Python Problems

Problem 1:

- Use a while loop to make sure that the hours worked are greater than zero.
- Use a while loop to make sure that the hourly pay is greater than zero.
- Ensure that hours worked are between zero and 60 and hourly pay is between zero and 20.00.
- Test your code thoroughly to ensure that your code is correct.

File name: gross_pay.py

Problem 2:

- Write a program that helps users keep track of the number of calories that they consume and display whether the user is over or within their calorie goal for the day.
- Your program should:
    - Ask the user to enter the calorie goal for number of calories to consume that day.
    - Males typically burn 2000 to 3000 calories per day and females typically burn 1500 – 2500 calories per day. Your program should ensure that the number of calories entered is between 1500 and 3000.
    - Use a loop to prompt the user to enter the calories for each item consumed during the day and keep a running total.
    - When the loop ends, display the total number of calories consumed and whether the user was within their calorie goal or if they exceeded their calorie goal.

File name: calories.py

Problem 3:

- You have been approached by a financial advisor to invest in a stock fund that is guaranteed to increase by 3 percent over the next five years.
- You must write a program that when given an amount of the initial investment, will calculate the value of the investment for the next five years.
- Your program must:
    - Prompt the user for the initial investment.
    - Check to make sure that the initial investment is between $1,000 and $100,000
    - Use a loop to calculate and print the projected value of the investment for each of the five years.
    - Print the initial investment and the final value of the investment after five years

File name: stocks.py

Problem 4:

- Write a program that keeps track of the investment growth for a number of different investments over a number of years.

- Your program should prompt the user for the number of investments to be calculated.
- Ensure that the number of investments is between 1 and 5.
- For each investment, the program should:
    - Prompt the user for the initial investment amount and rate of increase.
    - Ensure that the rate of increase is between 0 and 10 and the number of years is between 1 and 10.
    - Use a loop to calculate and print the projected value of the investment for each of the years.
    - Print the initial investment and the final value of the investment after the input number of years.

File name: stocks_multiple.py