

```
In [20]: import pandas as pd
df=pd.read_csv('EnjoySport.csv')
#df=df.drop(['slno'], axis=1)
column_length=df.shape[1]
df.head()
```

Out[20]:

	sky	airTemp	humidity	wind	water	forecast	enjoySport
0	sunny	warm	normal	strong	warm	same	yes
1	sunny	warm	high	strong	warm	same	yes
2	rainy	cold	high	strong	warm	change	no
3	sunny	warm	high	strong	cool	change	yes

```
In [21]: h=['0'] * (column_length-1)
hp=[]
hn=[]
```

```
In [22]: for training_example in df.values:
    if training_example[-1] != 'no':
        hp.append(list(training_example))
    else:
        hn.append(list(training_example))
```

```
In [23]: for i in range(len(hp)):
    for j in range (column_length-1):
        if (h[j] == '0'):
            h[j]=hp[i][j]
        if (h[j]!=hp[i][j]):
            h[j]='?'
        else:
            h[j]=hp[i][j]
```

```
In [24]: print(f'Positive Hypothesis:\n{hp}')
print(f'Negavtive Hypothesis:\n{hn}')
print(f'Maximally Specific Hypothesis:\n{h}')
```

Positive Hypothesis:

```
[['sunny', 'warm', 'normal', 'strong', 'warm', 'same', 'yes'], ['sunny', 'war
m', 'high', 'strong', 'warm', 'same', 'yes'], ['sunny', 'warm', 'high', 'stro
ng', 'cool', 'change', 'yes']]
```

Negavtive Hypothesis:

```
[['rainy', 'cold', 'high', 'strong', 'warm', 'change', 'no']]
```

Maximally Specific Hypothesis:

```
['sunny', 'warm', '?', 'strong', '?', '?']
```