1)

package generics;

import java.util.HashSet;

import java.util.Set;

public class Employee {

private int empId;

private String empName;

private int salary;

private String department;

private String displaydetails;

public Employee(int empId, String empName ,int salary, String department, String displaydetails) {

super();

this.empId = empId;

this.empName = empName;

this.salary = salary;

this.department = department;

this.displaydetails = displaydetails;

}

public final int getEmpId() {

return empId;

}

public final void setEmpId(int empId) {

this.empId = empId;

}

public final String getEmpName() {

return empName;

}

public final void setEmpName(String empName) {

this.empName = empName;

}

public final int getsalary() {

return salary;

}

public final void setsalary(int salary) {

this.salary = salary;

}

public final String getdepartment() {

return department;

}

public final void setdepartment(String department) {

this.department = department;

}

public final String getdisplaydetails() {

return displaydetails;

}

public final void setdisplaydetails(String displaydetails) {

this.displaydetails= displaydetails;

}

@Override

public String toString() {

return "Employee [empId=" + empId + ", empName=" + empName + ", salary="+ salary + ", department="+department+", displaydetails=" +displaydetails+ "]";

}

@Override

public int hashCode() {

return this.empId;

}

@Override

public boolean equals(Object obj) {

Employee employee = (Employee) obj;

if (employee.empId == this.empId) {

employee.setEmpName(this.empName);

return true;

} else {

return false;

}

}

public static void main(String[] args) {

Set<Employee> employees = new HashSet<>();

employees.add(new Employee(1, "Raj" , 25000, "abc", "details1"));

employees.add(new Employee(1, "Pradeep",35000, "abc11", "details2"));

employees.add(new Employee(1, "Kumar",45000, "abc22", "details3"));

employees.add(new Employee(2, "Chandan",55000, "abc33", "details4"));

employees.add(new Employee(2, "Amitava",65000, "abc44", "details5"));

System.out.println(employees);

}

}

2)

**package** generics;

**import** java.util.HashMap;

**public** **class** HashMap2 {

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

HashMap<Integer , Double>hm = **new** HashMap<Integer , Double>();

hm.put(1, 2.15);

hm.put(2, 3.15);

hm.put(3, 4.15);

hm.put(4, 5.15);

hm.put(5, 6.15);

hm.put(6, 7.15);

hm.put(7, 8.15);

hm.put(8, 9.15);

hm.put(9, 10.15);

hm.put(10, 11.15);

System.***out***.println(hm);

}

}

3)

**package generics;**

**import java.util.ArrayList;**

**import java.util.Arrays;**

**import java.util.Collections;**

**import java.util.List;**

**public class Exchange {**

**public static final <T> void swap (T[] a, int i, int j) {**

**T t = a[i];**

**a[i] = a[j];**

**a[j] = t;**

**}**

**public static final <T> void swap (List<T> l, int i, int j) {**

**Collections.<T>swap(l, i, j);**

**}**

**private static void test() {**

**String [] a = {"Hello", "Goodbye"};**

**swap(a, 0, 1);**

**System.out.println("a:"+Arrays.toString(a));**

**List<String> l = new ArrayList<String>(Arrays.asList(a));**

**swap(l, 0, 1);**

**System.out.println("l:"+l);**

**}**

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

**test();**

**}**

**}**