

## Final assignment

**Due:** Friday, December 23 by midnight. **NOTE:** No late assignments will be accepted!

**Weight:** 35% total (part 1: 15% and part1: 20%) of final mark

**Submission:** Submit all files (the full project package from NetBeans and database file) through blackboard in **zipped format (.zip) ONLY**; For part 2, each group will submit **only one** copy of the assignment.

**Requirements:** Solve the requirements listed below using Java programming code only. You must use the concepts we work on in class. All code must be fully commented.

**This is a group assignment. Only one person from the group will submit a copy. The student submitting will include all members in the comment section.**

**Assignment details:** This assignment will pull together all features studied in the Java courses in your program. As such, a fundamental requirement is that the application must function as specified in full. As a group, you must run tests on all parts of the program and fix any potential errors.

**Task:** Using a combination of your assignment 1 and assignment 2, add the following functionality:

In your group, pick one of the group member's GUI from part 1 and make it functional. This means that your group must build all the event handling for the GUI frontend to include the following:

- Validate all text fields, radio buttons, dropdowns have proper values (I.e. even though it is a text field for commission, it must be validated to ensure it is a proper Double value. This must be done for all components on each tab of the GUI) on all tabs and prompt the user if any value is missing/incorrect
- Must ask the user to confirm the submission before it is sent or cancelled (Using JOptionPane)
- Must gather all the proper data to create all types of Employee objects in the HR tab and submit it to the database
- Must gather all the proper data to create a Product object from the Product tab and submit it to the database
  - Manufacturer needs to be a dropdown combobox in the Product form.
- Must gather all the proper data to create a Manufacturer object from the Product tab and submit it to the database
- Must have a fully functional search tab that will search for either an employee or for a product and display the full information for the chosen Employee/Product in the appropriate form.
- Each group must have a **fully Normalized database** (including junction tables) to handle all the objects being created and must be connected to the project

- You must ensure connection to the database will work for marking purposes. Please provide access credentials for your program.

### **The following must be implemented:**

#### **IO:**

- Capture all errors through Try/Catch and store the data in an error log under "C:/JavaApp/Error/errorlog.txt"
- The entry should look something like this:

\*\*\*\*\*

**Date: 01/01/01 12:00am**

**Error description:**

**[use the error object caught and record the information in the file]**

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#### **GUI:**

- Login window to authenticate users
  - two types, regular and admin:
- Regular user can:
  - create new employee (any type), Product, Manufacturer, enter sales transaction And search data.
- Admin user can:
  - do everything a Regular user can
  - edit/delete Employees, Products, Manufacturer, Sales transactions
  - Hint: add edit/delete capability to a separate panel and only let admin users should see this part of the program.
- New tab - Sales
  - form that will allow a sale of a product
  - associate an employee with the sale
  - determine potential sales commission
  - add transaction to database
  - search window to allow for searching transactions.
- Customer tab to gather a customer data for data base

#### **Event Handling:**

- all components/tabs and functionality must have proper event handling
  - buttons to submit and search data and exit the system
  - Lists selection (to display selected data in an appropriate form)

#### **Database:**

- Design all tables required for the program (not limited to the following):
  - Employees
  - Customers
  - Products
  - Manufacturer
  - Sales
  - Login
- Add Database capabilities to the program to allow for
  - Employees, Products, Manufacturers, Customers, Sales transactions to be added
  - JList to display all search data

Part 2 is a group assignment and **all students in the group must contribute** in order to receive a mark. If any group member is not responding to group inquiries, immediately notify the instructor by carbon copy the all attempts of correspondence.

This is an accumulative assignment so **ALL** functionality from assignment 1 must be included in addition to the listed criteria below in order to receive full marks. Your group is allowed to use the GUI sample code provided on blackboard.

**NOTE:**

**No extensions will be given for this assignment.** Late assignment will result in a grade of zero (0) for the entire group.