**Program Nine Part One:**

//summary: This program uses classes to create a class named account. This class holds the ID, balance, annual interest rate,

// and date created varaibles. It allows the user to withdraw and deposit money, and it has accessors and mutators for each

// varaible

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import java.util.Date; //allows the date class to be used

public class Main

{

public static void main(String[] args)

{

account test = new account(1122, 20000); //holds the test data and sets some of the values

test.setAnnualInterestRate(4.5); //sets the annual interest rate to 4.5%

test.withdraw(2500); //withdraws 2500 dollars

test.deposit(3000); //deposits 3000 dollars

//outputs the ID, balance, monthly interest, and date

System.out.println("ID: " + test.getID());

System.out.printf("Balance: $%.2f", test.getBalance());

System.out.println();

System.out.printf("Monthly Interest: $%.2f", test.getMonthlyInterest());

System.out.println();

System.out.println("Date: " + test.getDateCreated());

}

}

**Account Class:**

import java.util.Date; //lets the date class be used

public class account

{

private int id = 0; //holds the id data and sets it to 0

private double balance = 0; //holds the balance data and sets it to 0

private double annualInterestRate = 0; //holds the annual interest rate data and sets it to 0

private Date dateCreated = new Date(); //holds the date created data and sets it to the current date

//no args constructor

account(){

}

//constructor that sets the id and balance

account(int a, double b){

id = a;

balance = b;

}

//gets the ID data and returns it

public int getID()

{

return id; //returns the id

}

//gets the balance data and returns it

public double getBalance()

{

return balance; //returns the balance

}

//gets the annual interest rate data and returns it

public double getAnnualInterestRate()

{

return annualInterestRate \* 100; //returns the annualInterestRate times 100 (turned into percent)

}

//gets the date created data and returns it

public Date getDateCreated()

{

return dateCreated; //returns the dateCreated

}

//sets id to the value sent over

public void setID(int temp)

{

id = temp; //id is set to temp

}

//sets balance to the value sent over

public void setBalance(double temp)

{

balance = temp; //balance is set to temp

}

//sets annualInterestRate to the value sent over divided by 100 (makes it a decimal)

public void setAnnualInterestRate(double temp)

{

annualInterestRate = temp / 100; //annualInterestRate is set to temp divided by 100

}

//finds the monthly interest rate and returns it

public double getMonthlyInterestRate()

{

return annualInterestRate / 12; //returns the annualInterestRate divided by 12

}

//finds the monthly interest and returns it

public double getMonthlyInterest()

{

return getMonthlyInterestRate() \* balance; //calls the getMonthlyInterestRate method and times it by balance

}

//takes money away from the balance varaible

public void withdraw(double temp)

{

balance = balance - temp; //sets balance to balance minus the temp amount

}

//puts money in to the balance varaible

public void deposit(double temp)

{

balance = balance + temp; //sets balance to balance plus the temp amount

}

}

**Output:**

