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| A picture containing drawing, stop, room  Description automatically generated | Machine Learning  Practical # 2 | | |
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| **Subject/Course:** | Machine Learning | **Class** | M.Sc. IT – Sem III |
| **Topic** | Concept Learning | **Batch** | Batch 1 |
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| **Topic: Concept Learning / two-way classification / binary classification** | | | |
| 1. **AIM: Implement and demonstrate the find-s algorithm for finding the most specific.**   **DESCRIPTION:**  **1. Training dataset table (input data):**    **2.:** **Write the right hypothesis/function from historical data**  One of the often-used statistical concepts in machine learning is the hypothesis.It is notably employed in supervised machine learning, where an ML model uses a dataset to train a function that most effectively translates input to related outputs.  In this code person enjoys sport if weather is sunny, airtemp is warm, wind is strong  **3. How Does It Work?**  It eliminates attribute that do not affect target column | | | |
| **4: Code and output:**  import csv  num\_attributes = 6  a = []  print("\n The Given Training Dataset \n")  with open('Book1.csv','r') as csvfile:  reader = csv.reader(csvfile)  count = 0  for row in reader:  if count == 0:  print(row)  count+=1;  else:  a.append(row)  print(row)  count+=1  print("\n The initial value of hypothesis: ")  hypothesis = ['0'] \* num\_attributes  print(hypothesis)  for j in range(0,num\_attributes):  hypothesis[j]= a[0][j];  print(hypothesis)  print("\n find S:finding a Maximally specific Hypothesis\n")  for i in range(0,len(a)):  if a[i][num\_attributes]=="Yes":  for j in range(0,num\_attributes):  if a[i][j]!=hypothesis[j]:  hypothesis[j]='?'  else:  hypothesis[j] = a[i][j]  print("for training example no :{0} the hypothesis is".format(i),hypothesis) | | | |
| import csv  a = []  with open('book2.csv', 'r') as csvfile:  next(csvfile)  for row in csv.reader(csvfile):  a.append(row)  for x in a:  print(x)  print("\nThe total number of training instances are : ",len(a))  num\_attribute = len(a[0])-1  print("\nThe initial hypothesis is : ")  hypothesis = ['0']\*num\_attribute  print(hypothesis)  for i in range(0, len(a)):  if a[i][num\_attribute] == 'yes':  print ("\nInstance ", i+1, "is", a[i], " and is Positive Instance")  for j in range(0, num\_attribute):  if hypothesis[j] == '0' or hypothesis[j] == a[i][j]:  hypothesis[j] = a[i][j]  else:  hypothesis[j] = '?'  print("The hypothesis for the training instance", i+1, " is: " , hypothesis, "\n")  if a[i][num\_attribute] == 'no':  print ("\nInstance ", i+1, "is", a[i], " and is Negative Instance Hence Ignored")  print("The hypothesis for the training instance", i+1, " is: " , hypothesis, "\n")  print("\nThe Maximally specific hypothesis for the training instance is ", hypothesis) | | | |