

EXPERIMENT 2:

```
# Training data
data = [
    ['Sunny', 'Warm', 'Yes'],
    ['Sunny', 'Cold', 'Yes'],
    ['Rainy', 'Warm', 'No']
]

# Number of attributes
num_attr = len(data[0]) - 1

# Initialize S and G
S = None
G = ['?'] * num_attr

for row in data:
    instance = row[:-1]
    label = row[-1]

    if label == 'Yes': # Positive example
        if S is None:
            S = instance.copy()
        else:
            for i in range(num_attr):
                if S[i] != instance[i]:
                    S[i] = '?'

    # Remove inconsistent hypotheses from G
    G = [g for g in G if all(g[i] == '?' or g[i] == instance[i] for i in range(num_attr))]
```

```
else: # Negative example
    new_G = []
    for g in G:
        for i in range(num_attr):
            if g[i] == '?' and S[i] != '?' and S[i] != instance[i]:
                new_h = g.copy()
                new_h[i] = S[i]
                new_G.append(new_h)
    G = new_G
```

Output

```
S = ['Sunny', '?']
G = ['Sunny', '?']

==== Code Execution Successful ===
```