

# MoreCode1

## 2020

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MAY 4

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COMPANY NAME

Authored by: Your Name



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Name

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# Group Activity 3

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• Due **Oct 5, 2020 at 11:59pm**

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• Points **50**

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• Questions **1**

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• Available **Sep 18, 2020 at 8am - Oct 5, 2020 at 11:59pm** 18 days

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• Time Limit **None**

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**This quiz was locked Oct 5, 2020 at 11:59pm.**

## Attempt History

	Attempt	Time	Score
LATEST	<a href="#"><u>Attempt 1</u></a>	1,238 minutes	44 out of 50

**Score for this quiz: 44 out of 50**  
**Submitted Sep 22, 2020 at 10:38am**  
**This attempt took 1,238 minutes.**

## Question 1

44 / 50 pts


Create a program called **staffSalary** using GUI Java and add a class named **Staff** that will determine the monthly payment amount of and return a specific staff description. The staff are getting paid differently base on the **rate** and **numbers of hours worked**. The staff also have **different description** based on the job. The staff class has 4 fields: **staff\_description**, **staff number**, **rate**, **hours worked**. Write get and set methods for each field. The set methods must prompt the user to enter the values for the following fields: staff\_description, staff number, rate and hours (Use JOptionPane for Input). No staff will work more than 200 hours per month and no staff will be paid more than 500 per hour. This class also needs a method to calculate the **monthlyPayment ()** and **staffDescription ()** since staff are getting paid differently and have different job description the methods should be declared abstract. Add the following **subclass staffInfos**. The subclass override **monthlyPayment ()** and **staffDescription ()**. Use the get methods to calculate the monthly payment and to display the job description (Do not override set and get). The tax deduction will be as follows: Cleaner 14 %, Lecturer 20%, and Admin 17%)

*Use any appropriate design of your choice for your GUI using java*

**Your Answer:**

The screenshot shows a Java Swing window titled "staffSalary". It contains five input fields with labels: "Staff Number:", "Staff Description:", "Staff Rate:", "Staff Hours Worked:", and "Staff Salary:". Below these fields is a large empty text area. At the bottom of the window are three buttons: "GetData", "Clear", and "Calculate Sala...".


Input ✕

 What is the employee's staff number

234

OK Cancel


Input ✕

 describe what the employee's job description in the company

Cleaner

OK Cancel


Input ✕

 What is the employee's hours worked

80

OK Cancel

Input ✕

 What is the employee's pay rate

150

OK Cancel

Staff Number: 234

Staff Description: cleaner

Staff Rate: 150.0

Staff Hours Worked: 80

Staff Salary:

and this is what  
the employee job description is in the company: cleaner  
the employee rate is: 150.0  
the employee work hours is: 80  
the tax deduction is: 0.17

GetData Clear Calculate Sala...

Staff Number: 234

Staff Description: cleaner

Staff Rate: 150.0

Staff Hours Worked: 80

Staff Salary: R51974.5

and this is what  
the employee job description is in the company: cleaner  
the employee rate is: 150.0  
the employee work hours is: 80  
the tax deduction is: 0.17

GetData Clear Calculate Sala...

Code:

```
//Staff Class
```

```
package staffSalary;  
import javax.swing.JOptionPane;
```

---

```

/**
 *
 * @author albert michael ludick
 */
public class Staff {
    protected String staff_description;
    protected String staffNumber;
    protected double rate;
    protected int hoursWorked;
    /**
     * @return the staff_description
     */
    public String getStaff_description() {
        return staff_description;
    }
    /**
     * this set the staff decription
     */
    public void setStaff_description() {
        String descriptionofStaff = JOptionPane.showInputDialog(null,
            "describe what the employee's job description "
            + "in the company").toLowerCase();
        if(descriptionofStaff.equals(description.Admin
            .toString().toLowerCase())){
            this.staff_description=descriptionofStaff;
        }else if(descriptionofStaff.equals(description.Cleaner
            .toString().toLowerCase())){
            this.staff_description=descriptionofStaff;
        }else if(descriptionofStaff.equals(description.Lecturer
            .toString().toLowerCase())){
            this.staff_description=descriptionofStaff;
        }
        else{
            JOptionPane.showMessageDialog(null, "the description is not a"
            +"at our company");
            setStaff_description();
        }
    }
    /**
     * @return the staffNumber
     */
    public String getStaffNumber() {
        return staffNumber;
    }
    /**
     * this set the Staff Number
     */
    public void setStaffNumber() {

