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#Question 1:

def calculate\_tax(income):

if income <= 150000:

tax = 0

elif income <= 300000:

tax = (income - 150000) \* 0.10

elif income <= 500000:

tax = (150000 \* 0.10) + ((income - 300000) \* 0.20)

else:

tax = (150000 \* 0.10) + (200000 \* 0.20) + ((income - 500000) \* 0.30)

return tax

income = float(input("Enter your income: "))

tax = calculate\_tax(income)

print(f"Tax payable: {tax}")

#Sample output:

Enter your income: 165000

Tax payable: 1500.0

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#Question 2:

from datetime import datetime

def calculate\_age(birthdate, current\_date):

birthdate = datetime.strptime(birthdate, "%d/%m/%Y")

current\_date = datetime.strptime(current\_date, "%d/%m/%Y")

age = current\_date.year - birthdate.year - ((current\_date.month, current\_date.day) < (birthdate.month, birthdate.day))

return age

current\_date = input("Enter the current date (dd/mm/yyyy): ")

birthdate = input("Enter your date of birth (dd/mm/yyyy): ")

age = calculate\_age(birthdate, current\_date)

print(f"Your age is {age} years.")

#Sample output:

Enter the current date (dd/mm/yyyy): 05/10/2023

Enter your date of birth (dd/mm/yyyy): 27/02/2004

Your age is 19 years.

#Question 3:

number = input("Enter a 5-digit number: ")

if len(number) != 5 or not number.isdigit():

print("Please enter a valid 5-digit number.")

else:

for i in range(len(number)):

formatted\_number = number[i:]

print(f"{formatted\_number:>{5-i}}")

#Sample output:

Enter a 5-digit number:12345

12345 1

2345 12

345 123

45 1234

5 12345

#Question 4:

# Get employee information

employee\_name = input("Enter the employee's name: ")

hourly\_wage = float(input("Enter the hourly wage: "))

regular\_hours = float(input("Enter the total regular hours worked: "))

overtime\_hours = float(input("Enter the total overtime hours worked: "))

# Calculate total weekly pay

regular\_pay = hourly\_wage \* regular\_hours

overtime\_pay = hourly\_wage \* 1.5 \* overtime\_hours

total\_weekly\_pay = regular\_pay + overtime\_pay

# Print the employee's total weekly pay

print(f"{employee\_name}'s total weekly pay is: ${total\_weekly\_pay:.2f}")

#Sample output:

Enter the employee's name: Jazim

Enter the hourly wage: 4500

Enter the total regular hours worked: 6

Enter the total overtime hours worked: 2

Jazim's total weekly pay is: $40500.00

#Question 5:

# Function to calculate GCD using the Euclidean algorithm

def gcd(a, b):

while b:

a, b = b, a % b

return a

# Input two numbers

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

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

# Calculate GCD

result = gcd(num1, num2)

# Display the GCD

print(f"The GCD of {num1} and {num2} is {result}")

#Sample output:

Enter the first number: 64

Enter the second number: 23

The GCD of 64 and 23 is 1