***Bill Splitting –***

import java.util.HashMap;

public class BillSplitter {

public static void main(String[] args) {

// Service information

String[][] services = {

{"LUNCH", "2500", "BALAJI"},

{"MOVIE TICKET", "1000", "ANAND"},

{"TEA/COFFEE", "750", "CHAITHANYA", "DIVYA"}

};

// Create a HashMap to store the individual amounts

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

individualAmounts.put("ANAND", 0);

individualAmounts.put("BALAJI", 0);

individualAmounts.put("CHAITHANYA", 0);

individualAmounts.put("DIVYA", 0);

// Loop through each service and update the individual amounts

for (String[] service : services) {

int bill = Integer.parseInt(service[1]);

String paidBy = service[2];

// Calculate the share for each individual

int numPeople = service.length - 2;

int share = bill / numPeople;

// Update the individual amounts for the people who are interested

for (int i = 2; i < service.length; i++) {

String person = service[i];

if (!person.equals(paidBy)) {

individualAmounts.put(person, individualAmounts.get(person) + share);

}

}

// Add the total amount to the paidBy person

individualAmounts.put(paidBy, individualAmounts.get(paidBy) + bill);

}

// Print the total amount for each service

System.out.println("Total Amount for Each Service:");

for (String[] service : services) {

int bill = Integer.parseInt(service[1]);

System.out.println(service[0] + ": " + bill);

}

// Print the total amount for each individual

System.out.println("Total Amount for Each Individual:");

for (String person : individualAmounts.keySet()) {

System.out.println(person + ": " + individualAmounts.get(person));

}

// Calculate the amount each person needs to pay or receive

System.out.println("Amounts to Pay/Receive:");

for (String person1 : individualAmounts.keySet()) {

for (String person2 : individualAmounts.keySet()) {

if (!person1.equals(person2)) {

int amount1 = individualAmounts.get(person1);

int amount2 = individualAmounts.get(person2);

int diff = amount1 - amount2;

if (diff > 0) {

System.out.println(person1 + " needs to receive " + diff + " from " + person2);

} else if (diff < 0) {

System.out.println(person1 + " needs to pay " + (-diff) + " to " + person2);

}

}

}

}

}

}

***Output-***

Total Amount for Each Service:

LUNCH: 2500

MOVIE TICKET: 1000

TEA/COFFEE: 750

Total Amount for Each Individual:

CHAITHANYA: 750ANAND: 1000

BALAJI: 2500

DIVYA: 375

Amounts to Pay/Receive:

CHAITHANYA needs to pay 250 to ANANDCHAITHANYA needs to pay 1750 to BALAJI

CHAITHANYA needs to receive 375 from DIVYA

ANAND needs to receive 250 from CHAITHANYA

ANAND needs to pay 1500 to BALAJI

ANAND needs to receive 625 from DIVYABALAJI needs to receive 1750 from CHAITHANYA

BALAJI needs to receive 1500 from ANANDBALAJI needs to receive 2125 from DIVYA

DIVYA needs to pay 375 to CHAITHANYA

DIVYA needs to pay 625 to ANAND

DIVYA needs to pay 2125 to BALAJI