Assignment 3

Q1. (Credit Limit Calculator)
Develop a Java application that determines whether any of several department-store customers has exceeded the credit limit on a charge account.
For each customer,the following facts are available:
a) account number
b) pending balance at the beginning of the month
c) total of all items charged by the customer this month
d) total of all credits applied to the customer's account this month
e) allowed credit limit.
The program should input all these facts as integers, calculate the new balance (= beginning balance+ charges – credits), display the new balance and determine whether the new balance exceeds the customer's credit limit. For those customers whose credit limit is exceeded, the program should display the message "Credit limit exceeded".
For eg -
Allowed Credit = 50000
total items charged = 25000
total all credit applied in this month = 10000
pending balance at the begining of the month = 5000
new balance for next month = 5000+25000-10000 => 20000 < Allowed Limit

Allowed Credit = 20000
total items charged = 20000
total all credit applied in this month = 5000
pending balance at the begining of the month = 10000
new balance for next month = 10000+20000-5000 => 25000 > Allowed Limit

Q2. Copy the Point2D class , along with the package from previous assignment.
a) Create a class "TestPointArray1.java" in "tester" package for the following
b) Accept , how many no of points to plot from user.
c) Create suitable data structure
Hint : Point2D[] points=new Point2D[sc.nextInt()];
d) Prompt user for x & y co ordinates n store the data suitably
Hint : for loop
e) Supply Menu to user with various Options like following

1. Display details of a specific point
User i/p : index
O/p : x & y co-ordinates should be displayed. or error message(eg : Invalid index , pls retry!!!!)

2) Display x, y co-ordinates of all points
Hint : for-each

3) User i/p : 2 indices for the points , validate the indices
Display distance between specified points (iff they are not located at the same position)
eg : sop("Enter index of strt point n end point");
validation : boundary condition (0<=index<length-1)
isEqual -- false --compute distance --display it.

4. Exit

Q3. Create an application that calculates your daily driving cost, so that you can estimate how much money could be saved by car pooling, which also has other advantages such as reducing carbon emissions and reducing traffic congestion. The application should input the following information and display the user's cost per day of driving to work:

a) Total miles driven per day.

b) Cost per gallon of gasoline.

c) Average miles per gallon.

d) Parking fees per day.

e) Tolls per day.