**Program -1 – How to return map to method**

package com.hashmap;

import java.util.HashMap;

import java.util.Map;

public class HashMapDemo5 {

public HashMap<Integer,String> a Employee(){

HashMap<Integer, String> hashMap= new HashMap<Integer,String>();

hashMap.put(10, "rohan");

hashMap.put(20, "sohan");

hashMap.put(30, "velocity");

return hashMap;

}

public static void main(String[] args) {

HashMapDemo5 hashMapDemo5= new HashMapDemo5();

System.out.println("first way="+hashMapDemo5.addEmployee()); //1st way

HashMap<Integer, String> hashMap=hashMapDemo5.addEmployee(); //2nd way

System.out.println("second way="+hashMap);

Map<Integer, String> map= hashMapDemo5.addEmployee(); //3rd way

System.out.println("third way="+map);

}

}

**Program-2 Can we take custom Employee class as key in hashmap**

**package** com.hashmap;

**public** **class** Employee {

**int** id = 10;

String name = "ram";

String salary = "5000";

**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** String getSalary() {

**return** salary;

}

**public** **void** setSalary(String salary) {

**this**.salary = salary;

}

}

**package** com.hashmap;

**import** java.util.HashMap;

**public** **class** HashMapDemo6 {

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

HashMap<Employee, String> hashMap= **new** HashMap<Employee,String>();

Employee employee= **new** Employee();

//employee as object in map as key and name as value

hashMap.put(employee, employee.getSalary());

System.***out***.println(hashMap.get(employee));

}

}

**Program- 3**

Suppose, I have business requirement as below

Business requirements-

India

Maharashtra

Pune

Mumbai

Nagpur

Karnataka

Bangalore

mysore

Madhyapradesh

indore

Bhopal

**package** com.hashmap;

**import** java.util.\*;

**public** **class** ArrayListHashMap {

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

ArrayList<String> maharashtra = **new** ArrayList<String>();

maharashtra.add("pune");

maharashtra.add("mumbai");

maharashtra.add("nagpur");

ArrayList<String> karnataka = **new** ArrayList<String>();

karnataka.add("bangalore");

karnataka.add("mysore");

ArrayList<String> madhyapradesh = **new** ArrayList<String>();

madhyapradesh.add("indore");

madhyapradesh.add("bhopal");

HashMap<String, ArrayList<String>> hmstate = **new** HashMap<String, ArrayList<String>>();

hmstate.put("MH", maharashtra);

hmstate.put("KAR", karnataka);

hmstate.put("MP", madhyapradesh);

HashMap<String, HashMap<String, ArrayList<String>>> hmcountry = **new** HashMap<String, HashMap<String, ArrayList<String>>>();

hmcountry.put("India", hmstate);

// iterate and print the data

Set<String> s = hmcountry.keySet();

**for** (String str : s) { //iterate using iterator or list iterator for practice

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

System.***out***.println(hmcountry.get(str));

}

}

}

Suppose, I have business requirement as below

Business requirements-

E Shop

Computer & Accessories

Watch

Speaker

Laptop

Electronics

Printer

Mouse

Keyboards

Furniture

Bed

Chair

Sofa

**package** com.test;

**import** java.util.ArrayList;

**import** java.util.HashMap;

**import** java.util.Set;

**public** **class** HashMapDemo {

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

ArrayList<String> computeraccessories = **new** ArrayList<String>();

computeraccessories.add("watch");

computeraccessories.add("speaker");

computeraccessories.add("laptop");

ArrayList<String> electronics = **new** ArrayList<String>();

electronics.add("printer");

electronics.add("mouse");

electronics.add("keyboards");

ArrayList<String> furniture = **new** ArrayList<String>();

furniture.add("bed");

furniture.add("sofa");

furniture.add("chair");

HashMap<String, ArrayList<String>> categories = **new** HashMap<String, ArrayList<String>>();

categories.put("Computer", computeraccessories);

categories.put("Electronics", electronics);

categories.put("Furniture", furniture);

HashMap<String, HashMap<String, ArrayList<String>>> eShop = **new** HashMap<String, HashMap<String, ArrayList<String>>>();

eShop.put("E Shop", categories);

// iterate and print the data

Set<String> s = eShop.keySet();

**for** (String str : s) { // iterate using iterator or list iterator for practice

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

System.***out***.println(eShop.get(str));

}

}

}