

TEXT I/O

Text I/O :test bench

```
LIBRARY ieee;  
USE ieee.std_logic_1164.ALL;  
ENTITY test_bench IS  
END test_bench;
```

Text I/O

Defined in the STD library as a package `use std.textio.all;`

TEXT I/O TYPES

TEXT – a file

LINE- data of the line (write/read)

file input_file1 :text **open** **read_mode** is "C:\Yelement102_dirt.txt";

file output_file1 :text **open** **write_mode** is "C:\median_out_nir.txt";

Main functions

READLINE – **read**(l,temp_input);

READ— **readline**(input_file1,l)

WRITE – **write**(l,temp_output);

WRITELINE – **writeline**(output_file1,l);

ENDFILE – (**endfile**(input_file1);

Text I/O

- library IEEE;
- use IEEE.STD_LOGIC_1164.ALL;
- use std.textio.all;
- entity BH_WRITE_FILE is
- -- Port ();
- end BH_WRITE_FILE;

architecture Behavioral of
BH_WRITE_FILE is

begin

PROCESS

variable line_val:line ;

file write_file:text open write_mode is
"C:\bh_exp\nir_exmap.txt";

.....

END PROCESS;

end Behavioral;

Text I/O

architecture Behavioral of BH_WRITE_FILE is

begin

PROCESS

.....

.....

BEGIN

for i in 0 to 100 loop

.....

.....

wait for 10 ns ;

end loop;

END PROCESS;

end Behavioral;

architecture Behavioral of BH_WRITE_FILE is

begin

PROCESS

variable line_val:line ;

file write_file:text open write_mode is
"C:\bh_exp\nir_exmap.txt";

BEGIN

for i in 0 to 100 loop

write(line_val,"the value is "&integer'image(i)&" ");

writeline(write_file,line_val);

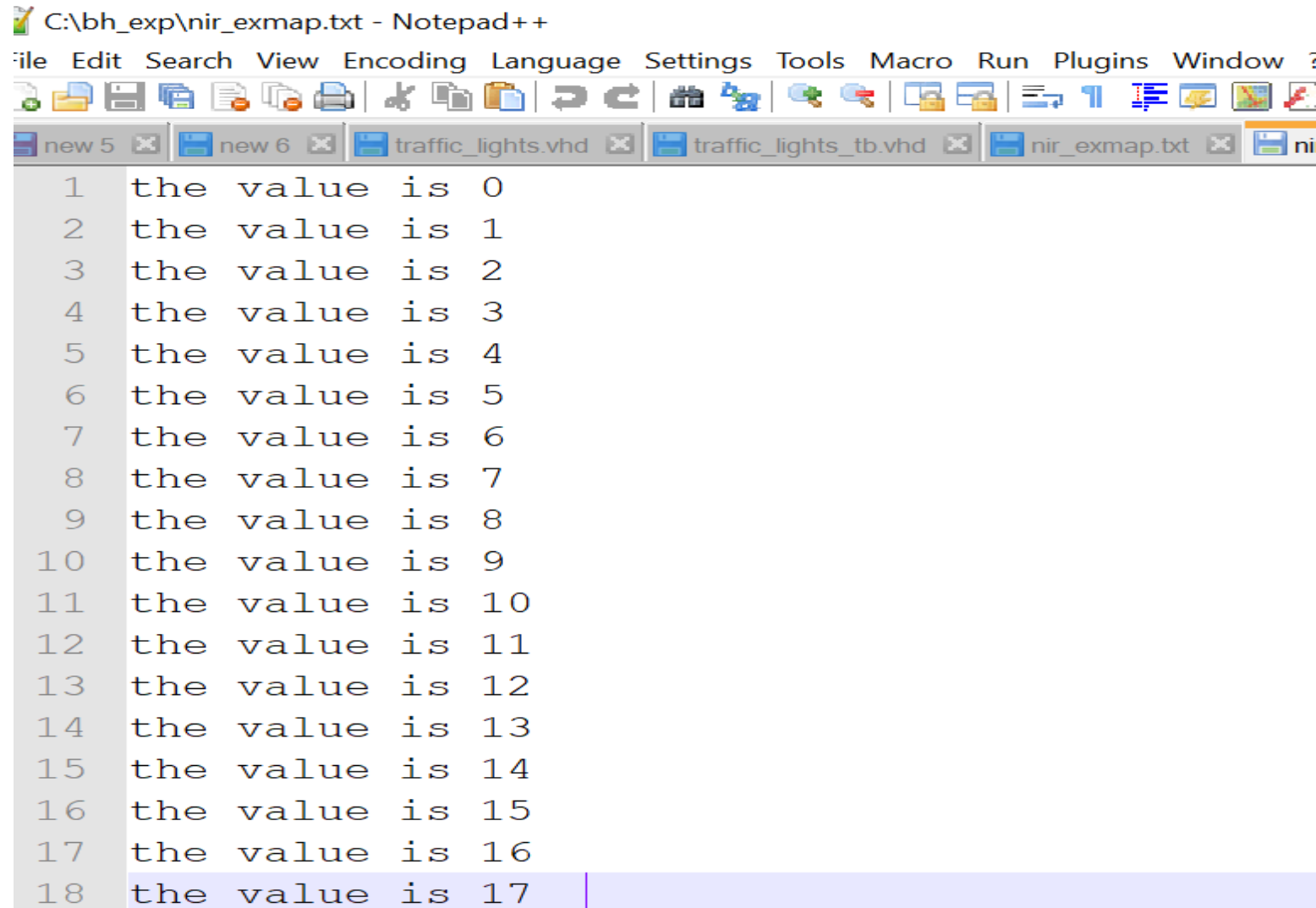
wait for 10 ns ;

end loop;

