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## Function to fatten numbers

X50141\_en

Examen revaluació PRO1 (2015-02-06)

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In this problem, given any natural number  $x$  with  $n$  digits  $x_1 \dots x_n$ , we say that  $y = y_1 \dots y_n$  is the result of fattening  $x$  if, for every  $i$  between 1 and  $n$ ,  $y_i = \max\{x_1, \dots, x_i\}$ . For instance, if we fatten 7 we get 7, if we fatten 32064781 we get 33366788, and if we fatten 9000000 we get 9999999.

Write a function

```
int fatten (int x);
```

to return the result of fattening  $x$ .

You cannot use vectors in the code. We suggest to think of a recursive solution. You may implement and use auxiliar procedures.

Your program should follow a right programming style. You should include the appropriate comments.

### Precondition

It holds  $0 < x < 10^9$ .

### Observation

You only need to submit the required procedure; your main program will be ignored.

### Problem information

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