EXPERIMENT :2

CODE:

```
import pandas as pd
import csv

# Load dataset
data = pd.read_csv('training_data.csv')
concepts = data.iloc[:, :-1].values
target = data.iloc[:, -1].values

# Initialize S and G
num_attributes = concepts.shape[1]
S = ['0'] * num_attributes
G = [['?'] * num_attributes]

print("Initial S:", S)
print("Initial G:", G)

# Candidate Elimination Algorithm
for i in range(len(concepts)):
    if target[i] == 'Yes':  # Positive example
        for j in range(num_attributes):
            if S[j] == '0':
                S[j] = concepts[i][j]
            elif S[j] != concepts[i][j]:
                S[j] = '?'
        G = [g for g in G if all(g[j] == '?' or g[j] == S[j] for j in range(num_attributes))]

    else:  # Negative example
        new_G = []
        for g in G:
            for j in range(num_attributes):
                if g[j] == '?' and S[j] != concepts[i][j]:
                    new_hypothesis = g.copy()
                    new_hypothesis[j] = S[j]
                    new_G.append(new_hypothesis)
        G = new_G

    print(f"\nAfter example {i+1}")
    print("S:", S)
    print("G:", G)

print("\nFinal Specific Hypothesis (S):", S)
print("Final General Hypotheses (G):", G)
```

OUTPUT:

```
---------------------------------------------------------------------------
FileNotFoundError                         Traceback (most recent call last)
/tmp/ipython-input-1574256601.py in <cell line: 0>()      3      4 # Load dataset----
> 5 data = pd.read_csv('training_data.csv')      6 concepts = data.iloc[:, :
-1].values      7 target = data.iloc[:, -1].values
 ____________________________________________________________________________
4 frames
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/usr/local/lib/python3.12/dist-packages/pandas/io/common.py in
get_handle(path_or_buf, mode, encoding, compression, memory_map, is_text,
errors, storage_options)    871        if ioargs.encoding and "b" not in
ioargs.mode:    872            # Encoding--> 873            handle = open(    874
handle,    875                ioargs.mode,
FileNotFoundError: [Errno 2] No such file or directory: 'training_data.csv'
```