Implementation code for Find-S algorithm

```python
import csv
num_attributes = 5
a = []
print("\n The Given Training Data Set \n")
with open('ws.csv', 'r') as csvfile:
    reader = csv.reader(csvfile)
    for row in reader: a.append (row) print(row)
print("\n The initial value of hypothesis: ")
hypothesis = ['0'] * num_attributes print(hypothesis)
for j in range(0,num_attributes):
hypothesis[j] = a[1][j]
print("\n The a[1] value of hypothesis: ")
print(hypothesis)
print("\n Find S: Finding a Maximally Specific Hypothesis\n")
for i in range(0,len(a)):
    if a[i][num_attributes]=='Yes':
        for j in range(0,num_attributes):
            if a[i][j]!=hypothesis[j]:
                hypothesis[j]='?'
                else :
                    hypothesis[j]= a[i][j]
    print(" For Training instance No:{} the hypothesis is ".format(i),
hypothesis)
print("\n The Maximally Specific Hypothesis for a given Training
Examples :\n")
print(hypothesis)
```

output:

```
☐→
    The Given Training Data Set

    ['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 initial value of hypothesis:
    ['0', '0', '0', '0', '0']

     The a[1] value of hypothesis:
    ['Sunny', 'Warm', 'High', 'Strong', 'Warm']

    Find S: Finding a Maximally Specific Hypothesis

    For Training instance No:0 the hypothesis is  ['Sunny', 'Warm', 'High', 'Strong', 'Warm']
    For Training instance No:1 the hypothesis is  ['Sunny', 'Warm', 'High', 'Strong', 'Warm']
    For Training instance No:2 the hypothesis is  ['Sunny', 'Warm', 'High', 'Strong', 'Warm']
    For Training instance No:3 the hypothesis is  ['Sunny', 'Warm', 'High', 'Strong', 'Warm']

    The Maximally Specific Hypothesis for a given Training Examples :

    ['Sunny', 'Warm', 'High', 'Strong', 'Warm']
```