**ASSIGNMENT 1**

Project report

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Approach:

We divided the problem statement into 2 parts and dealt with them separately as follows.

Part1: Identifying top left and bottom right corners of the region described by the given term.

* Firstly we identify the number of Boolean variables involved in the K-map which is equal to the length of the *term* parameter.
* We know that 2<term<4 and hence we make 3 separate case for term = 2,3 or 4.
* First we try to find the Y coordinate. For 2 variables it will depend only on the 1st member in term. For 3 or 4 variables it will depend on the 1st and 2nd members.
* Each member in term can take 3 values: 0,1 and None. Thus for the case of 2 variables we have 3 separate subcases while for 3 or 4 variables, we can have 3\*3 = 9 subcases.
* Each subcase corresponds to a specific value of Y for the top left and bottom right corners, which are assigned to the variables X and X2 respectively.
* A similar algorithm is implemented for finding the X coordinates which are assigned to the variables Y and Y2.