Experiment-1:

Aim: Implement and demonstrate the FIND-S algorithm for finding the most specific hypothesis based on a given set of training data samples. Read the training data from a .CSV file.

Program:

```
from google.colab import drive
```

```
[ ]  drive.mount('/content/drive')
```

```
Mounted at /content/drive
```

```
import pandas as pd
import numpy as np

data=pd.read_csv('/content/drive/MyDrive/data.csv')
data
```

	Example	sky	air temp	humidity	wind	water	forecast	sport
0	1	sunny	warm	normal	strong	warm	same	yes
1	2	sunny	warm	high	strong	warm	same	yes
2	3	rainy	cold	high	strong	warm	change	no
3	4	sunny	warm	high	strong	cool	change	yes

```
concepts=np.array(data)[:,:-1]
concepts
```

```
array([[1, 'sunny', 'warm', 'normal', 'strong', 'warm', 'same'],
       [2, 'sunny', 'warm', 'high', 'strong', 'warm', 'same'],
       [3, 'rainy', 'cold', 'high', 'strong', 'warm', 'change'],
       [4, 'sunny', 'warm', 'high', 'strong', 'cool', 'change']],
      dtype=object)
```

```
target = np.array(data)[:,-1]
target
```

```
array(['yes', 'yes', 'no', 'yes'], dtype=object)
```

```
def train(con,tar):
  for i, val in enumerate(tar):
    if val=='yes':
      specific_h=con[i].copy()
      break
  for i, val in enumerate(con):
    if tar[i]=='yes':
```

```
    for x in range(len(specific_h)):
      if val[x]!=specific_h[x]:
      specific_h[x]='?'
      else:
        pass
 return specific_h
print(train(concepts,target))
```

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