, 2]$$

$$3:4=1 \Rightarrow 2: [-1, -1, -1, 2, 1, 1, -1]$$

$$3:4=3 \Rightarrow 1: [-1, -1, -1, 2, 3, 1, -1]$$

$$3:4=2 \Rightarrow 1: [-1, -1, -1, 2, 2, 1, -1]$$

$$3:4=1 \Rightarrow 2: [-1, -1, -1, 1, 1, 2, -1]$$

$$3:4=3 \Rightarrow 1: [-1, -1, -1, 1, 3, 2, -1]$$

$$3:4=2 \Rightarrow 6: [-1, -1, -1, 1, 2, 2, -1]$$

$$3:2=1 \Rightarrow 4: [-1, -1, 1, 2, -1, 2, -1]$$

$$3:2=2 \Rightarrow 1: [-1, -1, 2, 2, -1, 2, -1]$$

$$3:2=3 \Rightarrow 1: [-1, -1, 3, 2, -1, 2, -1]$$

$$3:6=1 \Rightarrow 1: [-1, -1, -1, 1, -1, 3, 1]$$

$$3:6=2 \Rightarrow 2: [-1, -1, -1, 1, -1, 3, 2]$$

$$3:4=1 \Rightarrow 2: [-1, -1, -1, 2, 1, 3, -1]$$

$$3:4=3 \Rightarrow 1: [-1, -1, -1, 2, 3, 3, -1]$$

3:4=2 => 1: [-1, -1, -1, 2, 2, 3, -1]

3:6=1 => 1: [-1, -1, 1, -1, -1, 4, 1]

3:6=2 => 1: [-1, -1, 1, -1, -1, 4, 2]

3:1=1 => 4: [-1, 1, 2, -1, -1, 4, -1]

3:1=2 => 3: [-1, 2, 2, -1, -1, 4, -1]

3:1=3 => 3: [-1, 3, 2, -1, -1, 4, -1]

3:3=1 => 4: [-1, -1, 3, 1, -1, 4, -1]

3:3=2 => 1: [-1, -1, 3, 2, -1, 4, -1]

Generating Decision Tree for Monks3 Test Dataset for depth : 1

0:-1=-1 => 2: [-1, -1, -1, -1, -1, -1, -1]

1:2=1 => 5: [-1, -1, 1, -1, -1, -1, -1]

1:2=2 => 5: [-1, -1, 2, -1, -1, -1, -1]

1:2=3 => 4: [-1, -1, 3, -1, -1, -1, -1]

Generating Decision Tree for Monks3 Test Dataset for depth : 2

0:-1=-1 => 2: [-1, -1, -1, -1, -1, -1, -1]

1:2=1 => 5: [-1, -1, 1, -1, -1, -1, -1]

1:2=2 => 5: [-1, -1, 2, -1, -1, -1, -1]

1:2=3 => 4: [-1, -1, 3, -1, -1, -1, -1]

2:5=1 => 1: [-1, -1, 1, -1, -1, 1, -1]

2:5=2 => 1: [-1, -1, 1, -1, -1, 2, -1]

2:5=3 => 4: [-1, -1, 1, -1, -1, 3, -1]

2:5=4 => 1: [-1, -1, 1, -1, -1, 4, -1]

2:5=1 => 1: [-1, -1, 2, -1, -1, 1, -1]

2:5=2 => 1: [-1, -1, 2, -1, -1, 2, -1]

2:5=3 => 3: [-1, -1, 2, -1, -1, 3, -1]

2:5=4 => 1: [-1, -1, 2, -1, -1, 4, -1]

2:4=1 => 5: [-1, -1, 3, -1, 1, -1, -1]

2:4=3 => 1: [-1, -1, 3, -1, 3, -1, -1]

2:4=2 => 1: [-1, -1, 3, -1, 2, -1, -1]

Generating Decision Tree for Monks3 Test Dataset for depth : 3

0:-1=-1 => 2: [-1, -1, -1, -1, -1, -1, -1]

1:2=1 => 5: [-1, -1, 1, -1, -1, -1, -1]

1:2=2 => 5: [-1, -1, 2, -1, -1, -1, -1]

1:2=3 => 4: [-1, -1, 3, -1, -1, -1, -1]

2:5=1 => 1: [-1, -1, 1, -1, -1, 1, -1]

