

Session: 2021 – 2025

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2021-CS-33

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**Differentiating the Disease Category**

**Part 2:**

Symptom is totally dependent upon the label because as the label is independent with respect to symptom. The label should identify that if the following patient has x, y, z symptom then specific label will be assigned. The label cannot assign until or unless the required symptom is found.

**Part 5:**

**[0])**

|  |  |
| --- | --- |
| Code | **Time Complexity** |
| label=df.loc[:,"TYPE"] | **1** |
| dfB=df.loc[:, df.columns != 'TYPE'] | **1** |
| point1=np.array(dfS.iloc[0]) | **1** |
| point2=np.array(dfB.iloc | **1** |
| labelIndex=0 | **1** |
| for i in range(1,len(dfS)): | **n** |
| point1=np.array(dfS.iloc[i]) | **n(1)** |
| for j in range(1,len(dfB)): | **n(n)** |
| point2=np.array(dfB.iloc[j]) | **n2(1)** |
| dist=np.linalg.norm(point1 - point2) | **n2(1)** |
| if(dist<finalDistance): | **n2(1)** |
| finalDistance=dist | **n2(1)** |
| labelIndex=j | **n2(1)** |
| print("Patient",i,"has symptom of ",label[labelIndex]) | **n(1)** |

**Total Time is T(n): O(n2)**