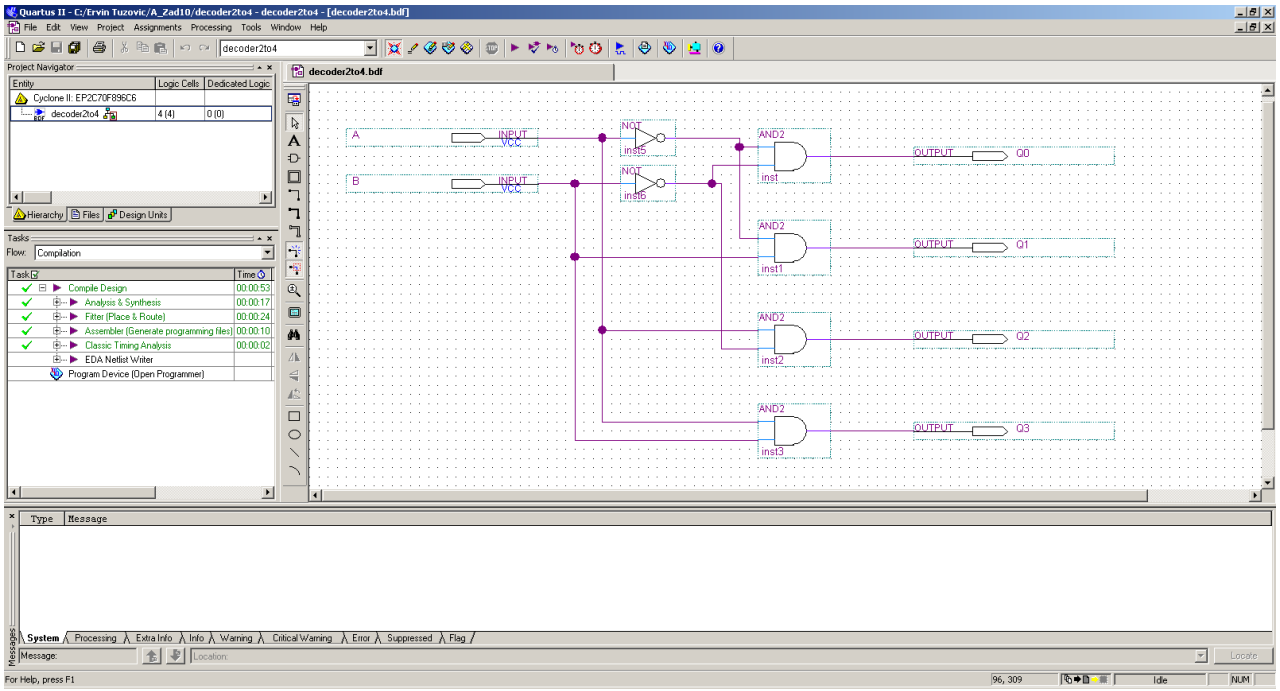
Rešenje student Ervin Tuzović, 42/19

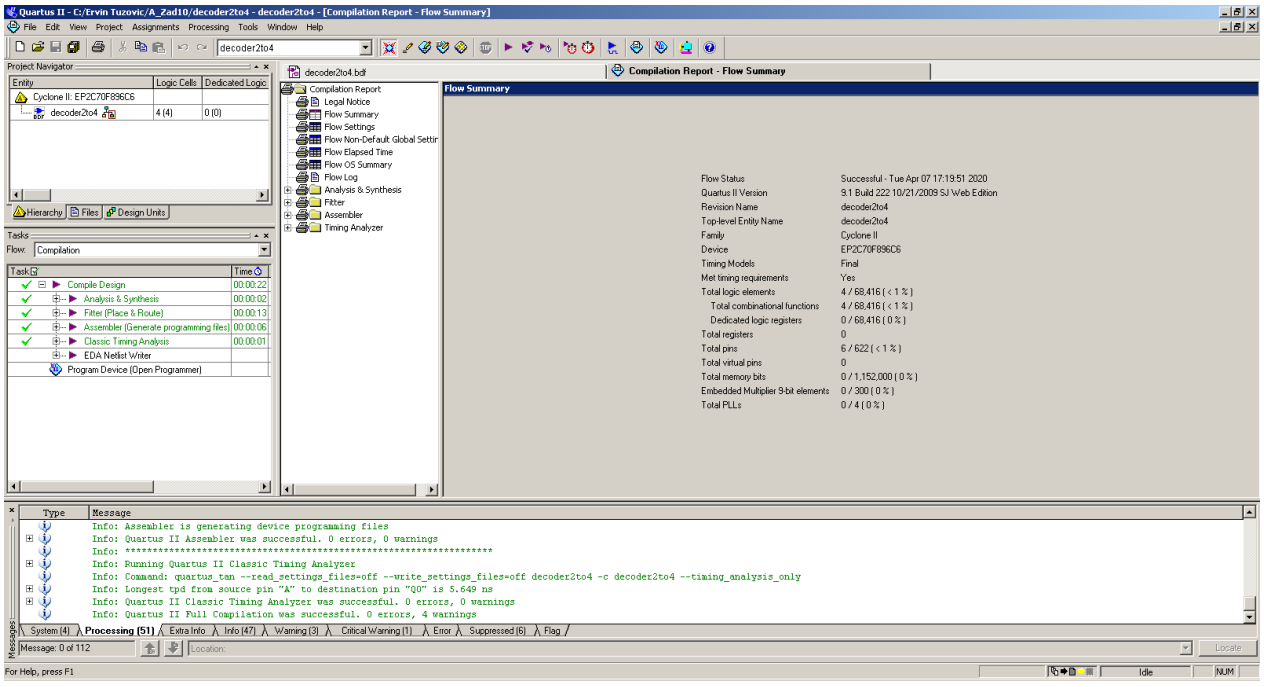
Zadaci: **1. A_dio_10 zadatak**
2. B_dio_3 zadatak

