Java Essentials Module 2 Assignment

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Please use the jar file to test the program.

Command: java -jar Module2Assignment.jar

Notes:

* ArrayList has been chosen to hold array elements as this can add additional elements which is more like a real life system (i.e. adding new employees)
* ArrayList can only hold objects so strings have been passed and used to store information
* ArrayLists are declared as static so passing to functions is unnecessary but performed to demonstrate overloading
* Pre-processing of employee ID can be performed by converting to string (e.g using static int with increments to generate new IDs before padding with characters to make 3 digit numbers)
* Pre or post processing of salary can be performed by converting to or from string to double or float

EmployeeArrays Class (contains main()):

import java.util.ArrayList;

import java.util.Scanner;

public class EmployeeArrays {

static Scanner adminInput = new Scanner(System.in);

static ArrayList<String> employeeIDArray = new ArrayList<>();

static ArrayList<String> employeeNameArray = new ArrayList<>();

static ArrayList<String> employeeSalaryArray = new ArrayList<>();

public static void main(String[] args) {

for (int i = 1; i < 6; i++) {

System.out.println("Please enter employee ID: ");

String employeeIDInput = adminInput.nextLine();

System.out.println("Please enter employee name: ");

String employeeNameInput = adminInput.nextLine();

System.out.println("Please enter employee salary (£): ");

String employeeSalaryInput = adminInput.nextLine();

employeeIDArray.add(employeeIDInput);

employeeNameArray.add(employeeNameInput);

employeeSalaryArray.add(employeeSalaryInput);

System.out.println("--------------------------------- ");

}

display(employeeIDArray, employeeNameArray);

display(employeeIDArray, employeeNameArray, employeeSalaryArray);

for (;;) {

System.out.println("\n---------------------------------\n ");

searchName();

}

}

# Display Methods

public static void display(ArrayList<String> employeeIDArray, ArrayList<String> employeeNameArray) {

System.out.println("");

System.out.println("ID \tName");

for (int i = 0; i < employeeIDArray.size(); i++) {

System.out.print(employeeIDArray.get(i) + "\t");

System.out.print(employeeNameArray.get(i) + "\t");

System.out.println();

}

}

public static void display(ArrayList<String> employeeIDArray, ArrayList<String> employeeNameArray, ArrayList<String> employeeSalaryArray) {

System.out.println("");

System.out.println("ID \tName \tSalary");

for (int i = 0; i < employeeIDArray.size(); i++) {

System.out.print(employeeIDArray.get(i) + "\t");

System.out.print(employeeNameArray.get(i) + "\t");

System.out.print("£" + employeeSalaryArray.get(i) + "\t");

System.out.println();

}

}

public static void display(ArrayList<String> employeeIDArray, ArrayList<String> employeeNameArray, ArrayList<String> employeeSalaryArray, int i) {

System.out.println("");

System.out.println("ID \tName \tSalary");

System.out.print(employeeIDArray.get(i) + "\t");

System.out.print(employeeNameArray.get(i) + "\t");

System.out.print("£" + employeeSalaryArray.get(i) + "\t");

System.out.println();

}

# searchName Method

public static void searchName() {

System.out.println("Search for employee by name:");

String nameSearchInput = adminInput.nextLine();

int i;

for (i = 0; i < employeeIDArray.size(); i++) {

if (employeeNameArray.get(i).equals(nameSearchInput))

break;

}

if (i == employeeIDArray.size())

System.out.println("Employee name not recognised.");

else

display(employeeIDArray, employeeNameArray, employeeSalaryArray, i);

}

# *}*

# Output:

Please enter employee ID:

001

Please enter employee name:

John

Please enter employee salary (£):

60000

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

Please enter employee ID:

002

Please enter employee name:

Clark

Please enter employee salary (£):

55000

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

Please enter employee ID:

003

Please enter employee name:

Nancy

Please enter employee salary (£):

50000

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

Please enter employee ID:

004

Please enter employee name:

Joe

Please enter employee salary (£):

50000

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

Please enter employee ID:

005

Please enter employee name:

Mary

Please enter employee salary (£):

30000

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

ID Name

001 John

002 Clark

003 Nancy

004 Joe

005 Mary

ID Name Salary

001 John £60000

002 Clark £55000

003 Nancy £50000

004 Joe £50000

005 Mary £30000

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

Search for employee by name:

Clark

ID Name Salary

002 Clark £55000

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

Search for employee by name:

Mary

ID Name Salary

005 Mary £30000

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

Search for employee by name:

John

ID Name Salary

001 John £60000

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

Search for employee by name:

Joseph

Employee name not recognised.

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Search for employee by name: