**Module 5: Critical Thinking**

Amal Pulikkiyil

Colorado State University Global

CSC500: Principles of Programming

Isaac Gang

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**Part 1 Pseudocode**

1. Ask user to enter the charge for food
   1. Store food\_charge
2. Calculate the tip amount with a tip of 18%
   1. Tip\_amount = food\_charge\*.18
3. Calculate the sales tax amount with a sales tax of 7%
   1. Sales\_tax\_amount = food\_charge \* .07
4. Add sales tax amount, food charge, and tip amount to calculate total price
   1. Total\_price = food\_charge + tip\_amount + sales\_Tax\_amount
5. Print food charge to two decimal places
   1. Food Charge: ${food\_charge: .2f}
6. Print tip to two decimal places
   1. Tip: ${tip\_amount: .2f}
7. Print sales tax to two decimal places
   1. Sales Tax: ${sales\_tax\_amount: .2f}
8. Print total price to two decimal places
   1. Total Price: ${total\_price: .2f}

**Part 2 Pseudocode**

1. Ask user to enter current hour
   1. Store current hour
2. Ask user to enter number of hours to wait until alarm goes off
   1. Store the number of hours to wait
3. Calculate the hour of the time when the alarm goes off
   1. Current\_hour + wait\_hours
   2. Modulo 24 above sum to make sure it’s a 24 hour clock
      1. (current\_hour + wait\_hours) % 24
   3. Store alarm\_hour
4. Print the time the alarm will go off at
   1. Alarm will go off at {alarm\_hour}:00

**All code**

# -\*- coding: utf-8 -\*-

"""

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@author: pulik

"""

#%%

# Part 1: Meal Purchase Calculator

# Ask user to enter charge for food

food\_charge = float(input("Enter the charge for the food:\n$"))

# Calculate the tip (18%)

tip\_percent = .18

tip\_amount = food\_charge \* tip\_percent

# Calculate sales tax (7%)

sales\_tax\_percent = .07

sales\_tax\_amount = food\_charge \* sales\_tax\_percent

# Calculate total price

total\_price = food\_charge + tip\_amount + sales\_tax\_amount

# Diplay each amount and total price

print(f'Food Charge: ${food\_charge: .2f}')

print(f'Tip (18%): ${tip\_amount: .2f}')

print(f'Sales Tax (7%): ${sales\_tax\_amount: .2f}')

print(f'Total Price: ${total\_price: .2f}')

#%%

# Part 2: 24-hour Clock Calculator

# Ask user to enter current hour

current\_hour = int(input("Enter the current hour:\n"))

# Ask user to enter number of hours to wait for alarm

wait\_hours = int(input("Enter the number of horus to wait for the alarm:\n"))

# Calculate hour on a 24-hour clock when alarm goes off

alarm\_hour = (current\_hour + wait\_hours) % 24

# Output time on 24-hour clock when alarm goes off

print(f'The alarm will go off at {alarm\_hour}:00.')

A screenshot of a computer program

Description automatically generated

**Result**

A computer screen shot of a computer program

Description automatically generated

**Git Repository**

<https://github.com/amalicious190810/CSC500-Module3-CT>

A screenshot of a computer

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A screen shot of a computer

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