

```

library IEEE;
use IEEE.STD_LOGIC_1164.ALL;
USE IEEE.numeric_std.all;

entity op_control is
port (
  opcode: in std_logic_vector(5 downto 0);
  en: in std_logic;
  OCU: out std_logic_vector(2 downto 0)
);
end op_control;

Architecture Behavioural of op_control is
begin
process(opcode)
begin
if (en='1') then
case opcode is
when "001000" =>
  OCU<="010";
when "001100" =>
  OCU<="110";
when "001001" =>
  OCU<="011";
when "001110" =>
  OCU<="001";
when "100011" =>
  OCU<="010";
when "101011" =>
  OCU<="010";
when others => OCU <= "000";
end case;
else
  OCU <= "000";
end if;end process;

end Behavioural;

```