Python assignment -1

#1. Declare and print

name = "yuvraj"

age = 17

course = "schooling

"

print(name, age, course)

# 2. Swap two numbers

a = 4

b = 9

a, b = b, a # Swap without third variable

print(a, b)

# 3. Arithmetic operations

num1 = float(input("Enter first number: "))

num2 = float(input("Enter second number: "))

print("Sum:", num1 + num2)

print("Difference:", num1 - num2)

print("Product:", num1 \* num2)

print("Quotient:", num1 / num2)

print("Remainder:", num1 % num2)

# 4. Percentage calculation

marks = []

for i in range(5):

marks.append(float(input(f"Enter marks for subject {i+1}: ")))

total = sum(marks)

percentage = (total / 500) \* 100

print("Total Marks:", total)

print("Percentage:", percentage)

# 5. Use compound assignment operators

x = 10

x += 5

print("After += 5:", x)

x \*= 2

print("After \*= 2:", x)

x -= 4

print("After -= 4:", x)

x /= 2

print("After /= 2:", x)

# 6. Relational operator check

num1 = int(input("Enter first number: "))

num2 = int(input("Enter second number: "))

print("Are they equal?", num1 == num2)

print("Is the first number greater?", num1 > num2)

print("Is the second number greater?", num2 > num1)

# 7. Logical operator challenge

is\_raining = True

have\_umbrella = False

if is\_raining and have\_umbrella:

print("You can go outside.")

elif is\_raining or have\_umbrella:

print("Check if you have an umbrella or if it's raining.")

else:

print("You can go outside.")

# 8. Identity operator

list1 = [1, 2, 3]

list2 = [1, 2, 3]

print("Using == :", list1 == list2) # Compare values

print("Using is :", list1 is list2) # Compare memory locations

# 9. Bitwise operation

num1 = 5 # 0101 in binary

num2 = 3 # 0011 in binary

print("Bitwise AND:", num1 & num2)

print("Bitwise OR:", num1 | num2)

print("Bitwise XOR:", num1 ^ num2)

# 10. Variable types and typecasting

integer\_value = int(input("Enter an integer: "))

float\_value = float(input("Enter a float: "))

print("Type of integer:", type(integer\_value))

print("Type of float:", type(float\_value))

print("Sum as integer:", int(integer\_value + float\_value))