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Tema: Práctica 7 Motor a pasos

código

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LIBRARY iEEe;
USE iEee.STD_LOGiC_1164.ALL;
USE iEEe.STD_lOgiC_ARITh.ALL;
USE IEEe.stD_LOGIc_UNSIgnED.ALL;
ENTITY pRACTica7 IS
    PORT (
        clK, RESET, StoP : IN Std_LOgic;
        dato_moTOr : OUT Std_lOGiC_VECTor(3 DOWNTO 0);
        seLecTor : IN std_loGIC_VEcToR(1 DOWNTO 0)
    );
END ENTITY;
ARCHITECTURE BeHaVioRal OF PRactiCa7 IS
    COMPONENT divIsOR IS
        PORT (
            cLk : IN StD_LOGIc;
            cLkL : OUT sTd_loGIc
        );
    END COMPONENT;
    TYPE STATe IS (INiCia, cERO, UNO, DOs, trES, CUaTro, CINCO, sEIs, SiETE);
    SIGNAL Pr_STaTe, nx_STatE : stATe;
    SIGNAL ClKL : STd_LogIC;
BEGIN
    u1 : dIVISoR
    PORT MAP(clk, ClKL);
    PROCESS (ReSEt, clkl)
    BEGIN
        IF (reSEt = '0') THEN
            pR_STATE <= iniCia;
        ELSIF cLkl = '1' AND clkl'EVENT THEN
            PR_statE <= Nx_state;
        END IF;
    END PROCESS;
    PROCESS (pR_sTatE, stOp)
        BEGIN
            IF SElECtOR = "11" THEN
                CASE Pr_staTE IS
                    WHEN inIcIa =>
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                    IF STOP = '0' THEN
                        NX_stATE <= inicia;
                    ELSE
                        NX_StAte <= cero;
                    END IF;
                WHEN cErO =>
                    IF sTOp = '0' THEN
                        NX_STATe <= CEro;
                    ELSE
                        nX_StATE <= UnO;
                    END IF;
                WHEN uno =>
                    IF stOP = '0' THEN
                        NX_STAtE <= uNO;
                    ELSE
                        nX_StaTe <= doS;
                    END IF;
                WHEN Dos =>
                    IF stoP = '0' THEN
                        NX_sTaTE <= DOS;
                    ELSE
                        nx_sTaTE <= TReS;
                    END IF;
                WHEN tREs =>
                    IF StoP = '0' THEN
                        NX_STaTE <= trEs;
                    ELSE
                        NX_STaTe <= CuAtrO;
                    END IF;
                WHEN CUATrO =>
                    IF SToP = '0' THEN
                        nX_STatE <= CuaTrO;
                    ELSE
                        nX_StaTE <= CINCo;
                    END IF;
                WHEN CIncO =>
                    IF stOP = '0' THEN
                        Nx_sTaTe <= cinCO;
                    ELSE
                        NX_sTate <= sEis;
                    END IF;
                WHEN seIS =>
                    IF stOp = '0' THEN
                        NX_sTatE <= SEiS;
                    ELSE
                        NX_sTAtE <= SiEte;
                    END IF;
                WHEN sIeTe =>
                    IF StOP = '0' THEN
                        nx_sTate <= SieTe;
                    ELSE
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                        nx_StaTe <= cERO;
                    END IF;
            END CASE;
        ELSE
            CASE pR_stATE IS
                WHEN INiCIA =>
                    IF sToP = '0' THEN
