1. library IEEE;

2. use IEEE.STD\_LOGIC\_1164.ALL;

3. use IEEE.STD\_LOGIC\_ARITH.ALL;

4. use IEEE.STD\_LOGIC\_UNSIGNED.ALL;

5.

6. entity kellojakaja is

7. Port (

8. clk : in STD\_LOGIC; -- 50 MHz kello

9. led : out STD\_LOGIC -- LED, joka välähtää 1 sekunnin välein

10. );

11. end kellojakaja;

12.

13.

14. architecture Behavioral of kellojakaja is

15.

16. -- Laskurin määrittely: 50 000 000 sykliä (50 MHz -> 1 sekunti)

17. signal counter : natural range 0 to 49999998 := 0;

18. signal blinker : std\_logic := '0';

19. begin

20.

21. -- Prosessi, joka laskee kellosyklit

22. process(clk)

23. begin

24. if rising\_edge(clk) then

25. counter <= counter + 1;

26. if counter >= 49999998 then

27. blinker <= not blinker;

28. counter <= 0;

29. end if;

30. end if;

31. end process;

32.

33. led <= blinker;

34.

35. end Behavioral;

36.

demo:

[74748600102\_\_52220419-53EA-4DFB-88F6-15A5A2570FC3.MOV](https://1drv.ms/v/c/2b2980717d4b73cc/EZ4ROSuA1OZKpvhnTS586VkBo3oQtJDmhXI1lLt9IUIM1w?e=Pg2X65)