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COMP 20039

SLP

LAB EXERCISE WEEK 2(Functions)

Simple program without function

```
# Step 1: Take input for three numbers from the user
# We use the input() function to get input from the user, which always returns a string.
# So, we wrap it with the float() function to convert the string to a number.
num1 = float(input("Enter the first number: "))
num2 = float(input("Enter the second number: "))
num3 = float(input("Enter the third number: "))

# Step 2: Calculate the sum of the three numbers
# We simply add num1, num2, and num3 to get their total sum.
total_sum = num1 + num2 + num3

# Step 3: Calculate the average
# The average of three numbers is the total sum divided by 3.
average = total_sum / 3

# Step 4: Display the average to the user
# We use an f-string to format the result in a readable way.
# The :.2f inside the f-string is used to round the result to two decimal places.
print(f"The average of {num1}, {num2}, and {num3} is: {average:.2f}")
```

Sample program with function

```
def get_input(prompt):
    return float(input(prompt))

def calculate_sum(num1, num2, num3):
    return num1 + num2 + num3

def calculate_average(total_sum, count=3):
    return total_sum / count

def display_average(num1, num2, num3, average):
    print(f"The average of {num1}, {num2}, and {num3} is: {average:.2f}")

def main():
    num1 = get_input("Enter the first number: ")
    num2 = get_input("Enter the second number: ")
    num3 = get_input("Enter the third number: ")
    total_sum = calculate_sum(num1, num2, num3)
    average = calculate_average(total_sum)
    display_average(num1, num2, num3, average)

if __name__ == "__main__":
    main()
```

Lab Exercises.

Exercise 1: Area of a Circle

Create a Python function to calculate the area of a circle given its radius.

Exercise 2: Fahrenheit to Celsius Converter

Create a Python function to convert a temperature from Fahrenheit to Celsius.

Exercise 3: Simple Interest Calculator

Create a Python function to calculate simple interest given principal, rate, and time.