Assignment #5: Inheritance and Interfaces

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For CST8284

**Task #1**: Create a class with a method that prints “This is a parent class” and its subclass with another method that prints “this is child class”. Now, create an object for each of the class and call

* Method of parent class by object of parent class
* Method of child class by object of child class
* Method of parent class by object of child class

A screenshot of a computer program

Description automatically generated

Parent class and method pictured above.

A screen shot of a computer program

Description automatically generated

**Task #2:** Create a class named 'Member' having the following members:

Data members:

1. Name
2. Age
3. Phone Number
4. Address
5. Salary

It also has a method named 'printSalary' which prints the salary of the members. Two classes 'Employee' and 'Manager' inherits the 'Member' class. The 'Employee' and 'Manager' classes have data members 'specialization' and 'department' respectively.

Now, assign name, age, phone number, address and salary to an employee and a manager by making an object of both of these classes and print the same.

Manager child class pictured below

A screen shot of a computer

Description automatically generated

Employee child class pictured below

A screen shot of a computer program

Description automatically generated

A screenshot of a computer

Description automatically generatedMember class, main method, and output pictured above. Data values were assigned to the required classes and was printed accordingly.

**Task #3:** Create a class named 'Shape' with a method to print "This is This is shape". Then create two other classes named 'Rectangle', 'Circle' inheriting the Shape class, both having a method to print "This is rectangular shape" and "This is circular shape" respectively. Create a subclass 'Square' of 'Rectangle' having a method to print "Square is a rectangle". Now call the method of 'Shape' and 'Rectangle' class by the object of 'Square' class.

A screen shot of a computer code

Description automatically generated

Circle child class pictured above

A screen shot of a computer program

Description automatically generated

Rectangle class pictured above

A screen shot of a computer program

Description automatically generated

Shape class pictured above

A screenshot of a computer program

Description automatically generated

Rectangle class and main method/output pictured above. The methods have been called via the square child class.