Assignment contain 5 Question

1. All Questions compulsory
2. Python programming language
3. Time duration 4-5 Hours

Q1.A sorted array is rotated at some unknown point, find the minimum element in it.

Following solution assumes that all elements are distinct.

Examples:

```
Input: {5, 6, 1, 2, 3, 4}
Output: 1

Input: {1, 2, 3, 4}
Output: 1

Input: {2, 1}
Output: 1
```

Q2.Given two strings **str1** and **str2** and below operations that can performed on str1. Find minimum number of edits (operations) required to convert ‘str1′ into ‘str2′.

Operation :- replace

** replacement cost =1

Examples:

Input :

Str1= Quantom

Str2= Quantum

Output:

1

As Quantom can be changed to Quantum by replacing o with u **Examples 2:**

Input :

Str1= Week Experience

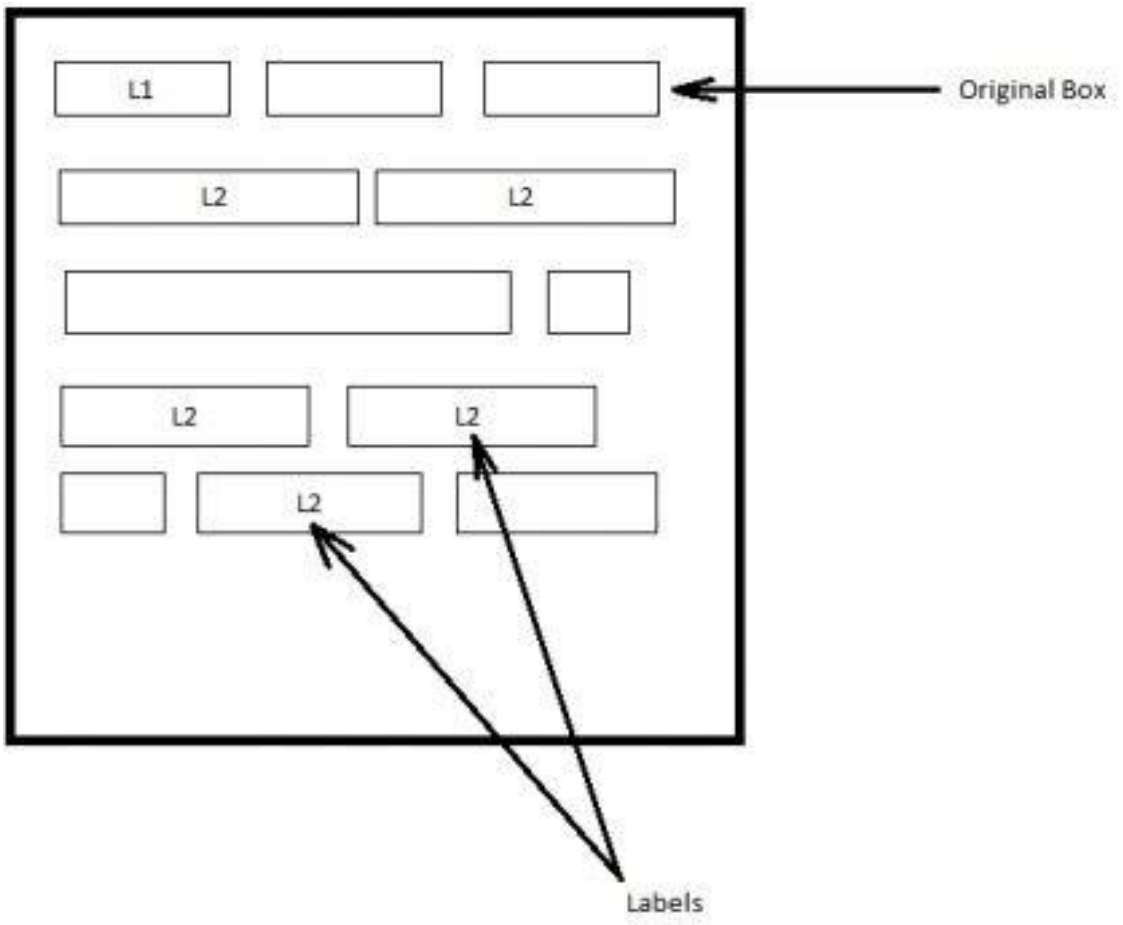
Str2= Work Experience

Output:

2

As ee can be replace by or in 2 operation

Q3.



