Securein Assessment

PART -A

CODE

```
die_A = [1, 2, 3, 4, 5, 6]
die_B = [1, 2, 3, 4, 5, 6]

# Input the sum to calculate
sum_to_calculate = int(input("Enter the sum you want to calculate: "))

# Initialize variables for total outcomes and list of combinations
total_outcomes = 0
combinations = []

# Loop through all combinations of die A and die B
for face_A in die_A:
    for face_B in die_B:
        print(face_A, face_B)  # Print the combination
        if face_A + face_B == sum_to_calculate:
            combinations.append((face_A, face_B))  # Add combination to the list
            total_outcomes += 1  # Increment total outcomes

# Print total possible outcomes
print("Total possible outcomes:")
for combination in combinations:
    print(combination)

# Print total probability
print("Total probability of getting the sum {} is: {}/{}".format(sum_to_calculate, total_outcomes,
len(die_A) * len(die_B)))
```

OUTPUT

```
┌─[root@parrot]─[/home/hwkar/sehaj/securein]
└──╼ #python3 ques1.py
Enter the sum you want to calculate: 2
1 1
1 2
1 3
1 4
1 5
1 6
2 1
2 2
2 3
2 4
2 5
2 6
3 1
3 2
3 3
3 4
3 5
3 6
4 1
4 2
4 3
4 4
4 5
4 6
5 1
```

```
5 2
5 3
5 4
5 5
5 6
6 1
6 2
6 3
6 4
6 5
6 6
Total possible outcomes:
(1, 1)
Total probability of getting the sum 2 is: 1/36
```

Explanation

1.Two lists are defined:

die_a= [1, 2, 3, 4, 5, 6]

die_b= [1, 2, 3, 4, 5, 6]

2. The user is prompted to enter the sum they want to calculate:

sum_to_calculat= int(input("Enter the sum that you want to calculate:"))

3.Initialize variables for total outcomes and list of combinations

4. Loop iterate through all possible pairs of numbers from lists die a and die b: and print the Pairs

```
for face_A in die_A:
    for face_B in die_B:
        print(face_A, face_B)
```

5. If the sum matches, append the pair to the list k and increment the counter c:

```
combinations.append((face_A, face_B))
  total_outcomes += 1
```

6. After the loops complete, print the total probability of getting the specified sum:

```
print("Total probability of getting the sum {} is: {}/{}".format(sum_to_calculate,
total_outcomes, len(die_A) * len(die_B)))
```