

Student Name _____ Sections ___ Date _____

Introduction to Java Programming - Using emacs

This particular exercise introduces you to Java programming through the `javac` compiler in a UNIX environment.

STEP 1 Logon your Computer

Turn on the computer and the monitor. After the logon screen appears, use your Oakstar information to logon to the campus network.

Your userid is **the first letter of your first name** in lower case followed by **the first 7 letter of your last name** in lowercase followed by the **last 4 digits of your OakStar Identification number**. Your location is the **last digit of your Oakstar Identification number followed by .academic.oakton**. Your password is your birth date in the six digit format **mmddyy**. See your instructor or a lab aid if you cannot logon.

STEP 2 Open a new UNIX Session

Open a UNIX session by clicking the **Start** button on the Windows **Desktop**, then point to the **Run** sub - menu. In the **Run** window, type `cmd` to go to the Command prompt. At the prompt, type: `telnet csc.oakton.edu`

Logon to UNIX using the same userid and password used to logon to your network account. When using VNC , use the given instructions to open an **xterm** UNIX session.

STEP 3 Open the UNIX emacs Text Editor and Type the Program Code

At the UNIX command prompt type the following command to invoke the emacs editor.

```
emacs Calculate.java &
```

When the emacs editor opens, type the program code shown in **Figure 1** , which follows, exactly as it appears, except substitute your own name in place of Sammy Student. Note: the `&` allows you to switch between emacs and the UNIX prompt.

STEP 4 Compile the Program

After you have typed the given program, click **Tools** on the emacs menu and then select **Compile** . The cursor will shift to the bottom of the screen and the following will be displayed:

```
Compile command: make -k
```

Erase the text `make -k` and type the following compile command in its place.

```
javac Calculate.java
```

Press **Enter** to have the command accepted. If the program compiles correctly, you will see a message such as

```
Compilation finished at Mon June 13 9:15:33
```

If you do not have any errors, proceed to the next step, otherwise read the error messages and make any necessary corrections by comparing your code to that shown on the prior page. Then recompile your program.

STEP 5 Run the Program

Keep emacs open and return to the UNIX command prompt.

Type the following command and press **Enter** to execute the program.

```
java Calculate
```

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STEP 6 **Check Your Output**

Use sample data to run your program.

STEP 7 **Exit emacs and Logout of your UNIX Session**Close emacs and at the UNIX prompt type `exit` to return to Windows.**Figure 1** **class Calculate**

```
import java.awt.Graphics;
import javax.swing.JOptionPane;

public class Calculate {
public static void main(String args[]) {
    String firstNum, secondNum, thirdNum;
    int num1,num2,num3;
    int sum, product, largest, smallest;

    firstNum = JOptionPane.showInputDialog("enter first integer");
    secondNum = JOptionPane.showInputDialog("enter second integer");
    thirdNum = JOptionPane.showInputDialog("enter third integer");

    num1 = Integer.parseInt(firstNum);
    num2 = Integer.parseInt(secondNum);
    num3 = Integer.parseInt(thirdNum);

    sum = num1 + num2 + num3;
    product = num1 * num2 * num3;

    if (num1 > num2)
    {
        largest = num1;
        smallest = num2;
    }
    else
    {
        largest = num2;
        smallest = num1;
    }
    if (num3 > largest)
        largest = num3;
    if (num3 < smallest)
        smallest = num3;

    JOptionPane.showMessageDialog(null, " The sum is "
        + sum, "Result", JOptionPane.PLAIN_MESSAGE);
    JOptionPane.showMessageDialog(null, " The product is "
        + product, "Result", JOptionPane.PLAIN_MESSAGE);
    JOptionPane.showMessageDialog(null, " The largest is "
        + largest, "Result", JOptionPane.PLAIN_MESSAGE);
    JOptionPane.showMessageDialog(null, " The smallest is "
        + smallest, "Result", JOptionPane.PLAIN_MESSAGE);
    System.exit(0);
    }
}
```
