**PART-A : -**

1. Logic to the problem statement: -

This code is simulating the probabilities of rolling two six-sided dice and calculating the distribution of the sum of their faces.

Let's break down the logic step by step:

1.Calculating Total Combinations:

* Total combinations = 6 \* 6, here we calculate the total no of combinations when rolling two six-sided dice.

2.Creating the Distribution Matrix:

* distribution = [[0] \* 6 for \_ in range(6)] initializes a 6x6 matrix with zeros. This matrix represents the possible sums of the faces of two six-sided dice.

3.Filling the Distribution Matrix:

* Nested loops iterate over the faces of two dice (i and j) and calculate their sum i+ j. The resulting sum is stored in the corresponding position of the distribution matrix.

4.Calculating Probability of Sums:

* Count occurrences of each possible sum from 2 to 12 by iterating through all combinations and storing their frequencies.

5.Probability Display:

* Calculate and print the probability of obtaining each sum by dividing its frequency by the total number of combinations (36).

3.Explain how did you come up with the solution: -

* Certainly! This code is simulating the rolling of two six-sided dice. Let's break it down step by step:

1.Total Combinations:

* 36 combinations exist when rolling two six-sided dice (6 possibilities for each die).

2. Distribution:

* Simulates all combinations and their sums in a 2D list.

3.Probability of Sums:

* Calculates the probability of each sum from 2 to 12. It counts how many times each sum occurs in all combinations and divides that count by the total combinations.