                        nX_StaTE <= INiCIa;
                    ELSE
                        nx_STaTE <= CEro;
                    END IF;
                WHEN CeRO =>
                    IF sTOp = '0' THEN
                        Nx_sTate <= Cero;
                    ELSE
                        nX_sTAtE <= UNO;
                    END IF;
                WHEN Uno =>
                    IF sTop = '0' THEN
                        Nx_staTE <= unO;
                    ELSE
                        NX_staTE <= dOS;
                    END IF;
                WHEN dOs =>
                    IF stop = '0' THEN
                        nX_sTaTe <= DOS;
                    ELSE
                        nX_stAte <= trEs;
                    END IF;
                WHEN trEs =>
                    IF sTop = '0' THEN
                        NX_sTatE <= TrEs;
                    ELSE
                        NX_STaTe <= cERo;
                    END IF;
                WHEN OTHERS =>
                    IF STOp = '0' THEN
                        nX_stATE <= inicia;
                    ELSE
                        Nx_sTATe <= cERO;
                    END IF;
            END CASE;
        END IF;
    END PROCESS;
    PROCESS (PR_stATe)
        BEGIN
            IF SeleCTOR = "01" THEN
                CASE pr_stAtE IS
                    WHEN iNiCiA => DATO_motoR <= "0000";
                    WHEN CERO => daTo_MOtOr <= "1000";
                    WHEN UNo => DaTO_moTOr <= "0100";
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                    WHEN Dos => daTO_moTOR <= "0010";
                    WHEN TreS => DAto_MOtoR <= "0001";
                    WHEN OTHERS => NULL;
                END CASE;
            END IF;
            IF seLECToR = "10" THEN
                CASE pR_State IS
                    WHEN InIcIa => DaTO_MOToR <= "0000";
                    WHEN ceRo => DATO_moTOr <= "0001";
                    WHEN UNo => dATo_MOtOr <= "0010";
                    WHEN doS => DAto_mOtOR <= "0100";
                    WHEN tRES => daTO_mOtOR <= "1000";
                    WHEN OTHERS => NULL;
                END CASE;
            END IF;
            IF SElEctoR = "11" THEN
                CASE Pr_StaTE IS
                    WHEN inicIa => DAto_mOtor <= "0000";
                    WHEN CERo => dato_moTOR <= "1000";
                    WHEN Uno => DaTO_MotOR <= "1100";
                    WHEN dOs => dAtO_moTOR <= "0100";
                    WHEN TRES => DAto_mOToR <= "0110";
                    WHEN CuATRO => dAto_MOtOR <= "0010";
                    WHEN CINCO => dAto_MOTor <= "0011";
                    WHEN seis => dATO_MOTOr <= "0001";
                    WHEN SiEte => DaTO_mOtoR <= "1001";
                    WHEN OTHERS => NULL;
                END CASE;
            END IF;
        END PROCESS;
END BeHAvIOral;
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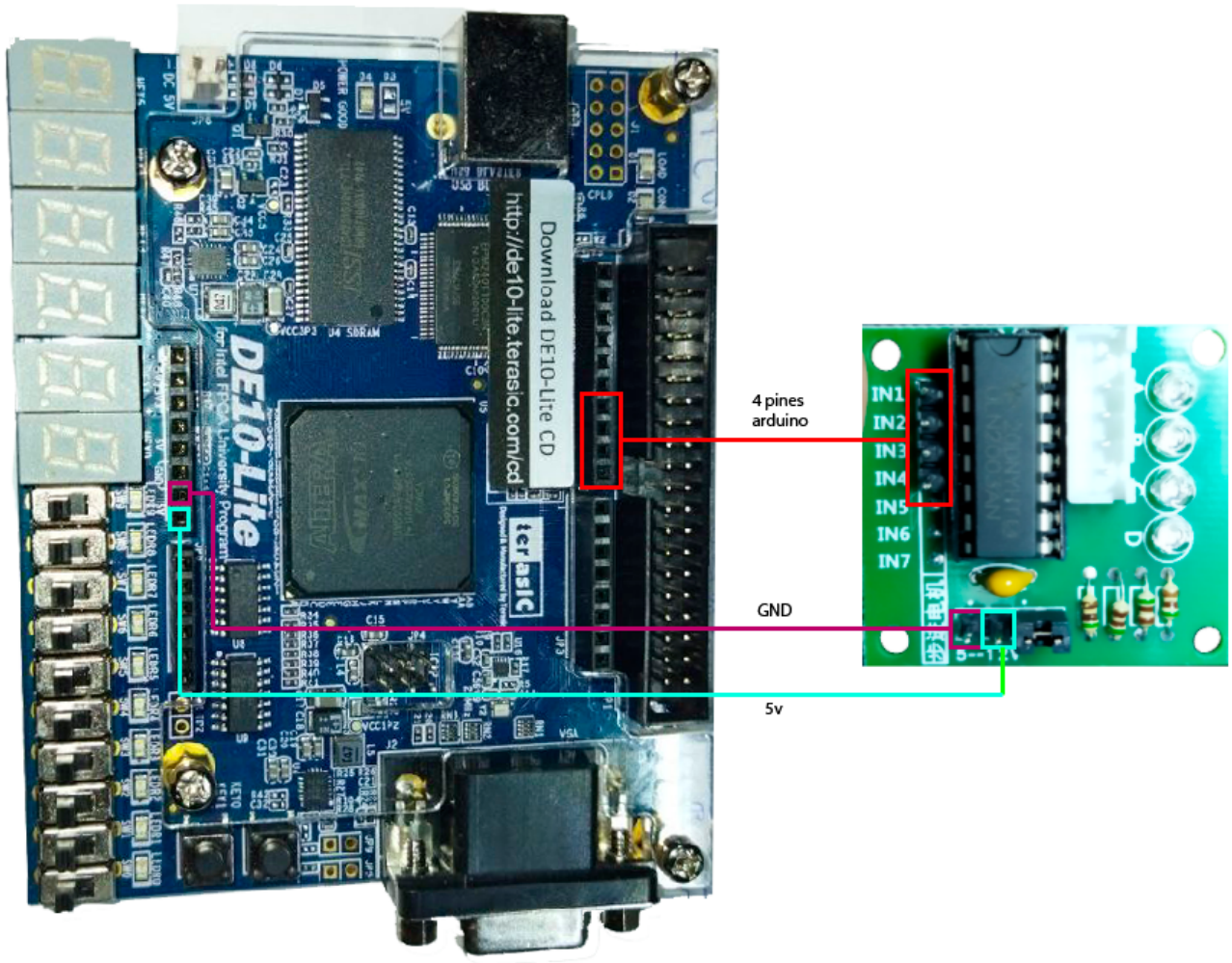
Desarrollo

Node Name	Direction	Location
clk	Input	PIN_P11
dato_motor[3]	Output	PIN_AB17
dato_motor[2]	Output	PIN_AA17
dato_motor[1]	Output	PIN_AB20
dato_motor[0]	Output	PIN_AA19
reset	Input	PIN_B8
Selector[1]	Input	PIN_C11
Selector[0]	Input	PIN_C10
stop	Input	PIN_A7
<<new node>>		



Muchas gracias por ver el video