***Berkley.java***

import java.io.\*;

import java.util.\*;

class Berkley {

float diff(int h, int m, int s, int nh, int nm, int ns) {

int dh = h - nh;

int dm = m - nm;

int ds = s - ns;

int diff = (dh \* 60 \* 60) + (dm \* 60) + ds;

return diff;

}

float average(float diff[], int n) {

int sum = 0;

for (int i = 0; i < n; i++) {

sum += diff[i];

}

float average = (float)sum / (n + 1);

System.out.println("The average of all time differences is" + average);

return average;

}

void sync(float diff[], int n, int h, int m, int s, int nh[], int nm[], int ns[], float average) {

for (int i = 0; i < n; i++) {

diff[i] += average;

int dh = (int)diff[i] / (60 \* 60);

diff[i] %= (60 \* 60);

int dm = (int)diff[i] / 60;

diff[i] %= 60;

int ds = (int) diff[i];

nh[i] += dh;

if (nh[i] > 23) {

nh[i] %= 24;

}

nm[i] += dm;

if (nm[i] > 59) {

nh[i]++;

nm[i] %= 60;

}

ns[i] += ds;

if (ns[i] > 59) {

nm[i]++;

ns[i] %= 60;

}

if (ns[i] < 0) {

nm[i]--;

ns[i] += 60;

}

}

h += (int)(average / (60 \* 60));

if (h > 23) {

h %= 24;

}

m += (int) (average / (60 \* 60 \* 60));

if (m > 59) {

h++;

m %= 60;

}

s += (int) (average / (60 \* 60 \* 60));

if (s > 59) {

m++;

s %= 60;

}

System.out.println("The Synchronized clocks are: \n Time Server --->" + h + ":" + m + ":" + s);

for (int i = 0; i < n; i++) {

System.out.println("Node" + (i + 1) + "--->" + nh[i] + ":" + nm[i] + ":" + ns[i]);

}

}

public static void main(String args[]) throws IOException {

Berkley b = new Berkley();

Date date = new Date();

BufferedReader obj = new BufferedReader(new InputStreamReader(System.in));

System.out.println("Enter number of nodes:");

int n = Integer.parseInt(obj.readLine());

int h = date.getHours();

int m = date.getMinutes();

int s = date.getSeconds();

int nh[] = new int[n];

int nm[] = new int[n];

int ns[] = new int[n];

for (int i = 0; i < n; i++) {

System.out.println("Enter time for node" + (i + 1) + "\n Hours:");

nh[i] = Integer.parseInt(obj.readLine());

System.out.println("Minutes");

nm[i] = Integer.parseInt(obj.readLine());

System.out.println("Seconds");

ns[i] = Integer.parseInt(obj.readLine());

}

for (int i = 0; i < n; i++) {

System.out.println("Time Server sent time" + h + ":" + m + ":" + s + "to node" + (i + 1));

}

float diff[] = new float[n];

for (int i = 0; i < n; i++) {

diff[i] = b.diff(h, m, s, nh[i], nm[i], ns[i]);

System.out.println("Node" + (i + 1) + "sent time difference of" + (int)diff[i] + "to Time Server.");

float average = b.average(diff, n);

b.sync(diff, n, h, m, s, nh, nm, ns, average);

}

}

}

**Output:**

