

```

import java.util.*;
import java.lang.*;
import java.io.*;
class Main
{
    public static void main (String[] args) throws java.lang.Exception
    {

        int t;
        Scanner s=new Scanner(System.in);
        t=s.nextInt();
        while(t!=0)
        {
            t--;
            int n=s.nextInt();
            HashSet<String> h=new HashSet<>();
            HashMap<String,String> ha=new HashMap<>();
            HashMap<String,String> hb=new HashMap<>();
            String arr[]=new String[n-1];
            long sum=0;
            for(int i=0;i<n-1;i++)
            {
                String str1=s.next();
                String str2=s.next();
                ha.put(str1,str2);
                h.add(str2);
                arr[i]=s.next();
                hb.put(str1,arr[i]);
                sum+=Integer.parseInt(arr[i].substring(0,arr[i].length()-1));
            }
            String ans="";
            for(String temp:ha.keySet())
            {
                if(!h.contains(temp))
                {
                    ans=temp;
                    break;
                }
            }
            for(int i=0;i<n-1;i++)
            {
                System.out.println(ans+" "+ha.get(ans)+" "+hb.get(ans));
                ans=ha.get(ans);
            }
            System.out.println(sum+"0");
        }
    }
}

```