**Python Lab 2 Nikita Halaiko**

**# Task 1**

def greeting():

name = input("Enter your name: ")

surname = input("Enter your surname: ")

balance = float(input("Enter your account balance: "))

print(f"Witaj {name} {surname}. Twój stan konta to {balance:.2f} zł.")

greeting()

**# Task 3**

def modify\_phonebook():

phonebook = {

"John": 938477566,

"Jack": 938377264,

"Jill": 947662781

}

# Remove "Jill" and add "Jake"

if "Jill" in phonebook:

del phonebook["Jill"]

if "Jake" not in phonebook:

phonebook["Jake"] = 938273443

return phonebook

print(modify\_phonebook())

**# Task 5**

def check\_odd(numbers):

return list(map(lambda x: x % 2 != 0, numbers))

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

print(check\_odd(numbers))

**# Task 9**

import random

def set\_operations():

random.seed(0) # Set a fixed seed for the random number generator

set1 = set(random.randint(1, 10) for \_ in range(5))

set2 = set(random.randint(1, 10) for \_ in range(5))

return {

"set1": set1,

"set2": set2,

"union": set1 | set2,

"intersection": set1 & set2,

"difference": set1 - set2,

"symmetric\_difference": set1 ^ set2

}

print(set\_operations())

**# Task 10**

def sort\_by\_second\_element(pairs):

return sorted(pairs, key=lambda x: x[1])

pairs = [('Jan', 'Kowalski'), ('Grzegorz', 'Brzęczyszczykiewicz'), ('Jacek', 'Placek')]

print(sort\_by\_second\_element(pairs))

**# Task 11**

def write\_even\_odd(numbers):

even = []

odd = []

for number in numbers:

if number == 0:

break

elif number % 2 == 0:

even.append(number)

else:

odd.append(number)

return even, odd

numbers = [3, 2, 0, 7, 8]

even\_numbers, odd\_numbers = write\_even\_odd(numbers)

print("Even:", even\_numbers)

print("Odd:", odd\_numbers)

**# Task 12**

def swap\_elements(lst, index1, index2):

lst[index1], lst[index2] = lst[index2], lst[index1]

return lst

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

print(swap\_elements(lst, 1, 3))