ISYS 350, Spring 22, Exam 2 Review

Exam 2 covers the skills we practice with Revel assignment 5 and 6, and programming assignments 4, 5, 6, and 7, and includes the following PowerPoint presentations:

      Loops (from slide# 23 to 42, Goal Seek)
      Functions
      Classes and objects
      Python Collections
      File processing

Sample questions:

1. Susan is hired for a job, and her employer agrees to pay her every day. Her employer also agrees that Susan's salary is 1 penny the first day, 2 pennies the second day. 4 pennies the third day, continuing to double each day. Create a Python program that allows the user to enter the number of days that Susan will work and calculates the accumulated total amount of pay in dollar she will receive over that period of time.

   ```
   days=int(input('Enter the number of days Susan will work:'))
   startingSalary=.01
   totalSalary=0
   ```

2. If you are asked to create a function named printAmortizationTable that apply the solution of assignment 4, part 2, Vehicle Loan Amortization, to print the loan amortization table, what are the input parameters you must provide to the function?

   ```
   def  printAmortizationTable(                                              ):
   ```

3. This semester's last day of classes is 5/13/2022, write a Python program to compute the number of days from the current date to the last day of classes.

4. On slide# 32 of the Python Classes and Objects PowerPoint we define an employee class with 5 properties and 3 methods. Assume we have already created a list of employee objects named empList with many employee objects.

   a. Write a Python program to print empIDs and names.

   b. Write a Python program to compute the total Social Security Tax benefit for all employees.

   c. Use a Python statement to compute the number of employees in the empList.

5. A student's four exam scores are stored in a list: examScores=[78, 65,91, 80]. Write a Python program to compute the weighted average of 4 exams after dropping the lowest exam score:
       weighted avg = 60% * highest + 30% * 2nd high + 10%*3rd high.

6. A Social Security number has this format: 123-45-6789. Given a Social Security number, how to get the last for digits of the Social Security number?

{

}

7. Define a customer class with properties: customerID, customerName, City, Rating, LastOrderSubmitDate where City has values such as San Francisco, Los Angeles, New York,, etc., Rating has three possible values A, B, or C, and the LastOrderSubmitDate stores the last time the customer submitted an order in this format: yyyy-mm-dd. This class has one method: DaysSinceLastOrder. This method returns the days from the customer's last order submit date to current date.
       a. Write a Python program to define the customer class.

b. A CSV file named customer.csv is already created with customer data as follow:

customerID	custoomerName	City	Rating	LastOrderSubmitDate
C101	Peter	San Francisco	A	2019-08-20
C106	Paul	New York	B	2021-03-15
C103	Mary	Los Angeles	A	2020-05-21
…	…	…	…	…

Write a Python program to read the customer.csv file, and create a list of customer objects named customerList where each customer object is initialized with data retrieved from the csv file.

c. Write a Python program to print the customer's ID and name if the customer's has not submitted any order for more than 100 days.