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```
import java.io.UnsupportedEncodingException;
import java.security.MessageDigest;
import java.security.NoSuchAlgorithmException;
import java.util.HashMap;

public class Regulation {

    private String origin_address;
    private String encrypted_address;

    private Regulation(String origin_address) {
        this.origin_address = origin_address;
    }

    private void encrypted_address(int target_length) {
        if (this.encrypted_address == null) {
            String diff = getSHA256(this.origin_address.substring(0,
target_length - this.origin_address.length()));
            char[] c = new char[target_length];
            for(int i = 0; i < diff.length(); i++){
                c[2*i+1] = diff.charAt(i);
                c[2*i] = this.origin_address.charAt(i);
            }
            for(int i = 2*diff.length(); i < target_length; i++){
                c[i] = this.origin_address.charAt(i);
            }
            StringBuilder sb = new StringBuilder();
            for(char ch : c){
                sb.append(ch);
            }
            this.encrypted_address = sb.toString();
        } else {
            return;
        }
    }

    private String get_Original() {
        if (this.isValid()) {
            return this.origin_address;
        } else {
            return "Error: Illegal Address.";
        }
    }

    private boolean isValid() {
        int flag = 0;
        int j = 0;
        for(int i = 0; i < this.origin_address.length(); i++){
            if(flag < 2){
                if(this.origin_address.charAt(i) ==
this.encrypted_address.charAt(j)){
                    j++;
                    flag = 0;
                }
                flag++;
            } else {
                return false;
            }
        }
        return true;
    }
}
```

```
public String getSHA256(String str) {
    MessageDigest messageDigest;
    String encodestr = "";
    try {
        messageDigest = MessageDigest.getInstance("SHA-256");
        messageDigest.update(str.getBytes("UTF-8"));
        encodestr = byte2Hex(messageDigest.digest());
    } catch (NoSuchAlgorithmException e) {
        e.printStackTrace();
    } catch (UnsupportedEncodingException e) {
        e.printStackTrace();
    }
    return encodestr;
}

private String byte2Hex(byte[] bytes) {
    StringBuffer stringBuffer = new StringBuffer();
    String temp = null;
    for (int i = 0; i < bytes.length; i++) {
        temp = Integer.toHexString(bytes[i] & 0xFF);
        if (temp.length() == 1) {
            stringBuffer.append("0");
        }
        stringBuffer.append(temp);
    }
    return stringBuffer.toString();
}
```