For a given set of training data examples stored in a .CSV file, implement and demonstrate the Candidate-Elimination algorithm to output a description of the set of all hypotheses consistent with the training examples.

Lab2data.csv

```
sky,air_temp,humidity,wind,water,forecast,enjoy_sport
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
```

program3.py

```python
import csv

file = open('Lab2data.csv')
data = list(csv.reader(file))[1:]

concepts = []
target = []

for i in data:
    # Check if the row has at least one element
    if len(i) >= 1:
        concepts.append(i[:-1])
        target.append(i[-1])
    else:
        print("Invalid data format in CSV file")

specific_h = concepts[0].copy()
general_h = [['?' for i in range(len(specific_h))] for i in
range(len(specific_h))]

for i, h in enumerate(concepts):
    if target[i] == "yes":
        for x in range(len(specific_h)):
            if h[x] != specific_h[x]:
                specific_h[x] = '?'
                general_h[x][x] = '?'
    if target[i] == "no":
        for x in range(len(specific_h)):
            if h[x] != specific_h[x]:
                general_h[x][x] = specific_h[x]
```

```
        else:
            general_h[x][x] = '?'

indices = [i for i, val in enumerate(general_h) if val == ['?', '?', '?', '?',
'?', '?']]

for i in indices:
    general_h.remove(['?', '?', '?', '?', '?', '?'])

print("Final Specific:", specific_h, sep="\n")
print("Final General:", general_h, sep="\n")
```

OUTPUT

Final Specific:

['sunny', 'warm', '?', 'strong', '?', '?']

Final General:

[['sunny', '?', '?', '?', '?', '?'], ['?', 'warm', '?', '?', '?', '?']]