END PROCESS;

end Behavioral;

Text I/O



C:\bh_exp\nir_exmap.txt - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

new 5 new 6 traffic_lights.vhd traffic_lights_tb.vhd nir_exmap.txt ni

```
1 the value is 0
2 the value is 1
3 the value is 2
4 the value is 3
5 the value is 4
6 the value is 5
7 the value is 6
8 the value is 7
9 the value is 8
10 the value is 9
11 the value is 10
12 the value is 11
13 the value is 12
14 the value is 13
15 the value is 14
16 the value is 15
17 the value is 16
18 the value is 17
```

Text I/O

```
library IEEE;
use IEEE.STD_LOGIC_1164.ALL;
use std.textio.all;

entity BH_READ_FILE is
-- Port ( );
end BH_READ_FILE;
```

```
architecture Behavioral of BH_READ_FILE is
signal ch_out:character;
begin
PROCESS
variable line_val:line ;
variable ch:character;
file read_file:text open read_mode is
"C:\bh_exp\nir_exmap.txt";
BEGIN
.....
END PROCESS;

end Behavioral;
```

Text I/O

architecture Behavioral of BH_READ_FILE is

signal ch_out:character;

begin

PROCESS

.....

BEGIN

while(not(ENDFILE(read_file))) loop

.....

for i in 0 to line_val'length-1 loop

.....

wait for 10 ns ;

.....

end loop;

end loop;

END PROCESS;

architecture Behavioral of BH_READ_FILE is

signal ch_out:character;

begin

PROCESS

variable line_val:line ;

variable ch:character;

file read_file:text open read_mode is "C:\bh_exp\nir_exmap.txt";

BEGIN

while(not(ENDFILE(read_file))) loop

readline(read_file,line_val);

for i in 0 to line_val'length-1 loop

read(line_val,ch);

wait for 10 ns ;

ch_out <= ch ;

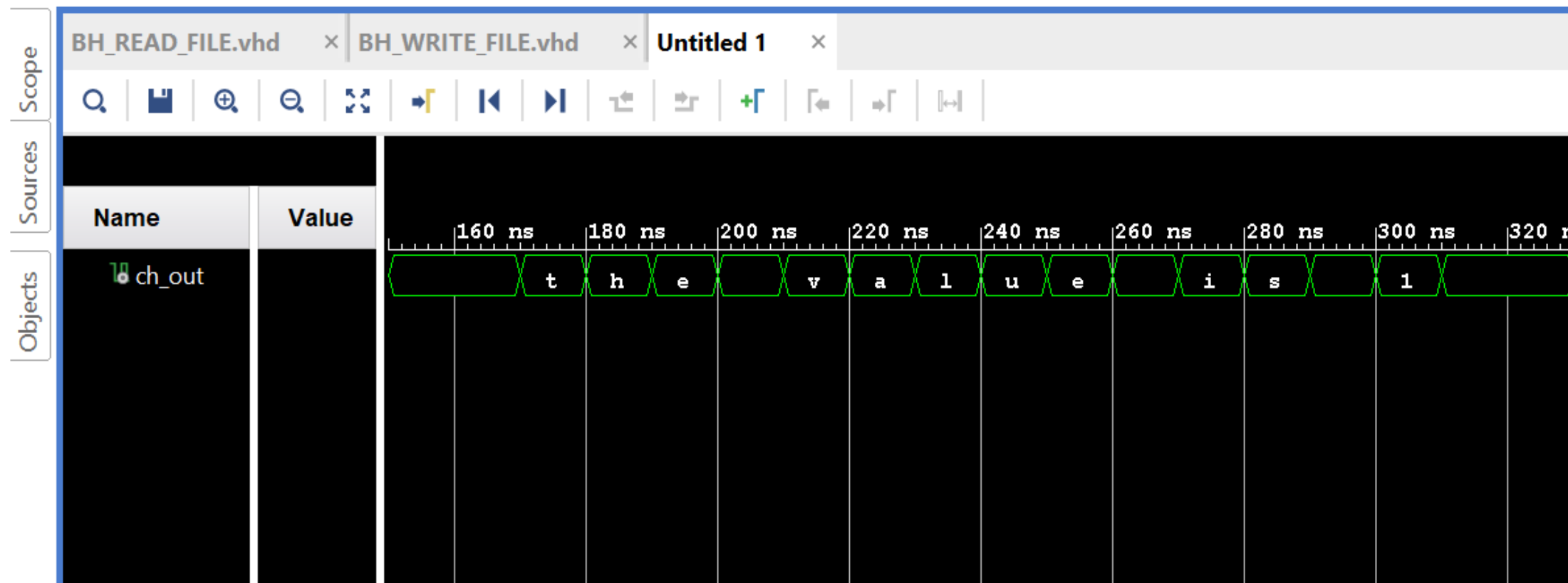
end loop;

end loop;

END PROCESS;

Text I/O

SIMULATION - Behavioral Simulation - Functional - sim_1 - BH_READ_FILE



החומרים לשימוש פנימי בלבד אין להשתמש או להעביר ללא רשות מפורשת מניר בלולו