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Computer Science II

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Module 3: Assignment 1

For this assignment I used the website below to help me understand the code and what all it was doing, this was the biggest project I have coded so far so it really helped to see what it would look like. As far as the code goes, I didn’t copy and paste, I typed it all out to try and help me remember, and on the majority of it I just needed to see a few syntax rules and was able to code the majority of it without referring to the website.

<http://soultionmanual.blogspot.com/2016/10/chapter-11-exercise-2-introduction-to.html>

My Code:

**package** Roster;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* (The Person, Student, Employee, Faculty, and Staff classes) Design a \*

\* class named Person and its two subclasses named Student and Employee. \*

\* Make Faculty and Staff subclasses of Employee. A person has a name, \*

\* address, phone number, and email address. A student has a class status \*

\* (freshman, sophomore, junior, or senior). Define the status as a constant. An \*

\* employee has an office, salary, and date hired. Use the MyDate class defined \*

\* in Programming Exercise 10.14 to create an object for date hired. A faculty \*

\* member has office hours and a rank. A staff member has a title. Override the \*

\* toString method in each class to display the class name and the person’s name. \*

\* Draw the UML diagram for the classes and implement them. Write a test program \*

\* that creates a Person, Student, Employee, Faculty, and Staff, and invokes \*

\* their toString() methods. \*

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**public** **class** Main {

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

Person person = **new** Person("Person");

Student student = **new** Student("Student");

Employee employee = **new** Employee("Employee");

Faculty faculty = **new** Faculty("Faculty");

Staff staff = **new** Staff("Staff");

System.***out***.println(person.toString());

System.***out***.println(student.toString());

System.***out***.println(employee.toString());

System.***out***.println(faculty.toString());

System.***out***.println(staff.toString());

}

}

**package** Roster;

**public** **class** Person {

**protected** String name;

**protected** String address;

**protected** String phoneNumber;

**protected** String email;

**public** Person(String name) {

**this**.name = name;

}

**public** String getName() {

**return** name;

}

//get address

**public** String getAddress() {

**return** address;

}

//set address

**public** **void** setAddress(String address) {

**this**.address = address;

}

//get phone number

**public** String getPhoneNumber() {

**return** phoneNumber;

}

//set phone number

**public** **void** setPhoneNumber(String phoneNumber) {

**this**.phoneNumber = phoneNumber;

}

//get email

**public** String getEmail() {

**return** email;

}

//set email

**public** **void** setEmail(String email) {

**this**.email = email;

}

@Override

**public** String toString() {

**return** "Name: " + getName() + " Class: " + **this**.getClass().getName();

}

}

**package** Roster;

**public** **class** Student **extends** Person {

**public** **static** **final** String ***FRESHMAN*** = "Freshman";

**public** **static** **final** String ***SOPHOMORE*** = "Sophomore";

**public** **static** **final** String ***JUNIOR*** = "Junior";

**public** **static** **final** String ***SENIOR*** = "Senior";

**protected** String status;

**public** Student(String name) {

**super**(name);

}

**public** Student(String name, String status) {

**super**(name);

**this**.status = status;

}

@Override

**public** String toString() {

**return** "Name: " + getName() + " Class: " + **this**.getClass().getName();

}

}

**package** Roster;

**public** **class** Faculty **extends** Employee {

**public** **static** String *LECTURER* = "Lecturer";

**public** **static** String *ASSISTANT\_PROFESSOR* = "Assistant Professor";

**public** **static** String *ASSOCIATE\_PROFESSOR* = "Associate Professor";

**public** **static** String *PROFESSOR* = "Professor";

**protected** String officeHours;

**protected** String rank;

**public** Faculty(String name) {

**this**(name, "9-5PM", "Employee");

}

**public** Faculty(String name, String officeHours, String rank) {

**super**(name);

**this**.officeHours = officeHours;

**this**.rank = rank;

}

**public** String getOfficeHours() {

**return** officeHours;

}

**public** **void** setOfficeHours(String officeHours) {

**this**.officeHours = officeHours;

}

**public** String getRank() {

**return** rank;

}

**public** **void** setRank(String rank) {

**this**.rank = rank;

}

@Override

**public** String toString() {

**return** "Name: " + getName() + " Class: " + **this**.getClass().getName();

}

}

**package** Roster;

**public** **class** Staff **extends** Employee {

**protected** String title;

**public** Staff(String name) {

**this**(name, "none");

}

**public** Staff(String name, String title) {

**super**(name);

**this**.title = title;

}

**public** String getTitle() {

**return** title;

}

**public** **void** setTitle(String title) {

**this**.title = title;

}

@Override

**public** String toString() {

**return** "Name: " + getName() + " Class: " + **this**.getClass().getName();

}

}

My Code Output:

Name: Person Class: Roster.Person

Name: Student Class: Roster.Student

Name: Employee Class: Roster.Employee

Name: Faculty Class: Roster.Faculty

Name: Staff Class: Roster.Staff