**Course Project   
DeVry University  
College of Engineering and Information Sciences**

**Course Number: CEIS420**

Final Project

Objectives

* To use design patterns effectively in a program
* To create a project using principles of object oriented programming

Introduction

This course covered advanced techniques in programming and design. One such advanced technique is design patterns. The factory pattern was covered in an earlier module This module involves implementing the iterator pattern.

Requirements

Using any high level programming language, create a Sales Tracking program.

1. The program should have a **SalesPerson** class that contains the person’s name, title, and sales (this should be an ArrayList of double values to store sales figures). Appropriate getters, setters, and constructors should be created.
2. An iterator must be implemented in the SalesPerson class. Example:
3. public Iterator<Double> iterSales() {
4. return sales.iterator();
5. }
6. The main program should ask the user to enter the name, title, and at least 3 sales figures for 3 different sales people. Add these sales people to an ArrayList of sales people.
7. The sales report method should print out all information for each sales person by using an iterator. The data printed should be: total sales, min sales, max sales, average sales and total for the entire company.
8. NOTE: for full credit, you must be one of the sales people.

Example snippet of code to create report using iterator

Text

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The output should look similar to the following. Feel free to be creative!

run:

Please enter sales person name: Han

Please enter your sales person title: Manager

How many sales values will you enter for this sales person? 4

Please enter sales figure for Han: 500

Please enter sales figure for Han: 450

Please enter sales figure for Han: 300

Please enter sales figure for Han: 200

Please enter sales person name: Luke

Please enter your sales person title: Associate

How many sales values will you enter for this sales person? 3

Please enter sales figure for Luke: 150

Please enter sales figure for Luke: 250

Please enter sales figure for Luke: 800

Please enter sales person name: Leia

Please enter your sales person title: Assistant

How many sales values will you enter for this sales person? 4

Please enter sales figure for Leia: 300

Please enter sales figure for Leia: 800

Please enter sales figure for Leia: 200

Please enter sales figure for Leia: 150

Sales person: Han

Total Sales: $4,100.00

Min Sales: $150.00

Max Sales: $800.00

Average Sales: $372.73

----------------------------------------------------

Sales person: Luke

Total Sales: $4,100.00

Min Sales: $150.00

Max Sales: $800.00

Average Sales: $372.73

----------------------------------------------------

Sales person: Leia

Total Sales: $4,100.00

Min Sales: $150.00

Max Sales: $800.00

Average Sales: $372.73

----------------------------------------------------

Company total sales: $12,300.00

BUILD SUCCESSFUL (total time: 1 minute 23 seconds)

Upload your project to github

**Create GitHub Account**

Developers use the Git tool to track and manage changes to their projects. GitHub is a website that lets you host and manage projects using Git. These tools work together and let developers manage projects with multiple developers. We will use Git and GitHub so that you can get experience with the tools used by professionals.

You can create your GitHub account at <https://github.com/>

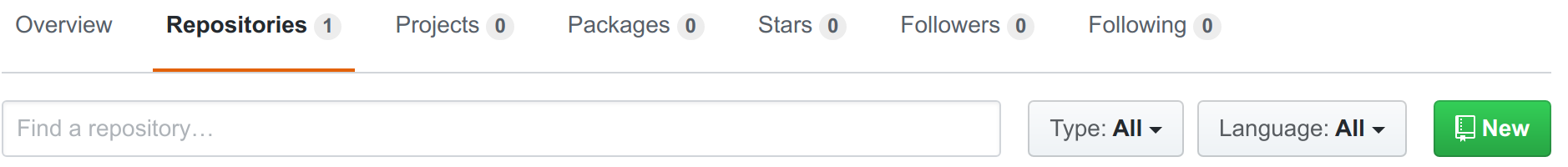
Create and Clone Repository

Git uses repositories to manage the files that make up your project. First, we will create a repository on GitHub. Then we will clone it to your project folder on your local computer. Git will keep track of any changes you make, and you will be able to stage and commit those changes back to GitHub at any point during your development.

Once you have logged into GitHub, click on the menu at the top-right of the page and go to **Your repositories.** Graphical user interface

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On the Repositories page, click New.



Enter the information for your repository and create new repository:

**Repository Name (Example: Final Project or My Final Project, something like that)**

**Description (Optional)**

**Select Private**

**Check Initialize this repository with a README**

**Click Create repository**

A screenshot of a computer

Description automatically generated with medium confidence

On the repository page, click the Add file Button and choose Upload Files

A close-up of a computer screen

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(If you are not on the repository page, you can use the menu at the top-right of the page to go to your repositories page).

To submit your repository, click on the Green code button and copy the link listed:

A screenshot of a computer

Description automatically generated with medium confidence

Final Project Deliverables

Create a Word document report or PowerPoint with the following sections:

* Introduction – (1 paragraph or 1 slide)
* Comparison of OOP, functional, and structured programming languages (1 paragraph or 1 slide)
* Explanation of Design Patterns especially the Iterator pattern (1 paragraph or 1 slide)
* SalesPerson class (all code)
* Main program and functions (all code)
* Any other classes/functions that were created (all code)
* Screenshot of program running
* All code commented and professionally written
* Link to Github
* Conclusion (1 paragraph or 1 slide)

Zipped final project should also be submitted