**2.**

list1 = [1, 2, 3]

list2 = [4, 5, 6]

list3 = [7, 8, 9]

summed\_lists = list(map(lambda x, y, z: x + y + z, list1, list2, list3))

print(summed\_lists)

**3.**

strings = ["apple", "banana", "cherry"]

listified\_strings = list(map(list, strings))

print(listified\_strings)

**4.**

base = 2

n = 5

indices = range(n)

powers = list(map(lambda x: base \*\* x, indices))

print(powers)

**5.**

numbers = [1, 2, 3, 4,5]

squared\_numbers = list(map(lambda x: x \*\* 2, numbers))

print(squared\_numbers)

**6.**

input\_string = "Hello World"

uppercase\_unique = ''.join(sorted(set(map(str.upper, input\_string))))

lowercase\_unique = ''.join(sorted(set(map(str.lower, input\_string))))

print("Uppercase Unique:", uppercase\_unique)

print("Lowercase Unique:", lowercase\_unique)

**7.**

list1 = [1, 2, 3, 4]

list2 = [5, 6, 7, 8]

sum\_lists = list(map(lambda x, y: x + y, list1, list2))

difference\_lists = list(map(lambda x, y: x - y, list1, list2))

print("Sum of Lists:", sum\_lists)

print("Difference of Lists:", difference\_lists)

**8.**

integer\_list = [1, 2, 3, 4, 5]

integer\_tuple = (6, 7, 8, 9, 10)

list\_as\_strings = [str(num) for num in integer\_list]

tuple\_as\_strings = [str(num) for num in integer\_tuple]

combined\_strings = list\_as\_strings + tuple\_as\_strings

print("List as Strings:", list\_as\_strings)

print("Tuple as Strings:", tuple\_as\_strings)

print("Combined List of Strings:", combined\_strings)

**9.**

sample\_tuple = (10, 20, 30, 40, 50)

indices\_to\_take = [0, 2, 4] # Taking elements at index 0, 2, and 4

new\_list = [sample\_tuple[i] for i in indices\_to\_take]

string\_value = "100"

converted\_integer = int(string\_value)

print("New List from Tuple:", new\_list)

print("Converted Integer:", converted\_integer)

**10.**

def fibonacci(n):

fib\_sequence = []

a, b = 0, 1

for \_ in range(n):

fib\_sequence.append(a)

a, b = b, a + b

return fib\_sequence

N = 10

fib\_numbers = fibonacci(N)

squared\_fib\_numbers = list(map(lambda x: x \*\* 2, fib\_numbers))

print("First", N, "Fibonacci Numbers:", fib\_numbers)

print("Squares of the First", N, "Fibonacci Numbers:", squared\_fib\_numbers)

11.

integer\_array = [1, 2, 3, 4, 5]

mapped\_array = list(map(int, integer\_array))

total\_sum = sum(mapped\_array)

print("Sum of elements in the array:", total\_sum)