Chapter 3: Payroll Advice with Overtime

Contents

Time required: 90 minutes

- Comment each line of code as shown in the tutorials and other code examples.
- Follow all directions carefully and accurately.
- Think of the direction as minimum requirements.

Pseudocode

1. Write pseudocode or TODO for the exercise.
2. Submit with the assignment.

Requirements

1. Create a Python program called **payroll_with_overtime.py**.
2. Calculate pay by multiplying hours and rate.
3. If the hours are over 40, calculate the overtime pay at 1.5 times the hourly rate.
4. Use CONSTANTS for all numbers we know before the program executes. No magic numbers.
5. Format the output to currency using f-Strings.

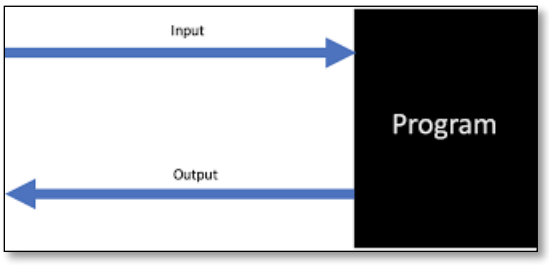
```
print(f"Your total pay is: ${pay:,.2f}")
                            $1,375.2f
```

Step 1: TODO Pseudocode

Build your problem solving TODO's one step at a time.

There may be mistakes in this pseudocode. The idea is to use this process to develop your own correct solution. Developing any program will involve some mistakes and dead ends.

All programs have 3 main parts. Start by dividing your pseudocode into three parts.




```
# ----------------------- INPUT -------------------------#

# ----------------------- CALCULATE ---------------------#

# ----------------------- DISPLAY -----------------------#
```

Step 2: TODO Pseudocode

This step is as if you were doing these calculations on a piece of paper. This generic pseudocode could be used in any programming language to create a program. It is not language specific.

```
# ---------------------- INPUT -------------------------#
# TODO: Get hours worked from user

# TODO: Get hourly rate from user

# ---------------------- CALCULATE ---------------------#
# TODO: Calculate regular pay
# if hours worked <= 40
# total pay = hours worked * hourly rate

# TODO: Calculate overtime pay
# else
# overtime hours = hours worked - 40
# overtime pay = overtime hours * (1.5 * hourly rate)
# regular pay = hourly rate * 40
# total pay = overtime pay + regular pay

# ---------------------- DISPLAY -----------------------#
# TODO: Display overtime pay
# TODO: Display total pay
```

Step 3: TODO Pseudocode

This step takes the pseudocode and starts converting it into Python code.

```
# Any hours over 40, are multiplied by 1.5
# Declare constants, this is information we know before the program starts
WORKWEEK = 40
OVERTIME_PAY = 1.5

# ---------------------- INPUT -------------------------#
# TODO: Get hours worked from user
hours_worked = input("Please enter hours worked: ")
# Cast hours to float
hours_worked = float(hours_worked)

# TODO: Get hourly rate from user
hourly_rate = float(input("Enter hourly rate: "))

# ---------------------- CALCULATE ---------------------#
# TODO: Calculate regular pay
# if regular_hours <= WORKWEEK, they are paid regular pay
# regular_pay = hourly_pay times regular hourly rate

# TODO: Calculate overtime pay
# else
# overtime hours = hours worked - 40
# overtime pay = overtime hours * (1.5 * hourly rate)
# regular pay = hourly rate * 40
# total pay = overtime pay + regular pay

# ---------------------- DISPLAY -----------------------#
# TODO: Display overtime pay
# TODO: Display total pay
```

Example run:

```
Enter your hours: 40
Enter your rate: 10
Your regular pay is: $400.00
Your overtime pay is: $0.00
Your total pay is: $400.00
```

```
Enter your hours: 50
Enter your rate: 25
Your regular pay is: $1,000.00
Your overtime pay is: $375.00
Your total pay is: $1,375.00
```

Assignment Submission

1. Attach the pseudocode.
2. Attach the program files.
3. Attach screenshots showing the successful operation of the program.
4. Submit in Blackboard.