

Q: Design a class named CustomerData.

The CustomerData class should have the following member variables:

• customerNumber

• Customer Name

• Address

• mailingList

The customerNumber variable will be used to hold a unique integer for each customer. The mailingList variable should be a bool. It will be set to true if the customer wishes to be on a mailing list, or false if the customer does not wish to be on a mailing list. Write appropriate getter setter functions for these member variables.

Q: A retail store has a preferred customer plan where customers may earn discounts on all their purchases. The amount of a customer’s discount is determined by the amount of the customer’s cumulative purchases in the store.

• When a preferred customer spends $500, he or she gets a 5% discount on all future purchases.

• When a preferred customer spends $1,000, he or she gets a 6% discount on all future purchases.

• When a preferred customer spends $1,500, he or she gets a 7% discount on all future purchases.

• When a preferred customer spends $2,000 or more, he or she gets a 10% discount on all future purchases.

Design a class named PreferredCustomer, which is derived from the CustomerData class you created. The PreferredCustomer class should have the following member variables:

• purchasesAmount (a double)

• discountLevel (a double)

provide default and parameterized constructor (with super keyword set values of parent’s attributes), and toString method.

The purchasesAmount variable holds the total of a customer’s purchases to date.

The discountLevel variable should be set to the correct discount percentage, according to the store’s preferred customer plan.

Also calculate discount Amount based on discount.

Provide getters as well.

Write appropriate member functions for this class,

Now in Main class create and ArrayList and add customers into it and display the customers details, purchase of each customer along with discount he/she gets.

Input Validation: Do not accept negative values for any sales figures.