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import java.io.*;
import java.nio.ByteBuffer;
import java.security.MessageDigest;
import java.util.Hashtable;

public class NodeFileReader {
    String file;
    Hashtable<Integer, String> data = new Hashtable<Integer, String>();
    public NodeFileReader(String file) {
        this.file = file;
    }

    public Hashtable<Integer, String> read () {
        try { //Apro il file

            FileInputStream fstream = new FileInputStream("textfile.txt");
            DataInputStream in = new DataInputStream(fstream);
            BufferedReader br = new BufferedReader(new InputStreamReader(in));
            String strLine;
            int data_id;
            //Leggo il file riga per riga

            while ((strLine = br.readLine()) != null) {
                //Genero l'identificatore del dato tramite la SHA-1
                MessageDigest md = MessageDigest.getInstance("SHA1");
                md.update(strLine.getBytes());
                byte[] output = md.digest();
                ByteBuffer bb = ByteBuffer.wrap(output);
                data_id = Math.abs((int) bb.getLong()) % (2 ^ 125);
                data.put(data_id, strLine);
            }

            //Chiudo lo stream
            in.close();

        } catch (Exception e) {
            e.printStackTrace();
        }

        return data;
    }

    public int getRandomIdData() { //Apro il file

        try {

            FileInputStream fstream = new FileInputStream("textfile.txt");
            DataInputStream in = new DataInputStream(fstream);
            BufferedReader br = new BufferedReader(new InputStreamReader(in));
            String strLine;
            int data_id, data_id_line, data_counter = 0;
            //Calcolo il numero di righe del file

            while ((strLine = br.readLine()) != null) {
                data_counter++;
            }

            //Chiudo lo stream
            in.close();

            fstream.close();

            //scelgo una riga a caso
            double double_data_id_line = Math.random() * data_counter;

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        data_id_line = (int) double_data_id_line;

        data_counter = 0;

        //riapro il file
        fstream = new FileInputStream("textfile.txt");

        in = new DataInputStream(fstream);

        br = new BufferedReader(new InputStreamReader(in));

        //vado a quella riga
        while ((strLine = br.readLine()) != null && data_counter < data_id_line) {
            data_counter++;
        }

        //Genero l'identificatore del dato tramite la SHA-1
        MessageDigest md = MessageDigest.getInstance("SHA1");

        md.update(strLine.getBytes());

        byte[] output = md.digest();

        ByteBuffer bb = ByteBuffer.wrap(output);

        data_id = Math.abs((int) bb.getLong()) % (2 ^ 125);

        return data_id;

    } catch (Exception e) {
        e.printStackTrace();
    }

    return 0;
}

```