Java Collection & Package

Task Description:

1. Create a package named "com.example.hr" that includes an Employee class. The Employee class should have the following fields:

name - a string that represents the employee's name.

id - an integer that represents the employee's ID number.

salary a double that represents the employee's salary.

a. The Employee class should also have the following methods:

b. public void printName() - a method that prints the employee's name to the console.

c. public void printSalary() - a method that prints the employee's salary to the console.

d. Create a second package named "com.example.hrtest" that includes a class named "Employee Test". The "EmployeeTest" class should include a main method that creates an instance of the 'Employee" class, sets the employee's name, ID number, and salary, and calls its methods to print the employee's name and salary to the console.

e. In your main method, use the "import" statement to import the "com.example.hr" package and access the "Employee" class.

f. Compile and run your program to verify that it successfully creates an instance of the "Employee" class and calls its methods to print the employee's name and salary to the console.

Program:

package com.example.hr;

public class Employee {

public String name;

public int id;

public double salary;

public void printName() {

System.out.println("Employee name: "+ name);

}

public void printSalary() {

System.out.println("Employee Salary: "+ salary);

}

public void printId() {

System.out.println("Employee id: "+id);

}

}

package com.example.hrtest;

import com.example.hr.Employee;//importing employee class from package com.example.hr

public class EmployeeTest{

public static void main(String[] args) {

Employee employee = new Employee();//entering required info

employee.name = "Vinoth";

employee.id=101;

employee.salary=10000.0;

employee.printName();

employee.printId();

employee.printSalary();

}

}

Output:

Employee name: Vinoth

Employee id: 101

Employee Salary: 10000.0

﻿

2. Write a Java program to create an ArrayList of strings and then remove all the elements from the ArrayList.

Program:

//importing required package

import java.util.ArrayList;

public class Arraylist {

public static void main(String[] args) {

// Creating array list

ArrayList<String> list=new ArrayList<String>();

list.add("Vinoth");

list.add("Kumar");

System.out.println(list);

//Removing list elements

list.clear();

System.out.println(list);

}

}

Output:

[Vinoth, Kumar]

[]

3. Write a Java program to create a TreeMap of employee IDs and names. Then, print out the names of all the employees in alphabetical order.

Program:

//importing required package

import java.util.TreeMap;

public class Treemap {

public static void main(String[] args) {

// Creating Treemap of employee IDs and names

TreeMap<Integer,String> employees=new TreeMap<>();

employees.put(1, "Vinoth");

employees.put(2, "Madhan");

employees.put(3, "Chandru");

employees.put(4,"Arnold");

//Printing names in alphabetical order

employees.values().stream().sorted().forEach(System.out::println);

//stream() and sorted() methods are used to sort the inputs

}

}

Output:

Arnold

Chandru

Madhan

Vinoth

4. Write a program to convert List to Array

Program:

//importing required package

import java.util.ArrayList;

import java.util.List;

public class ListToArray {

public static void main(String[] args) {

// Creating list

List<String> list=new ArrayList<>();

list.add("Java");

list.add("Python");

list.add("Selenium");

//Converting list to Arrat

String[] array=list.toArray(new String[0]);

//toArray() method is used to convert list to array

for(String codingLanguage : array) {

System.out.println(codingLanguage);

}

}

}

Output:

Java

Python

Selenium