AI1103: Assignment 1

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Download all python codes from

https://github.com/yuvrajshekhawat1989/Assignment−1/tree/main/Codes

and latex-tikz codes from

https://github.com/yuvrajshekhawat1989/Assignment−1.git

Problem 5.4

A piggy bank contains hundred 50p coins, fifty rupee 1 coins, twenty rupee 2 coins and ten rupee 5 coins. If it is equally likely that one of the coins will fall out when the bank is turned upside down, what is the probability that the coin

1) will be a 50p coin ?
2) will not be a rupee5 coin?

Solution 5.4

(1) The total number of coins in the piggy bank are 100 + 50 + 20 + 10 = 180.
Number of 50p coins are 100.
By definition of probability, the probability of the fallen coin being a 50p coin is equal to

$$\frac{\text{Number of 50p coins}}{\text{Total number of coins}} = \frac{100}{180} = \frac{5}{9}$$

(2)By Similar definition we used in previous part , we can say that probability of fallen coin not being a rupee 5 coin is

$$\frac{\text{Number of non rupee-5 coins}}{\text{Total number of coins}} = \frac{100+50+20}{180} = \frac{17}{18}$$