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Lab Task: 1 And 2

Subject: Software

Department: BSSE

Semester: 5th Date: 4 December 2025

Construction and Development

Code:

```
# 1. Area of a circle
radius = float(input("Enter radius: "))
area = 3.14159 * (radius ** 2)
print("Area of circle =", area)



# 2. Swap two numbers
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))
a, b = b, a
print("After swapping:")
print("a =", a)
print("b =", b)



# 3. Celsius to Fahrenheit
c = float(input("Enter temperature in Celsius: "))
f = (c * 9/5) + 32
print("Fahrenheit =", f)



# 4. Marks and percentage
m1 = int(input("Enter marks of subject 1: "))
m2 = int(input("Enter marks of subject 2: "))
m3 = int(input("Enter marks of subject 3: "))
```

```
m4 = int(input("Enter marks of subject 4: "))
m5 = int(input("Enter marks of subject 5: "))
total = m1 + m2 + m3 + m4 + m5
percentage = (total / 500) * 100
print("Total Marks =", total)
print("Percentage =", percentage)


# 5. Integer to float and float to integer
num_int = int(input("Enter a num: "))
num_float = float(input("Enter a num: "))
print("Integer to float:", float(num_int))
print("Float to integer:", int(num_float))


# 6. List operations
numbers = [5, 10, 15, 20, 25]
print("Sum =", sum(numbers))
print("Max =", max(numbers))
print("Min =", min(numbers))


# 7. Take 5 names from user
names = []
for i in range(5):
    name = input("Enter name: ")
```

```
    names.append(name)
print("Names list:", names)



# 8. Append element to list
list = [1, 2, 3]
list.append(4)
print(list)



# 9. Insert element at specific index
my_list = [10, 20, 30]
my_list.insert(1, 15)
print(my_list)



# 10. Remove element using remove() and pop()
my_list = [5, 10, 15, 20]
my_list2 = [6, 12, 18, 24]
my_list.remove(5)
my_list2.pop(2)
print("Updated list:", my_list)
print("Updated list2:", my_list2)



# 11. Tuple with 10 elements
```

```
my_tuple = (10, 3.14, "hello", 20, 5.5, "world", 30, 7.7, "python", 40)
print(my_tuple)


# 12. Count element in tuple
A = (1, 2, 3, 2, 4, 2, 5)
print("2 appears:", A.count(2), "times")


# 13. Convert tuple to list, modify, back to tuple
tuples = (1, 2, 3)
list = list(tuples)
list.append(4)
tuples = tuple(list)
print(tuples)


# 14. Nested tuple access
tuples = (1, 2, (10, 20, 30), 3)
print(tuples[2][1])  # accessing 20


# 15. Define set of 7 elements
my_set = {10, 3.5, "hello", 20, "python", 7.7, 30}
print(my_set)
```

```
# 16. Add and update set
set = {1, 2, 3}
set.add(4)
set.update([5, 6, 7])
print(set)


# 17. Remove element from set
set = {10, 20, 30}
set.remove(20)
set.discard(30)
print(set)


# 18. Union of sets
a = {1, 2, 3}
b = {3, 4, 5}
print("Union:", a.union(b))


# 19. Intersection of sets
a = {1, 2, 3}
b = {2, 3, 4}
print("Intersection:", a.intersection(b))
```

Output:

```
PS C:\Users\Ozair Khan\Desktop\github> python b.py
Enter radius: 4
Area of circle = 50.26544
Enter first number: 2
Enter second number: 7
After swapping:
a = 7
b = 2
Enter temperature in Celsius: 23
Fahrenheit = 73.4
Enter marks of subject 1: 78
Enter marks of subject 2: 76
Enter marks of subject 3: 75
Enter marks of subject 4: 68
Enter marks of subject 5: 70
Total Marks = 367
Percentage = 73.4
Enter a num: 5
Enter a num: 7
Integer to float: 5.0
Float to integer: 7
Sum = 75
Max = 25
Min = 5
Enter name: ozair
Enter name: khan
Enter name: abdurehman
Enter name: raied
Enter name: mahad
Names list: ['ozair', 'khan', 'abdurehman', 'raied', 'mahad']
[1, 2, 3, 4]
[10, 15, 20, 30]
Updated list: [10, 15, 20]
Updated list2: [6, 12, 24]
(10, 3.14, 'hello', 20, 5.5, 'world', 30, 7.7, 'python', 40)
2 appears: 3 times
Traceback (most recent call last):
```

```
PS C:\Users\Ozair Khan\Desktop\github> python b.py
[10, 15, 20, 30]
Updated list: [10, 15, 20]
Updated list2: [6, 12, 24]
(10, 3.14, 'hello', 20, 5.5, 'world', 30, 7.7, 'python', 40)
2 appears: 3 times
(1, 2, 3, 4)
20
{'python', 3.5, 20, 7.7, 'hello', 10, 30}
{1, 2, 3, 4, 5, 6, 7}
{10}
Union: {1, 2, 3, 4, 5}
Intersection: {2, 3}
PS C:\Users\Ozair Khan\Desktop\github>
```