Module 03: Critical Thinking Assignment: Creating Python Programs

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CSC500-1: Principles of Programming

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Module 03: Critical Thinking Assignment: Creating Python Programs

Part I: Python Pseudocode

```
# Define the function to calculate the total meal cost
Define function total_meals_purchased:

        # Ask the user for the base cost of the meal
        PROMPT the user to enter the initial cost of the meal
        STORE the input data as Meal_cost (convert into decimal numbers)

        # Calculate the tip and tax
        CALCULATE the tip by setting tip = Meal_cost * 0.18
        CALCULATE the tax by setting tax = Meal_cost * 0.07
        CALCULATE total_Meal_cost as Meal_cost + tip + tax

        # DISPLAY a meal receipt:
        Show Meal_cost
        Show tip amount
        Show tax amount
        Show total_Meal_cost

END the FUNCTION

CALL total_meals_purchased
DISPLAY a line separator ()
```

Part II: Python Pseudocode

```
# define the FUNCTION
FUNCTION AlamTime_Calculation
        #Ask the user to enter the current time in military time
        PROMPT the user to input the current time in 24-hour format (0hr – 23hr)
        STORE this value as current_time

        # Ask the user how many hours to wait for the alarm
        PROMPT the user to enter how many hours to wait for the alarm
        STORE this value as hours_to_wait

        # Calculate the alarm time
        CALCULATE alarm time as (current_time + hours_to_wait ) divide by 24(hours)

        #output the result
        DISPLAY the alarm time in 24-hour format

End the FUNCTION

CALL AlarmTime_Calculation
```

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Source Code

```
# Part 01
#  defined function
def total_meals_purchased():
    # collect user input
    Meal_cost= float(input("Please enter the meal cost here:$"))

    #add the tip (18%) and tax(7%)
    tip = Meal_cost * 0.18
    tax = Meal_cost * 0.07
    total_Meal_cost = Meal_cost + tip + tax

    # Shows the output for the input, tip, tax and total meal cost
    print("\t ---- Meal Receipt ---")
    print(f"Meal Charge .....$ {Meal_cost:.2f}")
    print(f"+ 18% manual gratuity..... ${tip:.2f}")
    print(f"+ 7% sales tax.....$ {tax:.2f}")
    print(f"\nYour Total Meal Cost is...$ {total_Meal_cost:.2f}")

#run the functon
total_meals_purchased()

print("\n ------------------------------------------------------------------------")

#Part II:

def AlarmTime_Calculation():
    # ask the user for the current time in 24hr format
    current_time = int(input("Enter the current Military Time (0 hr to 23 hr): "))

    # Ask the user to input the amount of hours to wait for the alam
    hours_to_wait = int(input("Now, enter how many hours you want to wait: "))

    #process the calculations for the alarm to ring /24hrs
    alarm = (current_time+hours_to_wait) % 24

    #print out the results
    print(f"Your alarm will go off at {alarm}:00 on a 24 hr clock.")


#run the function
AlarmTime_Calculation()
```

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Screen Shot

GIT Hub Repository

https://github.com/saraKhon/CTA003_CSC500-01_SaraKhon-.git