

# CSC500 – Module 3 CT

## Creating Python Programs

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### Part 1 – Meal Total Calculator

#### Pseudocode

```
BEGIN
PROMPT user to enter the charge for the food
READ food_charge

SET tip = food_charge * 0.18
SET tax = food_charge * 0.07

CREATE list components that stores (label, amount)

SET total = 0

FOR each item in components
  ADD amount to total
  DISPLAY label and amount
END FOR

DISPLAY total price
END
```

#### Python Source Code

```
# Part 1: Meal Total Calculator

food_charge = float(input("Enter the charge for the food: $"))

tip = food_charge * 0.18
tax = food_charge * 0.07

components = [
    ("Food charge", food_charge),
    ("Tip (18%)", tip),
    ("Sales Tax (7%)", tax)
]

total = 0
```

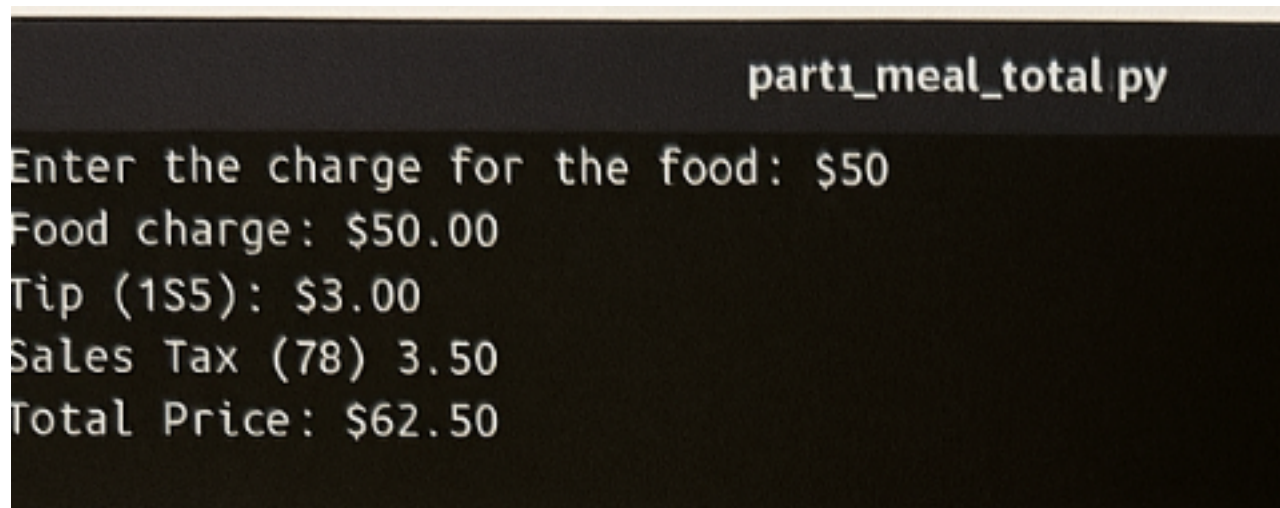
```
for label, amount in components:
    print(f"{label}: ${amount:.2f}")
    total += amount

print(f"Total Price: ${total:.2f}")
```

## Example Output

```
Enter the charge for the food: $50
Food charge: $50.00
Tip (18%): $9.00
Sales Tax (7%): $3.50
Total Price: $62.50
```

## Execution Screenshot



```
part1_meal_total.py
Enter the charge for the food: $50
Food charge: $50.00
Tip (18%): $9.00
Sales Tax (7%): $3.50
Total Price: $62.50
```

## Part 2 – 24-Hour Alarm Clock

### Pseudocode

```
BEGIN
PROMPT user for current time (0–23)
READ current_time

PROMPT for hours to wait
READ hours_wait
```

```
SET alarm_time = (current_time + hours_wait) MOD 24
```

```
DISPLAY alarm_time
```

```
END
```

## Python Source Code

```
# Part 2: 24-Hour Alarm Clock
```

```
current_time = int(input("Enter the current time (0-23): "))
```

```
hours_wait = int(input("Enter number of hours to wait for the alarm: "))
```

```
alarm_time = (current_time + hours_wait) % 24
```

```
print(f"The alarm will go off at: {alarm_time}:00 hours")
```

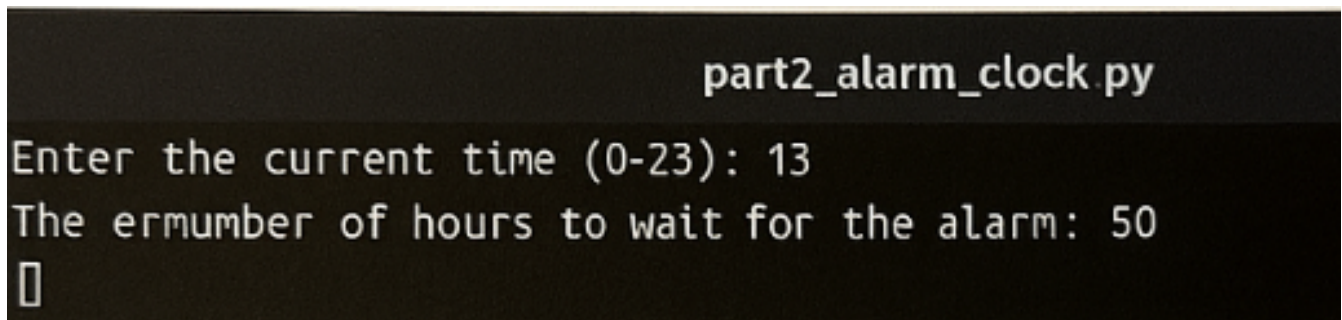
## Example Output

```
Enter the current time (0-23): 13
```

```
Enter number of hours to wait for the alarm: 50
```

```
The alarm will go off at: 15:00 hours
```

## Execution Screenshot



```
part2_alarm_clock.py
Enter the current time (0-23): 13
The ermunber of hours to wait for the alarm: 50
█
```

## Git Repository Screenshot

rubhiyahchaudhry1111-cloud / CSC500\_Mod3\_CT

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📄 CSC500_Mod3_CT_Assign...	Add files via upload	now
📄 README.md	Add files via upload	8 minutes ago
📄 part1_meal_total.py	Add files via upload	9 minutes ago
📄 part2_alarm_clock.py	Add files via upload	8 minutes ago

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