In [5]:

```
import csv

a=[]
```

In [6]:

```
with open('enjoysports.csv','r') as csvfile:
    for row in csv.reader(csvfile):
        a.append(row)
    print(a)

print("\nThe Total Number of Training Instances are: ",len(a))
```

```
[['sunny', 'warm', 'normal', 'strong', 'warm', 'same', 'yes'], ['sunny', 'wa
rm', 'high', 'strong', 'warm', 'same', 'yes'], ['rainy', 'cold', 'high', 'st
rong', 'warm', 'change', 'no'], ['sunny', 'warm', 'high', 'strong', 'cool',
'change', 'yes']]

The Total Number of Training Instances are:  4
```

In [7]:

```
num_attribute = len(a[0])-1

print("\nThe Initial Hypothesis is: ")
hypothesis = ['0']*num_attribute
print(hypothesis)

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("\nThe Hypothesis for the training instance {} is: \n".format(i+1),hypothesis)
```

```
The Initial Hypothesis is:
['0', '0', '0', '0', '0', '0']

The Hypothesis for the training instance 1 is:
 ['sunny', 'warm', 'normal', 'strong', 'warm', 'same']

The Hypothesis for the training instance 2 is:
 ['sunny', 'warm', '?', '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', '?', '?']
```

In [8]:

```
print("\nThe Maximally Specific Hypothesis for the training instance is ")
print(hypothesis)
```

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