In [1]:
```
import csv
a = []
```

In [14]:
```
with open('C:/BACHELOR OF ENGINEERING(ISE) NOTES/7th sem/ML LAB PROGRAMS/enjoyspo
    for row in csv.reader(csvfile):
        a.append(row)
    print(a)
```

```
[['sky', 'airtemp', 'humidity', 'wind', 'water', 'forcast', 'enjoysport'], ['su
nny', 'warm', 'normal', 'strong', 'warm', 'same', 'yes'], ['sunny', 'warm', 'hi
gh', 'strong', 'warm', 'same', 'yes'], ['rainy', 'cold', 'high', 'strong', 'war
m', 'change', 'no'], ['sunny', 'warm', 'high', 'strong', 'cool', 'change', 'ye
s']]
```

In [15]:
```
print("\nThetotalnumberoftraininginstancesare:",len(a))
```

```
Thetotalnumberoftraininginstancesare: 5
```

In [18]:
```
num_attribute =len(a[0])-1
print("\n The initial hypothesis is : ")
```

```
 The initial hypothesis is :
```

In [20]:
```
hypothesis = ['0']*num_attribute
print(hypothesis)
```

```
['0', '0', '0', '0', '0', '0']
```

In [22]:
```
for i in range(0, len(a)):
    if a[i][num_attribute] == 'yes':
        for j in range(0, num_attribute):
            if hypothesis[j]=='0'or hypothesis[j]==a[i][j]:
                hypothesis[j] =a[i][j]
            else:
                hypothesis[j] = '?'
    print("\n The hypothesis for the training instance {} is:\n" .format(i+1),hyp
```

```
 The hypothesis for the training instance 1 is:
['0', '0', '0', '0', '0', '0']

 The hypothesis for the training instance 2 is:
['sunny', 'warm', 'normal', 'strong', 'warm', 'same']

 The hypothesis for the training instance 3 is:
['sunny', 'warm', '?', 'strong', 'warm', 'same']

 The hypothesis for the training instance 4 is:
['sunny', 'warm', '?', 'strong', 'warm', 'same']

 The hypothesis for the training instance 5 is:
['sunny', 'warm', '?', 'strong', '?', '?']
```

In [24]:
```
print("\n The Maximally specific hypothesis for the training instance is ")
print(hypothesis)
```

```
 The Maximally specific hypothesis for the training instance is
['sunny', 'warm', '?', 'strong', '?', '?']
```