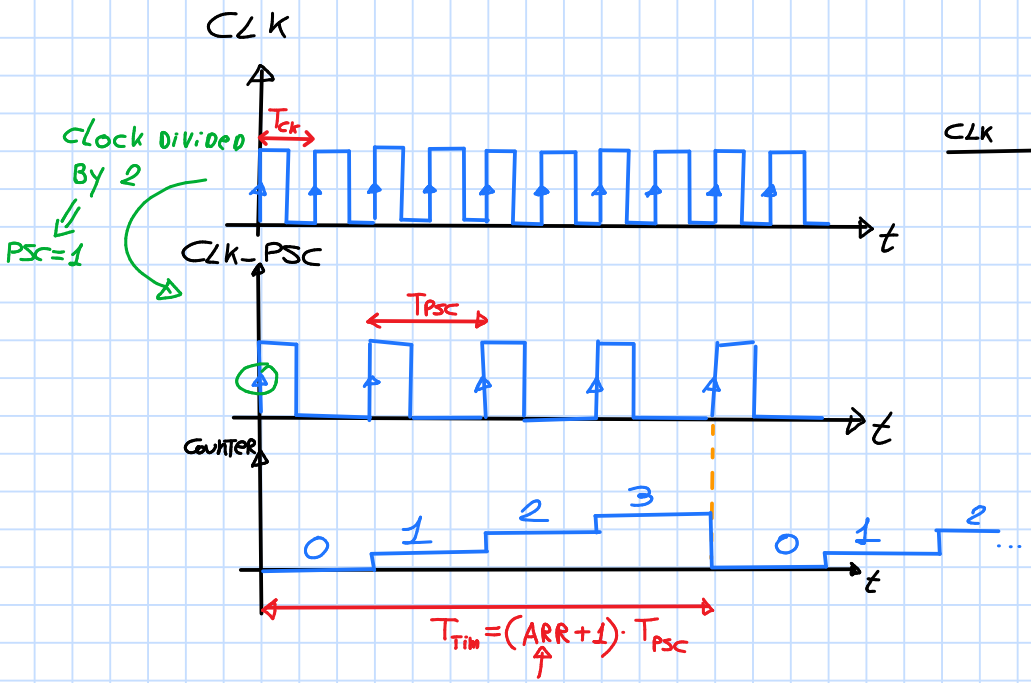

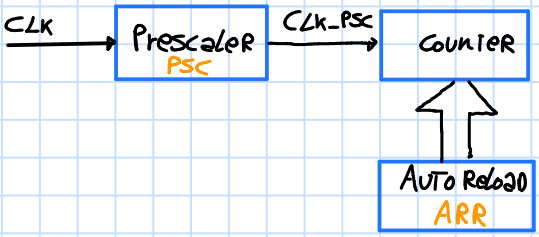

$$T_{PSC} = (PSC+1) \cdot T_{CLK}$$

Prescaler Register

$$T_{Tim} = (ARR+1) \cdot (PSC+1) \cdot T_{CLK} \Rightarrow \boxed{f_{Tim} = \frac{f_{CLK}}{(PSC+1)(ARR+1)}}$$

- PSC and ARR are 16 bit registers

⇒ max value is: $2^{16}-1 = 65535$

Design:

1) Choose $PSC \in [0, 65535] \cap \mathbb{N}$

2) Calculate The ARR, if $ARR < 2^{16}-1$ ok! else repeat (1)