

**CS 114, Fall 2014, Prof. Calvin**

**In class example #1**

Read a single positive integer  $n$ ,  $1 \leq n \leq 32,768$ . If  $n$  is even, print a 0 and divide  $n$  by 2 so that  $n$  is half its original value. If  $n$  is odd print a 1 and subtract one from  $n$  and then divide the result by 2. Keep repeating while  $n > 0$ . (All the ones and zeroes are printed next to each other in a single line with no spaces.)

For example, if the input is

73

then the correct output is

1001001

since the sequence of values of  $n$  is 73, 36, 18, 9, 4, 2, 1, 0.