**Assignments on Generics**

1. Use Hashset to hold Employee Objects. Upon running the application, the details of the employees added to the Hashset should be displayed.

import java.util.HashMap;

import java.util.Map;

class Employee{

int id,salary;

String name,department;

public Employee(int id,int salary,String name,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 int getSalary()

{

return salary;

}

public void setSalary(int sal)

{

this.salary=salary;

}

public String getName()

{

return name;

}

public String setName()

{

this.name=name;

}

public String getDepartment()

{

return department;

}

public String setDepartment()

{

this.department=department;

}

public void displaydetails()

{

System.out.println(“Id:”+getId()+”Salary:”+getSalary()+”Name:”+getName()+ “Department:” +getDepartment());

}

}

public class Hashset {

public static void main(String[] args)

{

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

Employee e=new Employee(1,35000,”Dineshwari”,”Analyst”);

set.add(emp);

emp.displaydetails();

}

}

1. Write an application to hold 10 random int values as keys and 10 random double values as values for a Hashmap.Print the data store in the Hashmap.

Note: Keys can only be int and values double

import java.util.HashMap;

import java.util.Map;

public class Hashmap{

{

Public static void main(String[] args)

{

Map<Integer,Double> map=new HashMap<>();

map.put(21,32.5);

map.put(24,35.2);

map.put(34,20.3);

map.put(22,32.4);

map.put(31,82.5);

map.put(37,90.0);

map.put(11,40.3);

map.put(35,55.9);

map.put(70,32.5);

map.put(33,93.9);

System.out.println(map);

}

}

1. Write a generic method to exchange the positions of two different elements in an array.

import java.util.Arrays;

public class GenericMethod{

public static <T> void swap(T[] a, int i, int j) {  
 T temp=a[i];

a[i]=a[j];

a[j]=temp;

}

public static void main(String[] args)

{

String[] s={“1”,”2”,”3”};

System.out.println(“Before swapping:”+Arrays.toString(s));

swap(s,0,2);

System.out.println(“After swapping:”+Arrays.toString(s));

}

}

1. Design a class named Pair which has two properties.

a)

import java.util.HashMap;

import java.util.Map;

public class pair{

public static void main(String[] args){

Map<String,String>map=new HashMap<>();

map.put(“Hello”,5);

map.put(“World”,6);

System.out.println(map);

}

}

b)

import java.util.Date;

import java.util.HashMap;

import java.util.Map;

public class pair1{

public static void main(String[] args){

Map<String,Date>map=new HashMap<>();

map.put(“Today is”, new java.util.Date());

System.out.println(map);

}

}