```

---

```

this.staffNumber = JOptionPane.showInputDialog(null,
"What is the employee's staff number");
}
/**
 * @return the rate
 */
public double getRate() {
return rate;
}
/**
 * this set the Staff rate
 */
public void setRate() {
int rateNumber = Integer.parseInt(JOptionPane.showInputDialog(null,
"What is the employee's pay rate"));
if(rateNumber<500){
this.rate=rateNumber;
}else{
JOptionPane.showMessageDialog(null, "the employee could not earn "
+ "more then 500 per hour");
setRate();
}
}
/**
 * @return the hoursWorked
 */
public int getHoursWorked() {
return hoursWorked;
}
/**
 * this set the Hours Worked
 */
public void setHoursWorked() {
int hoursWorkedNumber = Integer.parseInt(JOptionPane.showInputDialog(null,
"What is the employee's hours worked"));
if(hoursWorkedNumber<200){
this.hoursWorked=hoursWorkedNumber;
}else{
JOptionPane.showMessageDialog(null, "the employee could not have "
+ "worked more then 200 hours");
setHoursWorked();
}
}
/**
 * this method calculate the employee's salary
 * @return monthlySalary of the employee
 */
public double monthlyPayment(){//kan ook net die nicer maak deur na 2 des te vat

```



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```

double montlyPayment = (((getRate()*getHoursWorked()*52)/12));
return montlyPayment;
}
public String staffDescription(){//check wat ek hier moet doen
return "This the employee number: "+getStaffNumber()+"\n and this is what"
+ "the employee job description is in the company: "
+getStaff_description()+"\n the employee rate is: "
+getRate()+"\n the employee work hours is: "
+getHoursWorked()+"\n the tax deduction is: ";
}
enum description{Cleaner,Lecturer,Admin}
}

//Staffinfo class

package staffSalary;
/**
 *
 * @author albert michael ludick
 */
public class StaffInfo extends Staff {
public StaffInfo(){super();}
@Override
public double monthlyPayment(){//kan ook net die nicer maak deur na 2 des te vat
double tax=0;
switch(getStaff_description().toLowerCase()){
case "admin":{
tax=0.17;
break;
}
case "lecturer":{
tax=0.17;
break;
}
case "cleaner":{
tax=0.17;
break;
}
}
double montlyPayment = (((getRate()*getHoursWorked()*52)/12)
-(getRate()*tax));
return montlyPayment;
}
@Override
public String staffDescription(){//check wat ek hier moet doen
double tax=0;
switch(getStaff_description().toLowerCase()){
case "admin":{

```

---

```

tax=0.17;
break;
}
case "lecturer":{
tax=0.17;
break;
}
case "cleaner":{
tax=0.17;
break;
}
}
return "This the employee number: "+getStaffNumber()+"\n"
+"and this is what"+ "\n"
+ "the employee job description is in the company: "
+getStaff_description()+"\n"+"the employee rate is: "
+getRate()+"\n"+"the employee work hours is: "
+getHoursWorked()+"\n"+"the tax deduction is: "
+tax;
}
}

```

//Gui code

```

package staffSalary;
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */

/**
 *
 * @author albert michael ludick
 */
public class StaffSalaryform extends javax.swing.JFrame {
    private Staff employeeData;
    private StaffInfo employemath;
    /**
     * Creates new form StaffSalaryform
     */
    public StaffSalaryform() {
        initComponents();
    }

    /**
     * This method is called from within the constructor to initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is always
     * regenerated by the Form Editor.
     */

```

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```

*/
@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {

    jLabel1 = new javax.swing.JLabel();
    jLabel2 = new javax.swing.JLabel();
    jLabel3 = new javax.swing.JLabel();
    jLabel4 = new javax.swing.JLabel();
    jLabel5 = new javax.swing.JLabel();
    txtDescription = new javax.swing.JTextField();
    txtNumber = new javax.swing.JTextField();
    txtRate = new javax.swing.JTextField();
    txtHours = new javax.swing.JTextField();
    txtSalary = new javax.swing.JTextField();
    btnClear = new javax.swing.JButton();
    btnGetData = new javax.swing.JButton();
    btnCalculate = new javax.swing.JButton();
    jScrollPane1 = new javax.swing.JScrollPane();
    txtresult = new javax.swing.JTextArea();

    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

    jLabel1.setText("Staff Number:");
    jLabel2.setText("Staff Description:");
    jLabel3.setText("Staff Rate:");
    jLabel4.setText("Staff Hours Worked:");
    jLabel5.setText("Staff Salary:");
    txtDescription.setEditable(false);
    txtNumber.setEditable(false);
    txtRate.setEditable(false);
    txtHours.setEditable(false);
    txtSalary.setEditable(false);

    btnClear.setText("Clear");
    btnClear.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            btnClearActionPerformed(evt);
        }
    });

    btnGetData.setText("GetData");
    btnGetData.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {

```

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```

btnGetDataActionPerformed(evt);
}
});

btnCalculate.setText("CalculateSalary");
btnCalculate.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
btnCalculateActionPerformed(evt);
}
});

txtresult.setEditable(false);
txtresult.setColumns(20);
txtresult.setRows(5);
jScrollPane1.setViewportView(txtresult);

