1. Calculate Total with Discount for Quantity and Price

Input:

- The user is prompted to enter the quantity of items.
- The user is prompted to enter the price per item.
- The user is asked if they want to continue entering more items (Yes/No).

Process:

- The program calculates the total by multiplying the quantity by the price.
- If the total exceeds $10,000, a 10% discount is applied to the total.
- The program sums the extended price for all items entered by the user.

Output:

- The program displays the quantity, price per item, and total (after discount, if applicable).
- The program displays the total extended price for all the items entered.

2. Calculate Batting Average for a Player

Input:

- The user is prompted to enter the player's last name.
- The user is prompted to enter the number of hits the player made.
- The user is prompted to enter the number of at-bats the player had.
- The user is asked if they want to continue entering information for more players (Yes/No).

Process:

- The program calculates the batting average by dividing the number of hits by the number of at-bats.
- If the number of at-bats is zero, the program avoids division by zero by returning a batting average of 0.
- The program counts the number of players entered.

Output:

- The program displays the player's last name and the calculated batting average.
- The program displays the total number of players entered.

3. Calculate Miles per Gallon (MPG) and Gas Cost

Input:

- The user is prompted to enter the destination city.
- The user is prompted to enter the miles traveled.
- The user is prompted to enter the number of gallons of gas used.
- The user is asked if they want to continue entering information for more trips (Yes/No).

Process:

- The program calculates the miles per gallon (MPG) by dividing miles traveled by gallons used.
- The program calculates the gas cost by multiplying the gallons used by the price of gas ($3.00 per gallon).
- The program counts the number of trips made and keeps a running total of the miles traveled and the total gas cost.

Output:

- The program displays the destination city, miles traveled, MPG, and gas cost for each trip.
- At the end, the program displays the total number of trips, the total miles traveled, and the total gas cost.

4. Calculate Pay Rate and Gross Pay for Employee

Input:

- The user is prompted to enter the employee's last name.
- The user is prompted to enter the employee's job code (L, A, or J).
- The user is prompted to enter the number of hours worked by the employee.
- The user is asked if they want to continue entering information for more employees (Yes/No).

Process:

- The program determines the pay rate based on the job code:
    - L = $25/hr
    - A = $30/hr
    - J = $50/hr
- If the employee worked more than 40 hours, the program calculates overtime pay (time and a half for hours worked over 40).
- The program calculates the total gross pay by multiplying the hours worked by the hourly rate (with overtime if applicable).

Output:

- The program displays the employee's last name, hours worked, pay rate, and gross pay.
- At the end, the program displays the total gross pay for all employees.

5. Calculate Tuition for a Student Based on District Code

Input:

- The user is prompted to enter the student's last name.
- The user is prompted to enter the number of credit hours the student is taking.
- The user is prompted to enter the district code (I for in-district, O for out-of-district).
- The user is asked if they want to continue entering information for more students (Yes/No).

Process:

- The program calculates the tuition owed based on the district code:
    - In-district (I) = $250 per credit hour.
    - Out-of-district (O) = $550 per credit hour.
- The program sums the total tuition owed for all students entered.

Output:

- The program displays the student's last name and the calculated tuition owed.
- At the end, the program displays the total tuition owed for all students.