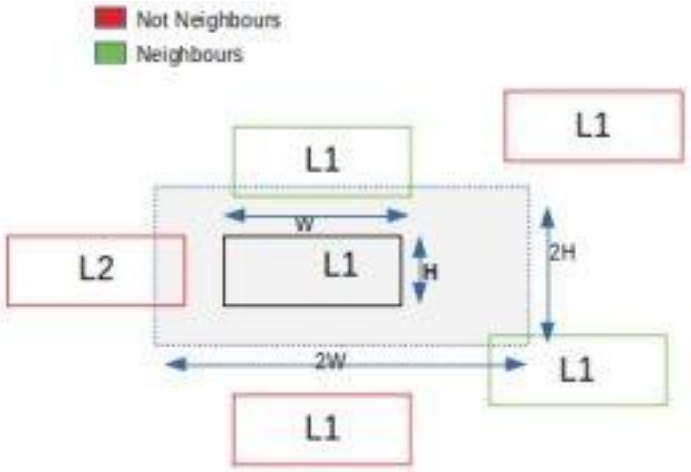
Write a sudo code To explain your approach

Given: An Image with rectangular Boxes and labels associated to those Boxes. Index of every Box and its Coordinates.

Problem Statement: Group together Boxes by labels and Neighboring Criteria and return the Coordinates of the New Boxes formed.

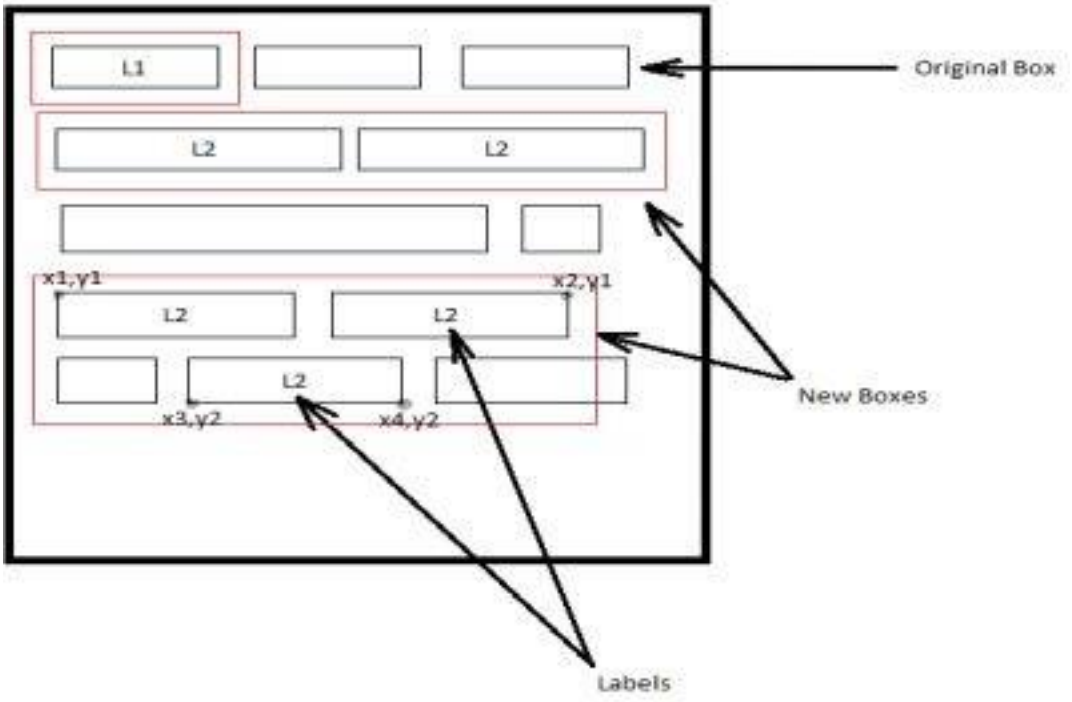
Input: Index, Label and Coordinate of the Box(x0,y0,x1,y1) where (x0,y0) represents top-left corner and (x1,y1) represents bottom-right corner of box with origin at top-left corner of image

Neighboring Criteria: Make a new Box that is 0.5 units away from the boundary of a selected original box for all the sides. Now if the original boxes intersect with this new box, we consider them as neighbors.



If label of the Neighbor Boxes matches within the newly formed Box we group them all together and re-calculate the new Box using the same method that we used in Neighboring Criteria (0.5 units away from extreme points among all the neighbor boxes).

Output:



Q4. Predict the below image with Machine Learning Algorithm and Check can you apply PCA?

i) check the accuracy.

ii) if accuracy level is low then how can we increase the accuracy **.**

Q5. open the first link which is detect lane with live camera and in second link video you have to recognize lane detect with simple line.

i) https://drive.google.com/file/d/129gov_EZtJqy_bQQpQyS5RxGR6HJm6IB/view?usp=sharing

ii) https://drive.google.com/file/d/19b5o4La9nRR50bB-dv_c8a__ZCo7aLCY/view?usp=sharing