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\*Course: CST8110

\*Semester: W20

\*Assignment1

\*Due Date: February 21st, 2020 11:59pm

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/\*This application implement basic invoice generating system for a small business.

\*It uses local date and time to show current time and date of invoice

\*It uses default constructor , parameterized constructor, display method , calculate tax method and keyboard input method(for getting input from users).

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import java.util.Scanner; // import scanner format

import java.time.LocalTime; //import local time format to display local time

import java.time.LocalDate; //import date format which shows local date

public class Invoice { //creating class Invoice

//declaring field variable with private access specifier

private String productDescription;

private double unitPrice;

private int quantityPurchased;

private static int invoiceNumber=100; // initialize invoice number to 100 and word static shows it will be a single number throught out the class

private static final int HST = 13 ; // static final shows value is constant and can not changed

LocalTime time = LocalTime.now(); // object time created

LocalDate date = LocalDate.now(); // object date created

public Invoice() { // default constructor with specified default value

super();

this.productDescription = "unknown";

this.unitPrice = 0.00;

this.quantityPurchased = 0;

} // end of default constructor

public Invoice(String productDescription, double unitPrice, int quantityPurchased ) { //parameterized constructor with input parameter

super();

this.productDescription = productDescription;

this.unitPrice = unitPrice;

this.quantityPurchased = quantityPurchased;

} //end of parameterized constructor

// variable tax declare outside calculateTax() method so that we can use that in any method of the same class

public double calculateTax() { // method created with return value for calculating tax

return ((unitPrice\*quantityPurchased)\*HST)/100; //formula for tax

} //end of method calculateTax()

public void displayInvoice() { //display method created

System.out.println("\nValley Garden Retail Outlet ");

System.out.println("\nDate: "+ date +"\nTime: "+ time+"\n");

System.out.println("INVOICE NUMBER = "+ ++invoiceNumber +"\n"); //using pre-increment operator for constantly increasing invoice number for each time we call display method

System.out.println("~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~\n");

//using string format for formatted string

System.out.println(String.format("%-25s %s %s", "PRODUCT DESCRIPTION" ,"QUANTITY PURCHASED", "UNIT PRICE "));

System.out.println(String.format(" %-25s %9s %17s ", productDescription , quantityPurchased ,unitPrice+"\n\n")); // string for eg %13shows it will take 13 character

System.out.println("~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~\n");

System.out.println(String.format("%49s %5.2f", "SUB TOTAL $ " , (unitPrice\*quantityPurchased))+"\n");

System.out.println(String.format("%49s %5.2f", "HST 13.000% $ ", calculateTax())+ "\n"); //calling calculateTax() method inside displayInvoice method

System.out.println("~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~\n");

System.out.println(String.format("%49s %5.2f" , "Total: $ ", (unitPrice\*quantityPurchased)+calculateTax() )+"\n"); // %2.f used to take only 2 decimal point

System.out.println("~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~\n");

System.out.println("\nThank you for shopping at Valley Garden Retail Outlet!\n");

} // end of method displayInvoice()

public void keyboardInvoiceInfo() { //creating keyboardInputInfo method for getting information from user

Scanner input = new Scanner(System.in); // creating input for Scanner class

System.out.print("\nINVOICE NUMBER = " + ( invoiceNumber+1 ) +"\n");

System.out.print("Enter product description: ");

productDescription = input.nextLine(); //getting production description from user

System.out.print("Enter unit price: $");

unitPrice = input.nextDouble(); // getting price per unit of product from user

System.out.print("Enter quantity purchased: ");

quantityPurchased = input.nextInt(); // getting quantity purchased

} //end of method keyboardInvoiceInfo()

} // end of class Invoice