NAME:NANDANIYA MAYUR

ROLL NO :24BCH132

BRANCH : CHEMICAL DIV:2(E4)

Q-1

names\_list = [("John", "Doe"), ("James", "Smith"), "Emily", "Sophia", ("Alex", "Brown"), "Mia"]

boys\_count = 0

girls\_count = 0

for ele in names\_list:

    if isinstance(ele, tuple):

        boys\_count += 1

    else:

        girls\_count += 1

print(f"Number of boys: {boys\_count}")

print(f"Number of girls: {girls\_count}")

OUTPUT:

Number of boys: 3

Number of girls: 3

Q-2

students\_list = [(1, "TUSHAR", 15), (2, "ANSH", 16), (3, "NAMAN", 14)]

roll\_no\_list = []

name\_list = []

age\_list = []

for student in students\_list:

    roll\_no\_list.append(student[0])

    name\_list.append(student[1])

    age\_list.append(student[2])

print("Roll No. List:", roll\_no\_list)

print("Name List:", name\_list)

print("Age List:", age\_list)

OUTPUT:

Roll No. List: [1, 2, 3]

Name List: ['TUSHAR', 'ANSH', 'NAMAN']

Age List: [15, 16, 14]

Q-3

from datetime import datetime

def convert\_to\_date(date\_tuple):

    day, month, year = date\_tuple

    return datetime(year, month, day)

date1 = (15, 2, 2025)

date2 = (22, 2, 2025)

date1\_obj = convert\_to\_date(date1)

date2\_obj = convert\_to\_date(date2)

date\_difference = date2\_obj - date1\_obj

print(f"Number of days between {date1} and {date2}: {date\_difference.days} days")

OUTPUT:

Number of days between (15, 2, 2025) and (22, 2, 2025): 7 days

Q-4

food\_items = [("Burger", 5), ("Pizza", 8), ("Pasta", 7), ("Salad", 4), ("Sushi", 12)]

sorted\_food\_items = sorted(food\_items, key=lambda x: x[1], reverse=True)

print(sorted\_food\_items)

OUTPUT:

[('Sushi', 12), ('Pizza', 8), ('Pasta', 7), ('Burger', 5), ('Salad', 4)]

Q-5

tuple\_list = [("Apple", 3), (), ("Banana", 2), (), ("Orange", 5)]

cleaned\_list = [t for t in tuple\_list if t]

print(cleaned\_list)

OUTPUT:

[('Apple', 3), ('Banana', 2), ('Orange', 5)]

Q-6

my\_tuple = (1, 2, 3, 4, 5)

temp\_list = list(my\_tuple)

temp\_list[2] = 10

modified\_tuple = tuple(temp\_list)

print(modified\_tuple)

OUTPUT:

(1, 2, 10, 4, 5)

Q-7

my\_tuple = (1, 2, 3, 4, 5)

my\_tuple = my\_tuple[:2] + my\_tuple[3:]

print(my\_tuple)

OUTPUT:

(1, 2, 4, 5)

1. lst = [ (‘X’, ‘Y’, ‘Z’), 40, 50 , 60]

a = lst[0]

print (a)

1. X b) 0 c) (x, y, z) d) (‘x’, ‘y’, ‘z’)

ANS:D