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

```

In [3]:
```
with open('ws.csv','r') as f:
    reader = csv.reader(f)
    print("The training data is: \n")
    for i in reader:
        print(i)
        a.append(i)
```

```
The training data is:

['Sunny', 'Warm', 'Normal', 'Strong', 'Warm', 'Same', 'Yes']
['Sunny', 'Warm', 'High', 'Strong', 'Warm', 'Same', 'Yes']
['Rainy', 'Cold', 'High', 'Strong', 'Warm', 'Change', 'No']
['Sunny', 'Warm', 'High', 'Strong', 'Cool', 'Change', 'Yes']
```

In [20]:
```
n  = len(a[0]) - 1

print("The Initial value of hypothesis: ")
S = ["0"] * n
G = ["?"] * n
print("The most specific S0: {0}".format(S))
print("The most general G0: {0}".format(G))

S = a[0][:-1] #first training example
tmp = []

for i,row in enumerate(a):
    if row[-1] == "Yes":
        for j,attrib in enumerate(row[:-1]):
            if attrib != S[j]:
                S[j] = "?"
            for k,g in enumerate(tmp):
                if g[j] != "?" and g[j] != S[j]:
                    del tmp[k]


    else:
        for j,attrib in enumerate(row[:-1]):
            if attrib != S[j] and S[j] != "?":
                G[j] = S[j]
                tmp.append(G)
                G = ["?"] * n
    print("------------------------------------------------------------")
    print("For Training example {0} Specific hypothesis S{0} is {1}".format(i+1,S))
    if(tmp==[]):
        print("For Training example {0} General hypothesis G{0} is {1}".format(i+1,G))
    else:
        print("For Training example {0} General hypothesis G{0} is {1}".format(i+1,tmp))
```

```
The Initial value of hypothesis:
The most specific S0: ['0', '0', '0', '0', '0', '0']
The most general G0: ['?', '?', '?', '?', '?', '?']
------------------------------------------------------------
For Training example 1 Specific hypothesis S1 is ['Sunny', 'Warm', 'Normal', 'Strong', 'Warm', 'Sa
me']
For Training example 1 General hypothesis G1 is ['?', '?', '?', '?', '?', '?']
------------------------------------------------------------
For Training example 2 Specific hypothesis S2 is ['Sunny', 'Warm', '?', 'Strong', 'Warm', 'Same']
For Training example 2 General hypothesis G2 is ['?', '?', '?', '?', '?', '?']
------------------------------------------------------------
For Training example 3 Specific hypothesis S3 is ['Sunny', 'Warm', '?', 'Strong', 'Warm', 'Same']
For Training example 3 General hypothesis G3 is [['Sunny', '?', '?', '?', '?', '?'], ['?', 'Warm',
'?', '?', '?', '?'], ['?', '?', '?', '?', '?', 'Same']]
------------------------------------------------------------
For Training example 4 Specific hypothesis S4 is ['Sunny', 'Warm', '?', 'Strong', '?', '?']
For Training example 4 General hypothesis G4 is [['Sunny', '?', '?', '?', '?', '?'], ['?', 'Warm',
'?', '?', '?', '?']]
```

In [ ]:
```

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