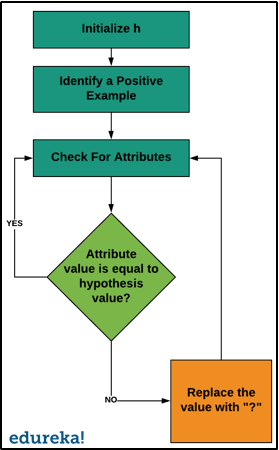
**U19EC046 | ML | LAB 1**

**AIM**

Implement and demonstrate the FIND-S algorithm for finding the most specific hypothesis based on a given set of training data samples. Read the training data from a .CSV file.

**ALGORIHM**



**CODE**

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| --- |
| **import numpy as np**  **import pandas as pd**  **data = pd.read\_csv('./Data.csv')**  **def seriesToList(series):**  **return [value for \_, value in series.items()]**  **def initialHypothesis(df):**  **for i, r in df.iterrows():**  **if r[-1] == 'Yes':**  **return seriesToList(r)**  **def updateHypothisis(h, curr):**  **currList = seriesToList(curr)**  **if currList[-1] == 'Yes':**  **for i in range(len(h)):**  **if h[i] != '?' and h[i] != currList[i]:**  **h[i] = '?'**  **h = initialHypothesis(data)**  **print(f"initial Hypothesis : {h}")**  **for i, r in data.iterrows():**  **updateHypothisis(h, r)**  **print(f"final hypothesis : {h[:-1]}")** |

**OUTPUT**

|  |
| --- |
| initial Hypothesis :  ['Morning', 'Sunny', 'Warm', 'Yes', 'Mild ', 'Strong', 'Yes']  final hypothesis :  ['?', 'Sunny', '?', 'Yes', '?', '?'] |

**CONCLUSION**

In this practical we have implemented Python code for FIND-S algorithm for finding most specific hypothesis from given training samples.