

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.

```
# Importing Important Libraries
```

```
import numpy as np
```

```
import pandas as pd
```

```
data=pd.read_csv('enjoysport.csv')
```

```
print(data)
```

```
concepts = np.array(data.iloc[:,0:-1])
```

```
print(concepts)
```

```
target = np.array(data.iloc[:,-1])
```

```
print(target)
```

```
# Candidate Elimination algorithm
```

```
def learn(concepts, target):
```

```
    specific_h = concepts[0].copy()
```

```
    print("\nInitialization of specific_h and general_h")
```

```
    print("\nSpecific hypothesis: ", specific_h)
```

```
    general_h = [["?" for i in range(len(specific_h))] for i in range(len(specific_h))]
```

```
    print("\nGeneric hypothesis: ",general_h)
```

```
    for i, h in enumerate(concepts):
```

```
        print("\nInstance", i+1, "is ", h)
```

```
        if target[i] == "yes":
```

```
            print("Instance is Positive ")
```

```
            for x in range(len(specific_h)):
```

```
                if h[x] != specific_h[x]:
```

```
                    specific_h[x] = '?'
```

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

```
        if target[i] == "no":
```

```
            print("Instance is Negative ")
```

```
            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] = '?'
```

```
    print("Specific hypothesis after ", i+1, "Instance is ", specific_h)
```

```
    print("Generic hypothesis after ", i+1, "Instance is ", general_h)
```

```
    print("\n")
```

```
indices = [i for i, val in enumerate(general_h) if val == ['?', '?', '?', '?', '?', '?']]
for i in indices:
    general_h.remove(['?', '?', '?', '?', '?', '?'])
return specific_h, general_h
```

```
s_final, g_final = learn(concepts, target)
```

```
print("Final Specific_h: ", s_final, sep="\n")
print("Final General_h: ", g_final, sep="\n")
```