

**COLLEGE OF COMPUTING AND ENGINEERING** **(CCE)**



**CCS108 – Object-Oriented Programming**

**Laboratory Exercise No. 9**

***Class Inheritance***

Submitted by:

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| **2CS-B** |

[Section]

Submitted to:

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| **Prof. Terrence A. Lim** |

[Name of Instructor/Professor]

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**GRADE**

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| 11/14/22 |

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***Laboratory Exercise No. 9***

**Class Inheritance**



**I. OBJECTIVES**

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| **At the end of the exercise, the students are expected to:**   * **Define and construct the classes implementing such inheritance.** * **Access the superclass constructor using the super keyword.** * **Implement the method overriding.** |

**II. EQUIPMENT/MATERIALS**

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| **The following equipment or materials will be needed to perform the laboratory exercise:**   * **PC with Java Compiler and IDE (Eclipse, NetBeans, jGrasp, etc.)** * **Internet Connection for Online Java Compiler/Editor and Submission** * **USB for backup and file storage** |

**III. PROCEDURE/DISCUSSION**

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| Laboratory Work A. You will need to construct a program with the name "Employee" that will inherit from the  class Person.   * Finish the **extends** statement in the Employee class header. * Write the Employee constructor, and do not forget your call the super. * Create two private class variables: an int *empNum*, and a double *hourlyPay.* * Since they are both private variables, write getters and setters for both variables: *getEmpNum, getHourlyPay, setEmpNum, setHourlyPay.*   B. In the Employee class, complete the *getRaise* method. This method gives the user a  raise, increasing their total hourly pay by 15%. This method also updates the hourly pay  class variable you made as well. Finally, return the value of the new hourlyPay for the  employee. |

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| C. Inside the Employee class, you must create a method *payDay*. This method calculates how  much the employee earned for the week. First, calculate their pay; if the employee worked  more than 40 hours, then any hour OVER 40 is worth 1.5 times their usual salary. It would  be their overtime pay; otherwise, their salary is regular. Then, return their salary for the  week.  D. Inside the Employee class, you must override the toString method. For the said method,  you will use the same output from the Person toString but add two new lines. Using the  Person toString method as your starting point, the first two lines of the new method will look  like this:    **Name: *first\_name* *last\_name***    **They are *height\_feet*’ *height\_inches*“**          You will now also add the lines:    **They make $*hourly\_pay***    **They have the employee number *id\_number***        A new line follows another one, including the last character. Format the hourly pay with  **two digits** after the decimal place. (Remember String.format()? ).  E. Within the Employee class, you will now override the equals method. The method will  return *true* if the employees share the same number *AND* their last names are the same.  If they are not the same, the said method will return *false*.    *HINT*: Go back or look for the example about the *instanceof* keyword. Does that look  similar to what we are trying to do?  F. Lastly, save the entire application with a name or folder CCS108LE9 with a package as  pnc.laboratory.exercise9. |

**IV. DATA REPRESENTATION / OUTPUT PICTURES**

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| ***Covida link:*** [*https://www.codiva.io/p/d42fa463-d087-4880-85af-606f587c8daf*](https://www.codiva.io/p/d42fa463-d087-4880-85af-606f587c8daf)  **Employee.class** |
| **Person.class** |
| **Main.class**    **Result:** |

**V. RESULTS INTERPRETATION/OBSERVATION**

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| The result of the laboratory exercise no.9 is like a payday or a payday system. First is we collect the names of the employee. Then we calculate the raise of their pay by simply adding a 15% to their payday hours. Then we check if the hourly oay is more than 40, if it is more than is we times it to 1.5,else is we don’t 1.5 raise. Then the last is we create a method to check if the employee is same, if it is same we return true, else false. We alse get their height. |

**VI. CONCLUSIONS**

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| In this laboratory exercise is we use a inheritance, Inheritance in Java is the method to create a hierarchy between classes by inheriting from other classes. we also used the super keyword and extends keyword. The super keyword refers to superclass (parent) objects. It is used to call superclass methods, and to access the superclass constructor. then the extends keyword extends a class indicates that a class is inherited from another class. We also have a subclass and a parentclass, the subclass is the one who inherent the classfields or methods of a parentclass. |

**VII. STUDENT OUTCOMES ADDRESSED**

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| ***(… to fill out by your instructor)*** |

**VIII. APPENDICES**

1. **RUBRICS AND SCORING**

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| ***(… kindly refer to rubrics and scoring provided)*** |