**Generic Assignment**

1. import java.util.HashSet;

public class GenericEmployee{

private int id;

private String name;

private double salary;

private String department;

public GenericEmployee(int id, String name, double salary, String department) {

this.id = id;

this.name = name;

this.salary = salary;

this.department = department;

}

public int getId() {

return id;

}

public void setId(int id) {

this.id = id;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public double getSalary() {

return salary;

}

public void setSalary(double salarylary) {

this.salary = salary;

}

public String getDepartment() {

return department;

}

public void setDepartment(String department) {

this.department = department;

}

public String displayDetails(){

return "GenericEmployee{" +

"id=" + id +

", name='" + name + '\'' +

", salary='" + salary + '\'' +

", department='" + department + '\'' +

'}';

}

}

class Main{

public static void main(String[] args) {

HashSet<GenericEmployee> employees = new HashSet<>();

employees.add(new GenericEmployee(1,"abcd",3000,"IT"));

employees.add(new GenericEmployee(2,"efgh",4000,"CyberSecurity"));

employees.add(new GenericEmployee(3,"ijjk",5000,"HR"));

employees.add(new GenericEmployee(4,"lmno",5000,"Business"));

employees.add(new GenericEmployee(5,"pqrst",9000,"Finance"));

employees.add(new GenericEmployee(6,"uvwx",4400,"Accounts"));

for(GenericEmployee e : employees){

System.out.println(e.displayDetails());

}

}

}

2. import java.util.HashMap;

import java.util.Map;

import java.util.Random;

public class RandomvaluesinMap {

public static void main(String[] args) {

HashMap<Integer , Double> randomMap= new HashMap<>();

Random r = new Random();

for(int i = 1 ; i <= 10 ; i++){

int key = r.nextInt();

double value = r.nextDouble();

randomMap.put(key,value);

}

for(Map.Entry entry : randomMap.entrySet()){

System.out.println("Key : "+entry.getKey()+" Value : "+entry.getValue());

}

}

}

3. public class GenericSwapMethod {

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

T temp = array[i];

array[i] = array[j];

array[j] = temp;

}

public static void main(String[] args) {

Integer [] a = {5,6,5,4,7,4,3,};

swap(a,5,4); // swap Integer array

for(Integer e : a){

System.out.print(e +" ");

}

System.out.println();

String [] b = {"hello","how","are","you","?"};

swap(b,2,4); // swap String array

for (String s: b) {

System.out.print(s +" ");

}

}

}

4. class Main2{

public static void main(String[] args) {

Pair myObj = new Pair();

myObj.setKey("13829");

myObj.setValue("only String value");

// set the date

myObj.setKey("Today is ");

myObj.setValue(new java.util.Date().toString()); // convert to string

System.out.println(myObj);

}

}

public class Pair

{

private String key;

private String value;

public String getKey() {

return key;

}

public void setKey(String key) {

this.key = key;

}

public String getValue() {

return value;

}

public void setValue(String value) {

this.value = value;

}

@Override

public String toString() {

return "Pair { " + key + " "+ value + " }";

}

}