

ITCS231

Data Structures and Algorithm Analysis

Programming Project 2

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Section 1

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## HashMap to generate the postcode

Code:

```
1 import java.io.BufferedReader;
2 // Waris Damkham 6388014 Sec 1
3 public class project2 {
4     public static void main(String args[]) throws IOException
5     {
6         HashMap<String, String> map0 = new HashMap<String, String>();
7         HashMap<String, String> map1 = new HashMap<String, String>();
8         HashMap<String, String> map2 = new HashMap<String, String>();
9         HashMap<String, String> map3 = new HashMap<String, String>();
10        BufferedReader read = new BufferedReader(new FileReader("C:\\Users\\HP\\Downloads\\TH\\TH.txt"));
11        String data="";
12        while((data = read.readLine()) != null)
13        {
14            if(data.trim() != null && !data.trim().isEmpty())
15            {
16                String[] line = data.split("\\t");
17                String country = line[0];
18                String postcode = line[1];
19                String place = line[2];
20                String province = line[3];
21                String latitude = line[9];
22                String longitude = line[10];
23                map0.put(place, country);
24                map1.put(place, postcode);
25                map2.put(place, province);
26                map3.put(place, latitude+"", "+longitude");
27            }
28        }
29        read.close();
30        Scanner scc = new Scanner(System.in);
31        Scanner sc = new Scanner(System.in);
32        System.out.println("How many times to generate?");
33        int num = sc.nextInt();
34        for(int i=0; i<num; i++)
35        {
36            System.out.println("Enter Name of place what you want to know: ");
37            String Data = scc.nextLine();
38            if(map1.containsKey(Data) == true)
39            {
40                System.out.println("*****");
41                System.out.println(Data + " are in the : " + map0.get(Data) + (" that stand for Thailand"));
42                System.out.println(Data + " postcode is : " + map1.get(Data));
43                System.out.println(Data + " province is : " + map2.get(Data));
44                System.out.println(Data + " are in latitude and longitude is : " + map3.get(Data));
45                System.out.println("*****");
46            }
47            else
48            {
49                System.out.println("*****");
50                System.out.println(Data + " not found");
51                System.out.println("*****");
52            }
53        }
54        scc.close();
55    }
56 }
```

This program will read the text file but in this case, read the file name "TH.txt." In the text file name, "TH.txt" has a country, postcode, place, province, and latitude longitude. And a program will ask user input of how many times you want to generate the information. Next, it will ask you to input the place's name and then print out the postcode and more information about this place.

The Output:

```
How many times to generate?
5
Enter Name of place what you want to know:
Samphanthawong
*****
Samphanthawong are in the : TH that stand for Thailand
Samphanthawong postcode is : 10100
Samphanthawong province is : Bangkok
Samphanthawong are in latitude and longitude is : 13.7333, 100.5
*****
Enter Name of place what you want to know:
Pom Prap Sattru Phai
*****
Pom Prap Sattru Phai are in the : TH that stand for Thailand
Pom Prap Sattru Phai postcode is : 10100
Pom Prap Sattru Phai province is : Bangkok
Pom Prap Sattru Phai are in latitude and longitude is : 13.7333, 100.5
*****
Enter Name of place what you want to know:
ABC
*****
ABC not found
*****
Enter Name of place what you want to know:
12345
*****
12345 not found
*****
Enter Name of place what you want to know:
Kui Buri
*****
Kui Buri are in the : TH that stand for Thailand
Kui Buri postcode is : 77150
Kui Buri province is : Prachuap Khiri Khan
Kui Buri are in latitude and longitude is : 12.05, 99.8667
*****
```

## Reference

*Why String class is popular key in a HashMap in Java?* (n.d.). Tutorialspoint. Retrieved October 30, 2021,

from <https://www.tutorialspoint.com/why-string-class-is-popular-key-in-a-hashmap-in-java>