Hands-On Exercises

Map

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# Map

## Assignment 01

Develop a java class with a instance variable M1 (HashMap) create a method saveCountryCapital(String CountryName, String capital) , the method should add the passed country and capital as key/value in the map M1 and return the Map (M1).

Key- Country Value - Capital

India Delhi

Japan Tokyo

2. Develop a method getCapital(String CountryName) which returns the capital for the country passed, from the Map M1 created in step 1.

3. Develop a method getCountry(String capitalName) which returns the country for the capital name, passed from the Map M1 created in step 1.

4. Develop a method which iterates through the map M1 and creates another map M2 with Capital as the key and value as Country and returns the Map M2.

Key – Capital Value – Country

Delhi India

Tokyo Japan

5. Develop a method which iterates through the map M1 and creates an ArrayList with all the Country names stored as keys. This method should return the ArrayList.

NOTE: You can test the methods using a main method.

## Assignment 02

Create a Collection called HashMap which is capable of storing String objects. The program should have the following abilities

a) Check if a particular key exists or not.

b) Check if a particular value exists or not.

c) Use Iterator to loop through the map.

## Assignment 03

Write a program that will have a Properties class object which is capable of storing some States of India and their Capital.

Use an Iterator to list all the elements stored in the Properties.

## Assignment 04

Create a Collection “ContactList” using HashMap to store name and phone number of contacts added. The program should use appropriate generics (String, Integer) and have the following abilities:

a) Check if a particular key exists or not.

b) Check if a particular value exists or not.

c) Use Iterator to loop through the map.

## Assignment 05

Implement the assignment 1 using TreeMap

1. Develop a java class with a instance variable M1 (HashMap) create a method saveCountryCapital(String CountryName, String capital) , the method should add the passed country and capital as key/value in the map M1 and return the Map (M1).

Key- Country Value - Capital

India Delhi

Japan Tokyo

2. Develop a method getCapital(String CountryName) which returns the capital for the country passed, from the Map M1 created in step 1.

3. Develop a method getCountry(String capitalName) which returns the country for the capital name, passed from the Map M1 created in step 1.

4. Develop a method which iterates through the map M1 and creates another map M2 with Capital as the key and value as Country and returns the Map M2.

Key – Capital Value – Country

Delhi India

Tokyo Japan

5. Develop a method which iterates through the map M1 and creates an ArrayList with all the Country names stored as keys. This method should return the ArrayList.

NOTE: You can test the methods using a main method.

## Assignment 06

Implement the assignment 1 using HashTable

1. Develop a java class with a instance variable M1 (HashMap) create a method saveCountryCapital(String CountryName, String capital) , the method should add the passed country and capital as key/value in the map M1 and return the Map (M1).

Key- Country Value - Capital

India Delhi

Japan Tokyo

2. Develop a method getCapital(String CountryName) which returns the capital for the country passed, from the Map M1 created in step 1.

3. Develop a method getCountry(String capitalName) which returns the country for the capital name, passed from the Map M1 created in step 1.

4. Develop a method which iterates through the map M1 and creates another map M2 with Capital as the key and value as Country and returns the Map M2.

Key – Capital Value – Country

Delhi India

Tokyo Japan

5. Develop a method which iterates through the map M1 and creates an ArrayList with all the Country names stored as keys. This method should return the ArrayList.

NOTE: You can test the methods using a main method.

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