BIST for SWE LED on Basys 3 loard system [15:0] This vis hew the correct pendeng SW20 (Jest LED by sending random pattern). 1000....00 | and and bist (onfut clk, infut [15:0] sw, output [15:0] let (00 00) ... 000 cycle repeats 11 formainteen slower elk 000 the given booken the eve take a count 000 sheep skiet & hop He Hele of clk. 000.....00 000----00

SW-1 turning coversponding LEP of the verspeliere switch is not equal to 0.

This is how the covers ponding

Let turns on as per the visible operation (turns on).

Code:

time scale Instips

module bist (infut clk, infut [15:0] sw, output [15:0] lid),

integer count :0;

veg sclk:0;

always @ (posidge clk) legin

if (count < 50000000)

count · count +1;

else begin

count L2 0;

end

und

Il tomaintain slower elle with the given 100 MHz

Clk we take a count value of 52 107 to day the state of clk.

9,09791 ->

00-00-000

veg flag = 1'60; always @ Cpasedge clk) begin they had recent places they do in mot ! the State of tumper working (= 1161; switch of dung in 0 or 1 As the clock frequency of tout ; 0 : is rugaring vug [15:0] temp = 0:5# 01 - pr/16 always @ Coosedge & clk) begin it (flag = = 1150) begin it (iz 16) begin Muming
on led's
from left to
night i = v+1; s countr sace und [celse it (i232) Segin 1 221+1; { temp [14:0], 1160};]7 temp 12 again turning of them from right to left. und celse begin 1220; 16,900000000000000000 temp L2 end 11 this is to regest cycle again from

else begin 4 this is for the case when SW = 1 (flag 1) where LED turns on writswitch temp = sw; र्रिड्या = १६१६००००० und This is to constantly assign hed forthe value temp to get the Opp with continous assignment. assign led: temp; serd module. : As the clock frequency of Basys 3 boards is 100MHz clefrey -> 108 Hz:00 met E0:217 pur to main tain a slower clk of feriod I see-we main tain a count value to stang the (Clifeld grow), 10 2 = 5×107 it is no = count & 5210+ . slowerclk. period (1cycle) [1.4001 (D:41) quid again would be bloom & whole the William is be impact and copies from