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package model;

import view.UserInterface;
import data.Database;

/**
 * This class describes a payment method and thus extends the Payment Class.
 * Added variables are (String) number, expiry date and security code.
 */
public class CreditCard extends Payment {
    private String number, expiryDate, securityCode;

    /**
     * Database Constructor
     *
     * @param newId ID of the payment instance
     * @param newBookingRef Reference to a (unique) Booking
     * @param newAmount Amount of the payment
     * @param newNumber Credit card number
     * @param newExpiryDate Credit card expiry date
     * @param newSecurityCode Credit card security code
     */
    public CreditCard(int newId, String newBookingRef, int newAmount, String
        newNumber, String newExpiryDate, String newSecurityCode) {
        super(newId, newBookingRef, newAmount, "credit card");

        number          = newNumber;
        expiryDate       = newExpiryDate;
        securityCode     = newSecurityCode;
    }

    /**
     * In-App Constructor
     *
     * @param newBookingRef Reference to a (unique) Booking
     * @param newAmount Amount of the payment
     */
    public CreditCard(String newBookingRef, int newAmount) {
        super(newBookingRef, newAmount);

        number          = UserInterface.inputCreditCardNumber();
        expiryDate       = UserInterface.inputCreditCardExpiryDate();
        securityCode     = UserInterface.inputCreditCardSecurityCode();
        super.setMethod("credit card");
    }

    /**
     * Write a line to the database
     */
    public void toDB() {
        Database.write("payments", super.getId()+";"+super.getBookingRef()
            +";"+super.getAmount()+";"+super.getMethod()+";"+this.number+";"
            +this.expiryDate+";"+this.securityCode+" ");
    }

    // Start getter
    public String getNumber() {
        return this.number;
    }
}
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public String getLastFour() {
    return this.number.substring(number.length()-4);
}

public String getExpiryDate() {
    return this.expiryDate;
}

public String getCvvCode() {
    return this.securityCode;
}
// End getter

/**
 * Implementation of the Luhn algorithm to validate credit card numbers.
 *
 * Adapted from: https://github.com/eix128/gnuc-credit-card-checker/blob/master/CCCheckerPro/src/com/gnuc/java/cc/Luhn.java
 *
 * @param ccNumber Credit card number
 * @return boolean check variable.
 */
public static boolean luhnCheck(String ccNumber) {
    int sum = 0;
    boolean alternate = false;
    for (int i = ccNumber.length() - 1; i >= 0; i--) {
        int n = Integer.parseInt(ccNumber.substring(i, i + 1));
        if (alternate) {
            n *= 2;
            if (n > 9) {
                n = (n % 10) + 1;
            }
        }
        sum += n;
        alternate = !alternate;
    }
    return (sum % 10 == 0);
}

// Start print methods
public static String printTableHeader() {
    return String.format("\t | %-18s | %-8s | %-15s | %-9s |\n",
        "Booking Reference", "Amount", "Payment Method", "Last Four"
    );
}

public static String printLine(CreditCard creditcard) {
    return String.format("\t | %-18s | %-8s | %-15s | %-9s |\n",
        creditcard.getBookingRef(), creditcard.getAmount()/100.0,
        "Credit Card", "*****"+creditcard.getLastFour());
}

public String printLine() {
    return String.format("\t | %-18s | %-8s | %-15s | %-9s | %-12s |\n",
        ,
        super.getBookingRef(), super.getAmount()/100.0, "Credit
        Card", "*****"+this.getLastFour(), "--");
}

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    public String toString() {  
        String out = String.format("\n\n\tCREDIT CARD:\n");  
        out += printTableHeader();  
        out += printLine(this);  
        return out;  
    }  
    // End print methods  
}
```