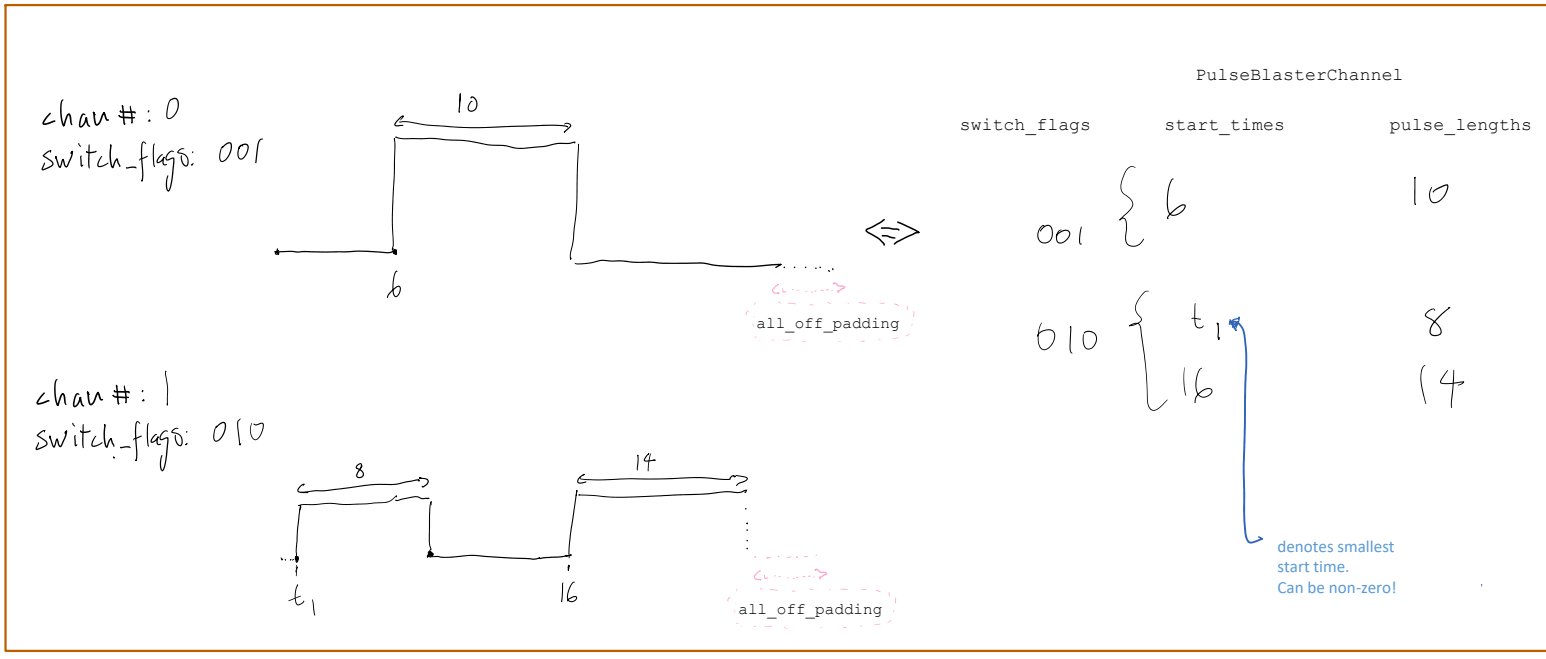
_create_insts_lengths(channels: List[PulseBlasterChannel], all_off_padding:int=0)

- Is an intermediate step to generate pb instructions:
  - Generates two array of equal lengths called inst_lengths and switch_falgs
  - Inst_lengths are durations of a instructions
  - Switch_flags are flags that toggle the state of the channel i.e: off-> to on and on-> off.
- This two array allows to compute the output state of pulse blaster.

Example of desired pulse program



_create_insts_lengths(channels: List[PulseBlasterChannel], all_off_padding:int=0) (in ns)

1. Combine all PulseBlasterChannels

unsorted_times (in ns)	unsorted_switch_flags
6	001
16	001
t_1	010
8	010
16	010
30	010

Each channel is switched on and off

2. Prepend (0, 000) & sort w.r.t. time

times
0
t_1
6
8
16
16
30

switch_flags
000
010
001
010
001
010
010

prepend (0, 000) such that all channels can be low @ $t=t_1$

the final switch flag switches off last high channel. In other words, all channels will be off after it is processed.

3. Diff times to get instruction lengths.

inst_lengths	switch_flags
t_1	000
$6-t_1$	010
2	001
8	010
0	001
14	010
<...>	010

We can add many 000 we want since $000 \wedge x = x$

$\Rightarrow$ 000 is identity operator

Insert `all_off_padding` length here.