In [26]:
```
import pandas as pd
import numpy as np
```

In [27]:
```
df=pd.read_csv("C:/Users/rohit/OneDrive/Documents/6th sem/ML/Lab/ML_datasets/Play
df
```

Out[27]:

	Outlook	Temperature	Humidity	Wind	Play Tennis
0	Sunny	Hot	High	Weak	No
1	Sunny	Hot	High	Strong	No
2	Overcast	Hot	High	Weak	Yes
3	Rain	Mild	High	Weak	Yes
4	Rain	Cool	Normal	Weak	Yes
5	Rain	Cool	Normal	Strong	No
6	Overcast	Cool	Normal	Strong	Yes
7	Sunny	Mild	High	Weak	No
8	Sunny	Cool	Normal	Weak	Yes
9	Rain	Mild	Normal	Weak	Yes
10	Sunny	Mild	Normal	Strong	Yes
11	Overcast	Mild	High	Strong	Yes
12	Overcast	Hot	Normal	Weak	Yes
13	Rain	Mild	High	Strong	No

In [30]:
```
data=np.array(df)[:5,:]
data
```

Out[30]:
```
array([['Sunny', 'Hot', 'High', 'Weak', 'No'],
       ['Sunny', 'Hot', 'High', 'Strong', 'No'],
       ['Overcast', 'Hot', 'High', 'Weak', 'Yes'],
       ['Rain', 'Mild', 'High', 'Weak', 'Yes'],
       ['Rain', 'Cool', 'Normal', 'Weak', 'Yes']], dtype=object)
```

In [31]:
```
def find_s_algorithm(data):
    hypothesis = ["#"] * (len(data[0]) - 1)
    for instance in data:
        if instance[-1].lower() == "yes":
            for i in range(len(hypothesis)):
                if hypothesis[i] == "#":
                    hypothesis[i] = instance[i]
                elif hypothesis[i] != instance[i]:
                    hypothesis[i] = "?"
    return hypothesis


specific_hypothesis = find_s_algorithm(data)
print("\nFind-S Specific Hypothesis:\n", specific_hypothesis)
```

```
Find-S Specific Hypothesis:
 ['?', '?', '?', 'Weak']
```

In [ ]:
```

```