Load the dataset using Pandas package - From github

In [26]:

```
import pandas as pd
df=pd.read_csv('https://raw.githubusercontent.com/anirudhtulasi/FindS-Implementation/master/data11_sports6.csv')
#df=pd.read_csv('https://raw.githubusercontent.com/anirudhtulasi/FindS-Implementation/master/data12_sports4.csv')
dataset = df.values.tolist()
```

In [27]:

```
print(df)
```

```
     Sky AirTemp Humidity    Wind Water Forecast  EnjoySport
0  sunny    warm   normal  strong  warm     same           1
1  sunny    warm     high  strong  warm     same           1
2  rainy    cold     high  strong  warm   change           0
3  sunny    warm     high  strong  cool   change           1
```

Apply the Find-S Algorithm

In [28]:

```
flag = 0
h=[];
for x in range(len(dataset)):
    t=dataset[x]               # Get an instance from the dataset
    if t[-1]==1 and flag==0:   # Initialize h with first +ve sample
      flag=1
      h = dataset[x]
    elif t[-1]==1:             # Update h with remaining +ve samples
      for y in range(len(t)):
        if h[y]!=t[y]:
            h[y]='?'
    print("Training instance {0} the hypothesis is : ".format(x+1),end=' ')
    print(h[0:-1])
```

```
Training instance 1 the hypothesis is :  ['sunny', 'warm', 'normal', 'strong', 'warm', 's
ame']
Training instance 2 the hypothesis is :  ['sunny', 'warm', '?', 'strong', 'warm', 'same']
Training instance 3 the hypothesis is :  ['sunny', 'warm', '?', 'strong', 'warm', 'same']
Training instance 4 the hypothesis is :  ['sunny', 'warm', '?', 'strong', '?', '?']
```

Display the final result

In [29]:

```
print("The maximally specific hypothesis for a given training examples")
print(h[:-1])
```

```
The maximally specific hypothesis for a given training examples
['sunny', 'warm', '?', 'strong', '?', '?']
```