

```
-----  
--  
-- Purpose:  
--  
--   testbench of adder  
--  
-- Discussion:  
--  
--  
-- Licensing:  
--  
--   This code is distributed under the GNU LGPL license.  
--  
-- Modified:  
--  
--   2012.09.14  
--  
-- Author:  
--  
--   Young W. Lim  
--  
-- Parameters:  
--  
--   Input:  
--  
--  
--   Output:  
-----
```

```
library STD;  
use STD.textio.all;  
  
library IEEE;  
use IEEE.std_logic_1164.all;  
use IEEE.numeric_std.all;  
  
use WORK.cordic_pkg.all;  
use WORK.all;
```

```
entity bshift_tb is  
end bshift_tb;
```

```
architecture beh of adder_tb is
```

```
  component adder  
    generic (  
      WD      : in natural := 32;  
      BD      : in natural := 4 );  
  
    port (  
      an      : in  std_logic_vector (WD-1 downto 0) := (others=>'0');  
      bn      : in  std_logic_vector (WD-1 downto 0) := (others=>'0');  
      ci      : in  std_logic := '0';  
      cn      : out std_logic_vector (WD-1 downto 0) := (others=>'0');  
      co      : out std_logic := '0');  
  end component;
```

```
begin
```

```
  add_0 : adder generic map (WD=>32, BD=>4)  
    port map (an => , bn => , ci => , cn => , co => );
```

```
  clk <= not clk after half_period;
```

```
rst <= '0', '1' after 2* half_period;
```

```
process  
begin
```

```
end process;
```

```
process  
begin
```

```
    wait for 100* clk_period;
```

```
    assert false report "end of simulation" severity failure;  
end process;
```

```
-- XXXXXXX XXXXXX XXXXXX XXXXXX XXXXXXX XXXXXX XXXXX
```

```
end beh;
```