Name: Muhammad Ozair

ID: 4356-2023B

Lab Task: 3

Subject: Software

Department: BSSE

Semester: 5thDate: 4 December 2025

Construction and Development

Code:

```python
# 1. Dictionary of 3 students
dic = {
    "Ali": 85,
    "Ahmed": 92,
    "Ubaid": 78,
}
print(dic)


# 2. Add new key-value pair
dic = {
    "name": "Ali",
    "marks": 85
}
dic["grade"] = "A"
print(dic)


# 3. Access value using key
dic = {
    "name": "Ali",
    "marks": 90,
    "grade": "A",
}
print("Marks =", dic["marks"])
```

```python
# 4. Update existing value
dic = {"name": "Ali", "marks": 80}
dic["name"] = "Abdul Ahad"
print(dic)


# 5. Remove key-value pair
dic = {"name": "Hamza", "age": 20}
dic.pop("age")
print(dic)


dic = {"name": "Hamza", "age": 20}
del dic["age"]
print(dic)


# 6. Merge two dictionaries
dic1 = {"name": "Asad", "age": 20}
dic2 = {"ID": "5067", "age": 25}
dic1.update(dic2)
print(dic1)


# 7. Check if number is positive, negative, or zero
num = int(input("Enter a number: "))
if num > 0:
```

```python
    print("Positive")
elif num < 0:
    print("Negative")
else:
    print("Zero")


# 8. Largest of three numbers
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))
c = int(input("Enter third number: "))

if a > b and a > c:
    print(a, "is largest")
elif b > a and b > c:
    print(b, "is largest")
else:
    print(c, "is largest")


# 9. Discount calculation
amount = float(input("Enter amount: "))
if amount >= 500:
    discount = amount * 0.20
elif amount >= 200:
    discount = amount * 0.10
```

```python
else:
    discount = 0
print("Discount =", discount)
print("Final Price =", amount - discount)


# 10. Username and password login
username = input("Enter username: ")
password = input("Enter password: ")
if username == "admin" and password == "1234":
    print("Login Successful")
else:
    print("Login Failed")


# 11. Password strength check
password = input("Enter password: ")
length = len(password)
if length <= 6:
    print("Weak")
elif length <= 10:
    print("Medium")
else:
    print("Strong")


# 12. Speed fine check
```

```python
speed = int(input("Enter speed: "))
if speed <= 80:
    print("No fine")
elif speed <= 100:
    print("Small fine")
else:
    print("Heavy fine")
```

Output:

```
PS C:\Users\Ozair Khan\Desktop\github> & "C:/Users/Ozair Khan/
Users/Ozair Khan/Desktop/github/b.py"
{'khan': 85, 'ozair': 92, 'muhammad': 78}
{'name': 'musa', 'marks': 85, 'grade': 'A'}
Marks = 90
{'name': 'ozair khan', 'marks': 80}
{'name': 'Hamza'}
{'name': 'Hamza'}
{'name': 'Asad', 'age': 25, 'ID': '5067'}
Enter a number: 4
Positive
Enter first number: 5
Enter second number: 3
Enter third number: 7
7 is largest
Enter amount: 80
Discount = 0
Final Price = 80.0
Enter username: ozair
{'name': 'Hamza'}
{'name': 'Hamza'}
{'name': 'Asad', 'age': 25, 'ID': '5067'}
Enter a number: 4
Positive
Enter first number: 5
Enter second number: 3
Enter third number: 7
7 is largest
Enter amount: 80
Discount = 0
Final Price = 80.0
Enter username: ozair
Enter third number: 7
7 is largest
Enter amount: 80
Discount = 0
Final Price = 80.0
Enter username: ozair
```

```
Enter username: ozair
Enter password: 1234
Login Failed
Enter password: khan
Weak
Enter speed: 1234
Weak
Enter speed: 1234
Heavy fine
PS C:\Users\Ozair Khan\Desktop\github> []
```