2:5=2 => 1: [-1, -1, 1, -1, -1, 2, -1]

2:5=3 => 4: [-1, -1, 1, -1, -1, 3, -1]

2:5=4 => 1: [-1, -1, 1, -1, -1, 4, -1]

2:5=1 => 1: [-1, -1, 2, -1, -1, 1, -1]

2:5=2 => 1: [-1, -1, 2, -1, -1, 2, -1]

2:5=3 => 3: [-1, -1, 2, -1, -1, 3, -1]

2:5=4 => 1: [-1, -1, 2, -1, -1, 4, -1]

2:4=1 => 5: [-1, -1, 3, -1, 1, -1, -1]

2:4=3 => 1: [-1, -1, 3, -1, 3, -1, -1]

2:4=2 => 1: [-1, -1, 3, -1, 2, -1, -1]

3:1=1 => 3: [-1, 1, 1, -1, -1, 1, -1]

$$3:1=2 \Rightarrow 3: [-1, 2, 1, -1, -1, 1, -1]$$

$$3:1=3 \Rightarrow 3: [-1, 3, 1, -1, -1, 1, -1]$$

$$3:1=1 \Rightarrow 3: [-1, 1, 1, -1, -1, 2, -1]$$

$$3:1=2 \Rightarrow 3: [-1, 2, 1, -1, -1, 2, -1]$$

$$3:1=3 \Rightarrow 3: [-1, 3, 1, -1, -1, 2, -1]$$

$$3:4=1 \Rightarrow 1: [-1, -1, 1, -1, 1, 3, -1]$$

$$3:4=3 \Rightarrow 1: [-1, -1, 1, -1, 3, 3, -1]$$

$$3:4=2 \Rightarrow 1: [-1, -1, 1, -1, 2, 3, -1]$$

$$3:1=1 \Rightarrow 3: [-1, 1, 1, -1, -1, 4, -1]$$

$$3:1=2 \Rightarrow 3: [-1, 2, 1, -1, -1, 4, -1]$$

$$3:1=3 \Rightarrow 3: [-1, 3, 1, -1, -1, 4, -1]$$

$$3:1=1 \Rightarrow 3: [-1, 1, 2, -1, -1, 1, -1]$$

$$3:1=2 \Rightarrow 3: [-1, 2, 2, -1, -1, 1, -1]$$

$$3:1=3 \Rightarrow 3: [-1, 3, 2, -1, -1, 1, -1]$$

$$3:1=1 \Rightarrow 3: [-1, 1, 2, -1, -1, 2, -1]$$

$$3:1=2 \Rightarrow 4: [-1, 2, 2, -1, -1, 2, -1]$$

$$3:1=3 \Rightarrow 3: [-1, 3, 2, -1, -1, 2, -1]$$

$$3:3=1 \Rightarrow 4: [-1, -1, 2, 1, -1, 3, -1]$$

$$3:3=2 \Rightarrow 1: [-1, -1, 2, 2, -1, 3, -1]$$

$$3:1=1 \Rightarrow 3: [-1, 1, 2, -1, -1, 4, -1]$$

$$3:1=2 \Rightarrow 3: [-1, 2, 2, -1, -1, 4, -1]$$

$$3:1=3 \Rightarrow 3: [-1, 3, 2, -1, -1, 4, -1]$$

$$3:5=1 \Rightarrow 1: [-1, -1, 3, -1, 1, 1, -1]$$

$$3:5=2 \Rightarrow 1: [-1, -1, 3, -1, 1, 2, -1]$$

$$3:5=3 \Rightarrow 1: [-1, -1, 3, -1, 1, 3, -1]$$

$$3:5=4 \Rightarrow 1: [-1, -1, 3, -1, 1, 4, -1]$$

$$3:1=1 \Rightarrow 3: [-1, 1, 3, -1, 3, -1, -1]$$

$$3:1=2 \Rightarrow 3: [-1, 2, 3, -1, 3, -1, -1]$$

$$3:1=3 \Rightarrow 3: [-1, 3, 3, -1, 3, -1, -1]$$



$3:1=1 \Rightarrow 3: [-1, 1, 3, -1, 2, -1, -1]$

$3:1=2 \Rightarrow 3: [-1, 2, 3, -1, 2, -1, -1]$

$3:1=3 \Rightarrow 3: [-1, 3, 3, -1, 2, -1, -1]$