

The modeling of the project uses three different counter-models. Each one of them is represented by a module:

- Modulo-13 counter that counts till twelve.
- Modulo-8 counter that counts till seven but is used to count till six.
- Modulo-2 counter that counts two clock cycles.

All the counters have similar behavior: The count increases by one at the positive edge of the clock till they reach the desired count-value. A reset signal is also made available.

All the counters are synchronized to the clock with asynchronous resets.