6+0+6+0=12/30

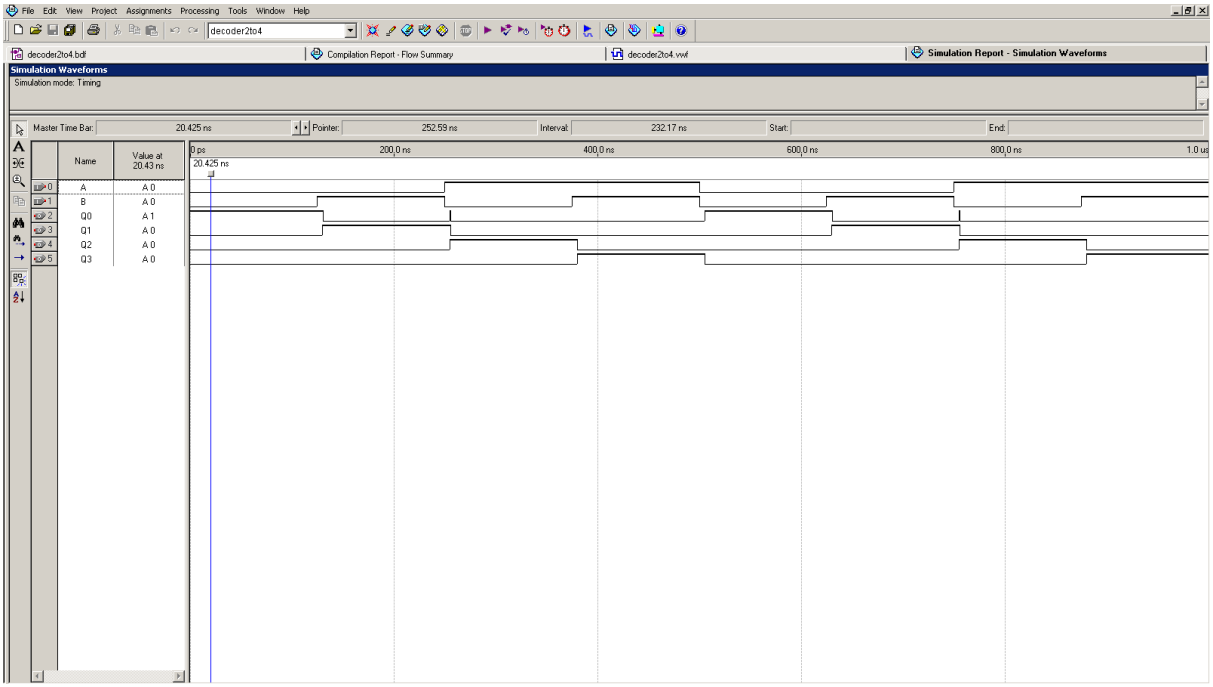
1. **Block diagram:**



Report:



Simulacioni dijagram:

