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1  #Functions Challenge 31: The Python Dice App
2  import random
3
4  def dice_sides():
5      """Ask the user how many sides on their die"""
6      sides = int(input("\nHow many sides would you like on your dice: "))
7      return sides
8
9
10 def dice_number():
11     """Ask the user how many dice to roll"""
12     number = int(input("How many dice would you like to roll: "))
13     return number
14
15
16 def roll_dice(sides, number):
17     """Simulate rolling the dice"""
18     dice = []
19     print("\nYou rolled " + str(number) + " " + str(sides) + " sided dice.")
20     print("\n-----Results are as followed-----")
21     for i in range(number):
22         value = random.randint(1, sides)
23         print("\t" + str(value))
24         dice.append(value)
25     return dice
26
27
28 def sum_dice(dice):
29     """Add all values of dice in a list"""
30     #Using built in sum() function
31     #print("The total value of your roll is " + str(sum(dice)) + ".")
32     #Using our own method.
33     total = 0
34     for die in dice:
35         total += die
36     print("The total value of your roll is " + str(total) + ".")
37
38
39 def roll_again():
40     """Ask the user to roll again"""
41     choice = input("\nWould you like to roll again (y/n): ").lower()
42     if choice != 'y':
43         roll = False
44     else:
45         roll = True
46     return roll
47
48
49 #The main code
50 print("Welcome to the Python Dice App")
51 rolling = True
52 while rolling:
53     #Get the info for the type of dice
54     d_sides = dice_sides()
55     d_number = dice_number()
56
57     #Roll and sum the dice
58     my_dice = roll_dice(d_sides, d_number)
59     sum_dice(my_dice)
60
61     #Roll again
62     rolling = roll_again()
63
64 print("\nThank you for using the Python Dice App.")

```