Practical 2

Write a program for Candidate Elimination algorithm for finding the consistent version space based on a given set of training data samples. The training data is read from a .CSV file.

Program:-

import numpy as np

import pandas as pd

df = pd.read\_csv('dataset.csv')

data = df.drop('EnjoySport',axis='columns')

target = df.EnjoySport

def candidate\_elimination(concepts, target):

specific\_h = concepts[0].copy()

print("Initialization Of Specific\_h And General\_h\n")

print(specific\_h)

general\_h = [["?" for i in range(len(specific\_h))] for i in range(len(specific\_h))]

print(general\_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(['?', '?', '?', '?', '?', '?'])

return specific\_h, general\_h

s\_final, g\_final = candidate\_elimination(data, target)

print("\n\nFinal Specific\_h:", s\_final, sep="\n")

print("\n\nFinal General\_h:", g\_final, sep="\n")

OUTPUT

