1. Implement and demonstrate the **FIND-Salgorithm** for finding the most specific hypothesis based on a given set of training data samples. Read the training data from a .CSV file.

```python
#read training data from csv file
import csv
with open('E://weather.csv', 'r') as f:
    reader = csv.reader(f)
    data = list(reader) #convert data into list of rows
#Training data from CSV file
print("Training data")
for row in data:
    print(row)
attr_len=len(data[0])-1
h = ['0']*attr_len# Initialize h to the most specific hypothesis in H
print("The Hypothesis are")
for row in data:
    if row[-1] == 'Yes': #For each positive training instance x
        j = 0
        for col in row: #For each attribute constraint a, in h
            if col != 'Yes': #replace a, in h by the next more general constraint that is satisfied by x
                if col != h[j] and h[j] == '0':
                    h[j] = col
                elif col != h[j] and h[j] != '0':
                    h[j] = '?'

            j = j + 1
    print(h) #print all Hypothesis
print('Maximally Specific Hypothesis: ', h)#print final hypothesis
```

Output:

```
Training data
['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']

The Hypothesis are
['Sunny', 'Warm', 'Normal', 'Strong', 'Warm', 'Same']
['Sunny', 'Warm', '?', 'Strong', 'Warm', 'Same']
['Sunny', 'Warm', '?', 'Strong', 'Warm', 'Same']
['Sunny', 'Warm', '?', 'Strong', '?', '?']
Maximally Specific Hypothesis:
 ['Sunny', 'Warm', '?', 'Strong', '?', '?']
```