



# EXERCISES — Run Length Encoding

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version #



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# 1 Run Length Encoding

**Files to submit:**

- run\_length\_encoding/rle.c

**Authorized headers:** You are only allowed to use the functions defined in the following headers:

- stdlib.h
- string.h
- stddef.h
- errno.h
- err.h
- assert.h

## 1.1 Goal

The RLE is an encoding format used to compress text, consisting in the replacement of successive occurrences of one character by an indication of the number of occurrences. For example, `rle_encode("AAAAAACBBBBB") = "7A1C6B"`.

You have to implement the following functions:

```
char *rle_encode(const char *s);  
char *rle_decode(const char *s);
```

These two functions respectively return the encoding and decoding of the strings passed as argument. The strings returned are allocated by the called functions. If any error occur you have to return NULL.

### Be careful!

AAAAAAAAAAAAAAAA will result to 9A6A

*It is my job to make sure you do yours.*