

# Exercises Week 7

## DSP

1. Find the DTFT of the signal  $\{\dots, 0, \underset{\uparrow}{1}, 1, 1, 0, 0, \dots\}$ , considering it is surrounded with infinitely-long zeros on both sides
  - write the expression of  $|X(\omega)|$  and  $\angle X(\omega)$
  - what is the signal's spectrum (modulus and phase) at frequency  $f = \frac{1}{2}$ ?