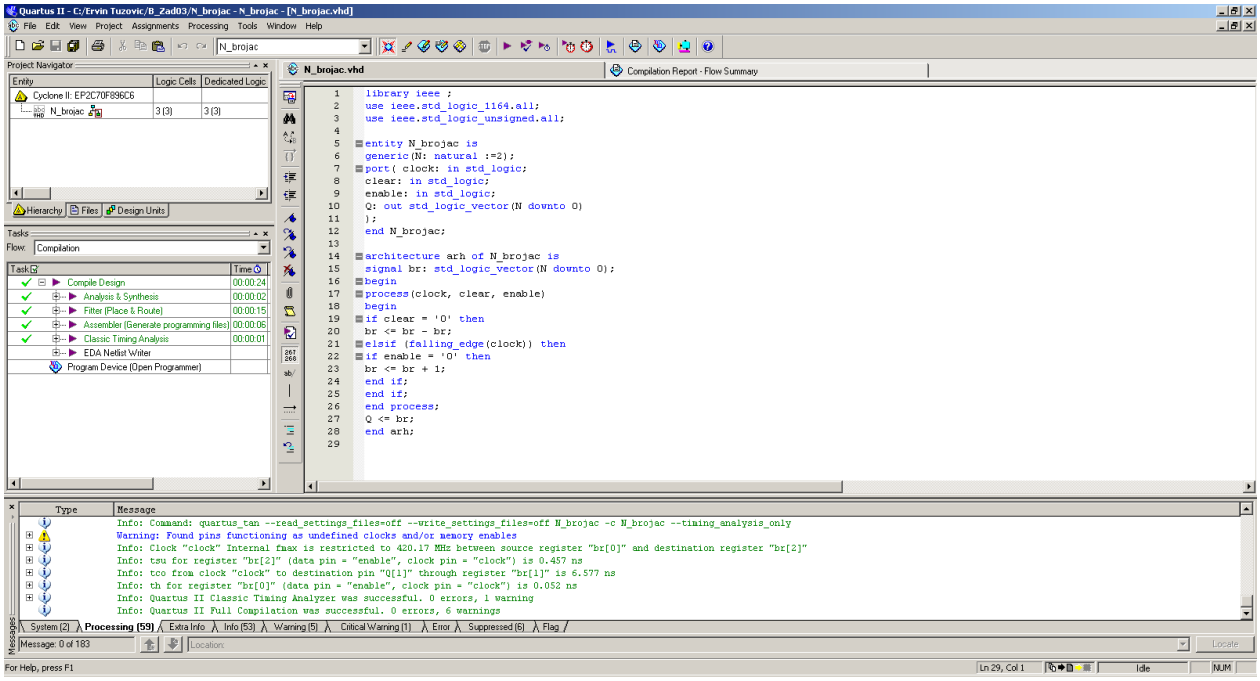


15 (-3 simulacioni diagrami nijesu objasnjeni)/2=6
ZA A=0, B=0, D0=1, D1=0, D2=0, D3=0;

2. Kod:

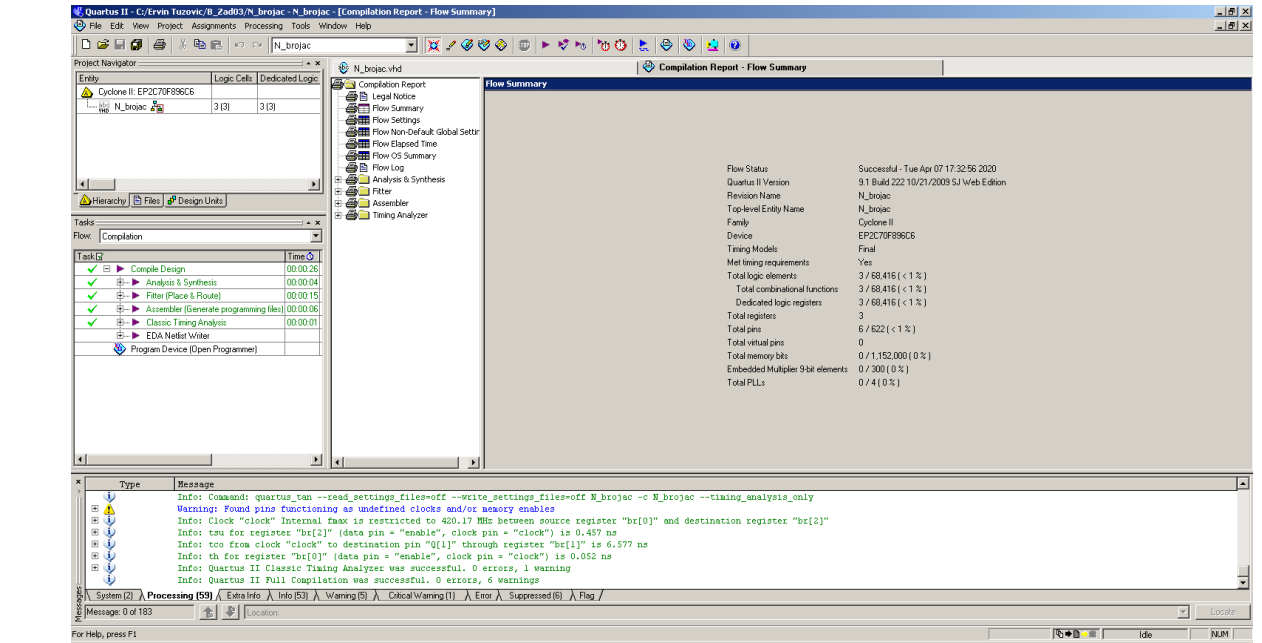
```
library ieee ;
use ieee.std_logic_1164.all;
use ieee.std_logic_unsigned.all;

entity N_brojac is
generic (N: natural :=2);
port
    (
    clock: in std_logic;
    clear: in std_logic;
    enable: in std_logic;
    Q: out std_logic_vector (N downto 0)
    );
end N_brojac;

architecture arh of N_brojac is
signal br: std_logic_vector (N downto 0);
begin
```

