Laboratory Exercise Question Prompt Week of 9/20

1. Please write a program that uses a simplified form of compound interest, in which the interest is calculated once a year and added to the balance. The output is displayed for now in non-formatted way. The sample output of the program is a report that shows for each year, the starting balance, the computed interest of the year and the ending balance.

   Sample Output:

   Enter the investment amount:10000

   Enter the number of years: 5

   Enter the yearly interest rate in %: 5

Year	BeginBalance	Interest	End Balance
1	10000.0	500.0	10500.0
2	10500.0	525.0	11025.0
3	11025.0	551.25	11576.25
4	11576.25	578.81	12155.06
5	12155.06	607.75	12762.82

2. Please create a program that calculates the retail price of a wholesale retail store. For any item, the retail mark up price is going to be 250% of the wholesale cost. The program should ask the user for the wholesale cost of an item, before the program process the input, the program will determine whether the input given is valid or not, if the input given is invalid (unit price is negative or 0) then print the message 'ERROR: The cost cannot be negative" and then ask the user to input a price of the item again. Otherwise, if the input given is valid, the program will calculate the retail price, print it out and then ask the user if they want to search for the price of another item. If the respond is yes (represented by either Y or y) then repeat the process, otherwise print out the statement that says, "Thank you for using our price computation system, have a wonderful day". **Hint:** this should be done using while loops.

Sample Output:

```
Enter the item's wholesale cost: 25
Retail price: $ 62.50
Do you have another item? (Enter y for yes): y
Enter the item's wholesale cost: 30
Retail price: $ 75.00
Do you have another item? (Enter y for yes): Y
Enter the item's wholesale cost: 45
Retail price: $ 112.50
Do you have another item? (Enter y for yes): n
Thank you for using ourr price computation system, have a wonderful day!
```

3 Please create a class test average computation program. The purpose of the program is for instructors to figure out the class average of a specific test. The program will first ask the user for the number of students they have and the number of test scores that should be considered for calculation. Once those input has been received, the program will determine whether the input given is valid or not based on the policy of the school in that each class should have at least 5 students and each student needs to complete 2 exams. For each student, the program will print out their unique student identification number and the average of the student test score based on the input provided by the user.

Sample output looks like this:

```
How many students do you have? 5
How many test scores per student? 2
Student number 1
-----------------
Test number 1: 50
Test number 2: 100
The average for student number 1 is: 75.0

Student number 2
-----------------
Test number 1: 72
Test number 2: 88
The average for student number 2 is: 80.0

Student number 3
-----------------
Test number 1: 75
Test number 2: 22
The average for student number 3 is: 48.5

Student number 4
-----------------
Test number 1: 45
Test number 2: 99
The average for student number 4 is: 72.0

Student number 5
-----------------
Test number 1: 88
Test number 2: 75
The average for student number 5 is: 81.5
```