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(layout.createSequentialGroup())
.addContainerGap()
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addComponent(jScrollPane1)
.addGroup(layout.createSequentialGroup())
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(layout.createSequentialGroup())
.addComponent(btnGetData, javax.swing.GroupLayout.PREFERRED_SIZE, 133,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addComponent(btnClear, javax.swing.GroupLayout.PREFERRED_SIZE, 78,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addComponent(btnCalculate, javax.swing.GroupLayout.PREFERRED_SIZE, 121,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addComponent(jLabel1)
.addComponent(jLabel3)
.addComponent(jLabel2)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING, false)
.addGroup(javax.swing.GroupLayout.Alignment.LEADING, layout.createSequentialGroup())
.addComponent(jLabel5)
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
.addComponent(txtSalary, javax.swing.GroupLayout.PREFERRED_SIZE, 225,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addGroup(javax.swing.GroupLayout.Alignment.LEADING, layout.createSequentialGroup())
.addComponent(jLabel4)
.addGap(18, 18, 18)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

```

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```

.addComponent(txtRate, javax.swing.GroupLayout.PREFERRED_SIZE, 225,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(txtHours, javax.swing.GroupLayout.PREFERRED_SIZE, 225,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(txtdescription, javax.swing.GroupLayout.PREFERRED_SIZE, 225,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(txtNumber, javax.swing.GroupLayout.PREFERRED_SIZE, 225,
javax.swing.GroupLayout.PREFERRED_SIZE))))))
.addGap(0, 28, Short.MAX_VALUE)))
.addContainerGap()
);
layout.setVerticalGroup(
layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(layout.createSequentialGroup()
.addContainerGap()
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addComponent(jLabel1)
.addGroup(layout.createSequentialGroup()
.addComponent(txtNumber, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(txtdescription, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(jLabel2))))))
.addGap(18, 18, 18)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel3)
.addComponent(txtRate, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(txtHours, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(jLabel4))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(txtSalary, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(jLabel5))
.addGap(18, 18, 18)
.addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 9,
Short.MAX_VALUE)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING, false)
.addComponent(btnGetData, javax.swing.GroupLayout.DEFAULT_SIZE, 64,
Short.MAX_VALUE)

```

```

.addComponent(btnClear, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
.addComponent(btnCalculate, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
.addContainerGap())
);

pack();
} // </editor-fold>

private void btnClearActionPerformed(java.awt.event.ActionEvent evt) {
txtHours.setText(null);
txtNumber.setText(null);
txtRate.setText(null);
txtSalary.setText(null);
txtdescription.setText(null);
}

private void btnGetDataActionPerformed(java.awt.event.ActionEvent evt) {
employeeData = new Staff();
employeeData.setStaffNumber();
employeeData.setStaff_description();
employeeData.setHoursWorked();
employeeData.setRate();
txtHours.setText(String.valueOf(employeeData.getHoursWorked()));
txtNumber.setText(employeeData.getStaffNumber());
txtRate.setText(String.valueOf(employeeData.getRate()));
txtdescription.setText(employeeData.getStaff_description());
employemath=new StaffInfo();
employemath.hoursWorked=employeeData.getHoursWorked();
employemath.rate=employeeData.getRate();
employemath.staffNumber=employeeData.getStaffNumber();
employemath.staff_description=employeeData.getStaff_description();
txtresult.setText(employemath.staffDescription());
}

private void btnCalculateActionPerformed(java.awt.event.ActionEvent evt) {
txtSalary.setText(String.valueOf("R"+employemath.monthlyPayment()));
}

/**
 * @param args the command line arguments
 */
public static void main(String args[]) {
/* Set the Nimbus look and feel */
//<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
/* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
 * For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
 */

```

---

```

try {
for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
if ("Nimbus".equals(info.getName())) {
javax.swing.UIManager.setLookAndFeel(info.getClassName());
break;
}
}
} catch (ClassNotFoundException ex) {
java.util.logging.Logger.getLogger(StaffSalaryform.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
} catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(StaffSalaryform.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
} catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(StaffSalaryform.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
} catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(StaffSalaryform.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
}
}
//</editor-fold>

/* Create and display the form */
java.awt.EventQueue.invokeLater(new Runnable() {
public void run() {
new StaffSalaryform().setVisible(true);
}
});
}

// Variables declaration - do not modify
private javax.swing.JButton btnCalculate;
private javax.swing.JButton btnClear;
private javax.swing.JButton btnGetData;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JTextField txtHours;
private javax.swing.JTextField txtNumber;
private javax.swing.JTextField txtRate;
private javax.swing.JTextField txtSalary;
private javax.swing.JTextField txtdescription;
private javax.swing.JTextArea txtresult;

```

---

```
// End of variables declaration
}

//main class code

/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package staffSalary;
/**
 *
 * @author albert michael ludick
 */
public class staffSalary {
    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        // TODO code application logic here
        StaffSalaryform form = new StaffSalaryform();
        form.setVisible(true);
    }
}
```

**Quiz Score: 44 out of 50**