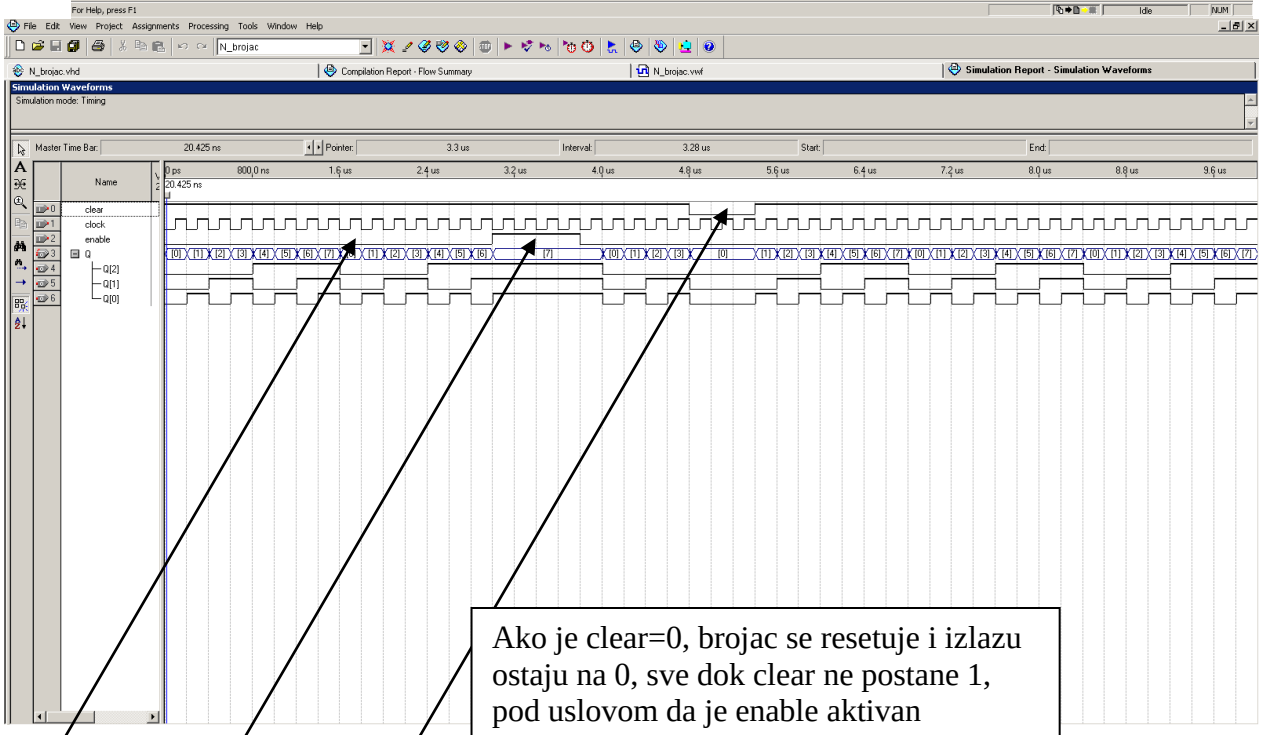
```
process (clock, clear, enable)
begin
    if clear = '0' then
    br <= br - br;
    elsif (falling_edge (clock)) then
    if enable = '0' then
    br <= br + 1;
    end if;
    end if;
end process;
Q <= br;
end arh;
```



Report:

Simulacioni dijagram





Ako je clear=0, brojac se resetuje i izlazu ostaju na 0, sve dok clear ne postane 1, pod uslovom da je enable aktivan

Ako je enable=1, brojac ne broji, vec zadrzava trenutnu vrijednost

Ako je clear=1 i enable=0, brojac broji od 0 do 7 na silaznu ivicu clocka

15 (-3 simulacioni diagrami nijesu objasnjeni)/2=6