**LAB PROGRAM-2**

**AIM:**

Write a Java program that loads names and phone numbers from a text file where the data is organized as one line per record and each field in a record are separated by a tab (\t). It takes a name or phone number as input and prints the corresponding other value from the hash table (hint: use hash tables).

**DESCRIPTION:**

***Hashtable***

* Java Hashtable class implements a hashtable, which maps keys to values. It inherits Dictionary class and implements the Map interface.
* A Hashtable is an array of a list. Each list is known as a bucket. The position of the bucket is identified by calling the hashcode() method. A Hashtable contains values based on the key.
* Java Hashtable class contains unique elements.
* Java Hashtable class doesn't allow null key or value.
* Java Hashtable class is synchronized.
* The initial default capacity of Hashtable class is 11 whereas loadFactor is 0.75.

**Constructors of ArrayList**

|  |  |
| --- | --- |
| **Constructor** | **Description** |
| Hashtable() | It creates an empty hashtable having the initial default capacity and load factor. |
| Hashtable(int capacity) | It accepts an integer parameter and creates a hash table that contains a specified initial capacity. |
| Hashtable(int capacity, float loadFactor) | It is used to create a hash table having the specified initial capacity and loadFactor. |
| Hashtable(Map<? extends K,? extends V> t) | It creates a new hash table with the same mappings as the given Map. |

**PROGRAM**

import java.io.FileInputStream;

import java.util.Scanner;

public class Expt2

{

public static void main(String args[]) throws Exception

{

Hashtable<String, String> ht=new Hashtable<String, String>();

String str,a;

String ar[];

FileInputStream fis=new FileInputStream("myfile.txt");

Scanner sc=new Scanner(fis);

while(sc.hasNext())

{

a=sc.nextLine();

ar=a.split("\t");

ht.put(ar[0],ar[1]);

System.out.println(ht);

}

Scanner s=new Scanner(System.in);

System.out.println("Enter name as given in phonebook: ");

str=s.nextLine();

if(ht.containsKey(str))

{

System.out.println(ht.get(str));

}

else

{

System.out.println("Name not found");

}

}

}

**Output:**

{Ramu=7096567834}

{John=9067812873, Ramu=7096567834}

{John=9067812873, Ramu=7096567834, Nani=7689920345}

Enter name as given in phonebook:

Nani

7689920345