LAB ACTIVITIES

LAB TASK 1 : Output function and Creating Variables

Question:
Write a Python program to display the following output on the screen.

Instructions:
Use the print() command to display each item clearly. Also, create variables where required and display their values.

Output Requirements:

- Display the message: Hello everyone
- Display the message: All the best for the future!!!!
- Display the number: 43589
- Create a variable named AGE and assign it a value, then display it
- Create a variable named SCHOOL and assign it a value, then display it

Expected Output:

```
Hello everyone
All the best for the future!!!!
43589
AGE: 12
SCHOOL: ABC School
```

Python Code:

```python
print("Hello everyone")
print("All the best for the future!!!!")
print(43589)

AGE = 12
SCHOOL = "ABC School"

print("AGE:", AGE)
print("SCHOOL:", SCHOOL)
```

Solution screenshot

LAB TASK 2: Changing Variable Values

Question:
Write a Python program to show how a variable's value can be changed by adding to its previous value.

Instructions:
Use a variable to represent a game level and demonstrate how it increases step by step.

Task Requirements:

- Create a variable named LEVEL and assign it an initial value (e.g., 1)
- Display the current value of LEVEL using the print() function
- Update the value of LEVEL by adding 1 to its current value (LEVEL = LEVEL + 1)
- Display the updated value of LEVEL

Solution screenshot

Python Code:

```python
LEVEL = 1
print("Current Level:", LEVEL)

LEVEL = LEVEL + 1
print("Updated Level:", LEVEL)
```

Expected Output:

```
Current Level: 1
Updated Level: 2
```

LAB TASK 3: Input function

Question:
Write a Python program to take input from the user for three different types of information and display them.

Instructions:

- Create three variables to store user input:
    1. **name** – a string representing the user's name
    2. **age** – an integer representing the user's age
    3. **height** – a float representing the user's height in meters or centimetres
- Use the input() function to take input for each variable
- Convert the input for age to an integer and height to a float
- Display the values of all three variables using the print() function

Solution screenshot

```python
# Taking input from the user

name = input("Enter your name: ")
age = int(input("Enter your age: "))
height = float(input("Enter your height: "))

# Displaying values

print("Name:", name)
print("Age:", age)
print("Height:", height)
```

Expected Output (Example):

```
Enter your name: Ali
Enter your age: 13
Enter your height: 1.55
Name: Ali
Age: 13
Height: 1.55
```

LAB TASK 4: Type Casting

Question:
Write a Python program to perform basic arithmetic operations on two numbers entered by the user and demonstrate type casting.

Instructions:

- Take two numbers as input from the user using the input() function.
- Convert the input values from strings to integers using int() (this is called type casting).
- Perform the following arithmetic operations:
    1. Addition (+)
    2. Subtraction (-)
    3. Multiplication (*)
    4. Division (/)
- Display the result of each operation using the print() function.

Solution screenshot

```python
num1 = input("Enter first number: ")
num2 = input("Enter second number: ")

# Converting input strings to integers
num1 = int(num1)
num2 = int(num2)

# Performing arithmetic operations
addition = num1 + num2
subtraction = num1 - num2
multiplication = num1 * num2
division = num1 / num2  # result will be a float

# Displaying results
print("Addition:", addition)
print("Subtraction:", subtraction)
print("Multiplication:", multiplication)
print("Division:", division)
```

Expected Output (Example):

```
Enter first number: 8
Enter second number: 4
Addition: 12
Subtraction: 4
Multiplication: 32
Division: 2.0
```