

BlackCat Technical Test (Run Length Encoding)

Steps:

- 1) Build a class implementing the following interface:

```
public interface Encoder {  
    String encode(String s);  
}
```

The class will encode each sequence of the same character in the input string *s* longer than 5 characters as **{<character>;<no of occurrences>}**

e.g. `obj.encode("XYZAAAAABBBBCCCCCCCCDDDDDEEEEEEEEEEEFFFHHHHHHHHHHPP")`
will return `"XYZAAAAABBBB{C;8}DDDD{E;9}FFFF{H;10}PP"`

- 2) Build a class implementing the following interface:

```
public interface Decoder {  
    String decode(String s);  
}
```

The class will decode each **{<character>;<no of occurrences>}** form in the input string *s* to its original run of characters:

e.g. `obj.encode("B{O;7}M!!!!")`
will return `"BOOOOOOOM!!!!"`

- 3) Build a Spring Boot application with a basic web client. The web UI should allow the user to enter a string, submit the string to the server and get either its encoded or decoded version back.

Stretch goal:

The server could save the input string submitted by the client into a database, together with its encoded/decoded version.