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// Deethya Makonahalli's class for a credit account that uses methods from
// "Account" and stores new variables and performs calculations on those variables

public class CreditAccount extends Account{

    //initialising the field monthlyPayment
    private double monthlyPayment;

    //initialising the field amountPaidThisMonth
    private double amountPaidThisMonth;

    //initialising the field interestRate
    private double interestRate;

    //initialising the field accountNumber
    private String accountNumber;

    // Constructor for Credit Account which takes inputs accountNumber and
    interstRate
    public CreditAccount(String accountNumber, double interestRate){
        super(accountNumber,(int)interestRate);
        accountNumber = accountNumber;
        this.interestRate = interestRate;
    }

    // Method Setting the interest rate

    public void setInterestRate(double interestRate){
        this.interestRate = interestRate;
    }

    // Method to access the Interest Rate

    public double getInterestRate(){
        return this.interestRate;
    }

    // Method to set Monthlthy payments

    public void setMonthlyPayment(double monthlyPayment){
        this.monthlyPayment = monthlyPayment;
    }

    //Method to set Amount paid for each month
    public void setAmountPaidThisMonth(double amountPaidThisMonth){
        this.amountPaidThisMonth = amountPaidThisMonth;
    }

    // Method to access the monthly payment

    public double getMonthlyPayment(){
        return this.monthlyPayment;
    }

    // Method to access the Amount Paid in the past month

    public double getAmountPaidThisMonth(){
        return this.amountPaidThisMonth;
    }
}

```

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// Method to check if the amount paid this month is less than the monthly payment  
and adjust the Balance as per the interest rate  
  
public void endOfMonth(){  
    if (amountPaidThisMonth<monthlyPayment){  
        this.setBalance((this.getBalance()*interestRate)/12);  
    }  
    else {  
        this.setBalance(this.getBalance());  
        this.setBalance(monthlyPayment);  
        setAmountPaidThisMonth(0);  
    }  
}  
  
// Method to set the credit and adjust the Balance by the credit  
  
@Override  
public void credit(double credit){  
    this.setBalance(this.getBalance() - credit);  
    this.setAmountPaidThisMonth(this.getAmountPaidThisMonth() - credit);  
}  
}
```