**Problem Statement: The Doomed Dice Challenges**

My inference from the problem:

There are two dice namely Die A and Die B with six faces. we need to roll both dices together and our next turn is guided by our obtained sum.

**PART A**

1. We need to print all the possible combinations so for that we need to create a class namely Combos and initialize two variables i and j

Variable i denotes die A and variable j denotes die B. For each of the dice we create for loop for iteration and print the outcomes.

1. To calculate and display the distribution of all possible combinations we need to create a class namely Combos here we need to create an array and name it as frequency. For our understanding we will store all our frequency of sums here. Same as above problem we are declaring two variables and getting the sum using for loop after getting the sum we need to increase the frequency of that obtained sum and increment the value.

Once the loop is ended, we need to print all frequency and sum according.

1. To calculate the probability of all possible sum we need to create a class namely Combos and do the same procedure until we find the frequency once we find our frequency we need to create a variable total and assign value 6\*6 as we roll two dices each dice has 6 faces. Now we need to start our for loop and create a variable probability with datatype double and find the probability and typecast the obtained result to double and print the probability with the sum.

**PART-B**

In this part, a person came and removed all the spots. Our task is to reattach all the spots with some conditions:

* dice A cannot have more than 4 spots on a face
* dice A may have multiple faces with same number of spots
* dice B can have as many spots on a face as necessary (even more than 6)

but, in order to arrange the probability of the obtaining sum must remain the same. For this we use arrays data structure. We create 1D array for each die and a new dice array with 2D. We take a Boolean array to understand the filling and check if all the spots are assigned to both the dice. If not, with the help of conditions we completely assign the spots to both the dice.