CIS\_355A Week 3 iLab\_ Whitelaw

# First part

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CIS\_355A\_Week3\_iLab\_Part1

Developed By: Brian Whitelaw

Prepared For: Prof. Michael Brown

DeVry University Online

Program Name: Inheritance Test

Nature and Necessity: The purpose of this program is to Implement an inheritance hierarchy based

on the following specifications for Account class, Checking Account class, and Savings Account class.

There will be processDeposit, processWithdrawal, sets and gets for name and acctID, and displayAccount

methods.

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// Import Libraries

**import** javax.swing.JOptionPane;

**import** java.text.DecimalFormat;

**public** **class** InheritanceTest

{

**public** **static** **void** main(String[] args)

{

// Declare variables

String bName = ""; // Name of bank

String rNum = ""; // Routing number of account

// Initialize decimal format

DecimalFormat df = **new** DecimalFormat("$#,###.##");

// Gather data

bName = JOptionPane.*showInputDialog*("Please Enter the Bank Name: ");

rNum = JOptionPane.*showInputDialog*("Please Enter Your Routing Number: ");

// Call Checking Account Class

CheckingAcct ch = **new** CheckingAcct();

ch.processDeposit (0);

ch.processWithdrawal(0);;

ch.calcInt();

// Call Savings Account class

SavingsAcct sa = **new** SavingsAcct();

sa.processDeposit(0);

sa.processWithdrawal(0);

sa.calcInt();

// Display Results

System.***out***.println ("Bank Name: " + bName + "\nRouting Number: " + rNum);

System.***out***.println ("Account Name: " + ch.acctName + "\nChecking Account Number: " + ch.acctNum + "\nChecking Balance: " + df.format(ch.bal));

System.***out***.println ("Account Name: " + sa.acctName + "\nSavings Account Number: " + sa.acctNum + "\nSavings Balance: " + df.format(sa.bal));

} // End of main

} // End of class

## Account Class

// Import libraries

**import** javax.swing.JOptionPane;

**public** **class** Account

{

// Declare variables (protected for inheritance purposes)

**protected** String acctName = ""; // Account Name

**protected** **int** acctNum; // Account Number

**protected** Double bal = 0.00; // Account Balance

**protected** Double odFee = 0.00; // Overdraft Fee

// Create Account method

**public** Account ()

{

// Gather inputs

acctName = JOptionPane.*showInputDialog*("Please Enter Your Name: ");

acctNum = Integer.*parseInt*(JOptionPane.*showInputDialog*("Please Enter the Account Number: ")); // Using parseInt to convert from String to int

bal = Double.*parseDouble*(JOptionPane.*showInputDialog*("Please Enter the Account Balance: ")); // Using parseDouble to convert input from String to Double

odFee = Double.*parseDouble*(JOptionPane.*showInputDialog*("Enter the Overdraft Fee Amount: ")); // Using parseDouble to convert imput from String to Double

} // End of Account method

// processDeposit method

**public** **void** processDeposit (**double** amt)

{

bal += amt;

}

// processWithdrawal method

**public** **void** processWithdrawal (**double** amt)

{

bal -= amt;

**if** (bal < 0)

System.***out***.println("Insufficient Funds of " + amt);

bal -= odFee;

}

// Calls calculate interest method from child classes

**public** **void** calcInt()

{

}

} // End of class

## Savings Account Class

**public** **class** SavingsAcct **extends** Account

{

**public** SavingsAcct()

{

**super** (); // Calls inheritance from Account parent

}

// Calculate interest in savingsAcct class

**public** **void** calcInt ()

{

**if** (bal >= 5000)

bal += (bal\*.04);

**else** **if** (bal >= 3000)

bal += (bal\*.03);

**else** bal += (bal\*.02);

}

}// End of class

## Checking Account Class

// CheckingAcct extends Account for inheritance

**public** **class** CheckingAcct **extends** Account

{

**public** CheckingAcct()

{

// Call methods of parent class

**super**();

} // End of method

// Calculate Interest in CheckingAcct

**public** **void** calcInt ()

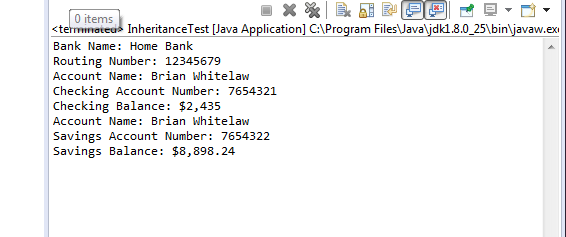
{

**if** (bal >= 3000)

bal += (bal\*.01);

} // End of calcInt method

}// End of class



# Second Part

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CIS\_355A\_Week3\_iLab\_Part1

Developed By: Brian Whitelaw

Prepared For: Prof. Michael Brown

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Program Name: Greeting

Nature and Necessity: The purpose of this program is to create a 500 x 500 applet

window with four components: label, text field, button, and a label that changes

after the button is pressed.

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// Import libraries

**import** java.applet.\*;

**import** java.awt.\*;

**import** java.awt.event.\*;

**public** **class** Greet **extends** Applet **implements** ActionListener

{

TextField txt = **new** TextField(20);

Label lblIn = **new** Label ("Please Enter Your Name: "); // Input label

Button btnGreet = **new** Button ("Greet");

Label lblOut = **new** Label ("Result Goes Here.");

// Create applet window

**public** **void** init ()

{

// Sets area to 500x500 pixels

setSize(500,500);

// Sets bg color to yellow

setBackground(Color.***YELLOW***);

// Add objects to applet window

add(lblIn); // Adds input label

add(txt); // Adds text field

add(btnGreet); // Adds "Greet" button

add(lblOut); // Adds Output label

btnGreet.addActionListener(**this**);

} // End applet window

// Call action listener

**public** **void** actionPerformed(ActionEvent e)

{

// Declare variables

String name = txt.getText();

lblOut.setText("Hello, " + name);

}

}// End of class

Pre-click

# 

Post-click

