```
# Naive Baye's Algorithm

heading = ['color','legs','height','smelly']
given_data = [['white',3,'short','yes','M'],
              ['green',2,'tall','no','M'],
              ['green',3,'short','yes','M'],
              ['white',3,'short','yes','M'],
              ['green',2,'short','no','H'],
              ['white',2,'tall','no','H'],
              ['white',2,'tall','no','H'],
              ['white',2,'short','yes','H']]

def priorProbability(species):
  count=0
  for i in given_data:
    if i[4] == species:
      count = count+1
  return count/len(given_data)

def conditionalProbability(property, value, species):
  count1,count2 = 0,0
  for i in given_data:
    if i[4] == species:
      count2 = count2 + 1
      if i[heading.index(property)] == value:
        count1 = count1 + 1
  return count1/count2

def instanceProbability(species,instance):
  probability = priorProbability(species)
  for i in range(len(heading)):
    probability = probability * conditionalProbability(heading[i],instance[i],species)
  return probability

# instance =['green',2,'tall','no']
print("Enter information of new instance-\n Color(white/green),legs(2/3),height(short/tall),smelly(yes/no)\n")
instance = []
for i in range(len(heading)):
  newInstance = input(heading[i] + '=')
  if i == 1:
    newInstance = int(newInstance)
  instance.append(newInstance)

print("New Instance =",instance)

probability1 = instanceProbability('M',instance)
probability2 = instanceProbability('H',instance)
print("Probability(M/instance) =",probability1, "\n Probability(H/insatnce) =",probability2)
if probability1>probability2:
  print("New instance belongs to species M.")
else:
  print("New instance belongs to species H.")
```

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Enter information of new instance-
 Color(white/green),legs(2/3),height(short/tall),smelly(yes/no)

color=green
legs=2
height=tall
smelly=no
New Instance = ['green', 2, 'tall', 'no']
Probability(M/instance) = 0.00390625
 Probability(H/insatnce) = 0.046875
New instance belongs to species H.
```