

Assignment 4

By Dhananjay Sapawat (2019CS10345)

Bhukya Sai Ram Naik (2019CS10340)

Steps to make a Controlling Brightness of 7-Segment Display in Vivado is the following:

This assignment is built over Assignment 3.

Design

We change the brightness of the led by pulse width module.

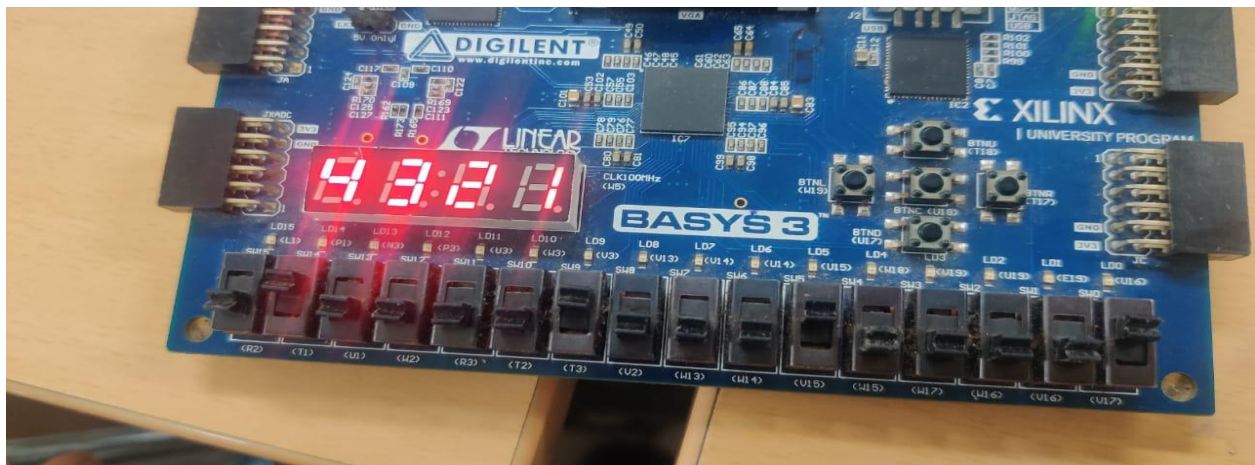
To change the brightness we use a counter, by which we don't light rightmost led 75% times, 2nd rightmost led 50% times, 3rd rightmost led 25% times and we always light leftmost led due to which LEDs brightness decrease.

CIRCUIT

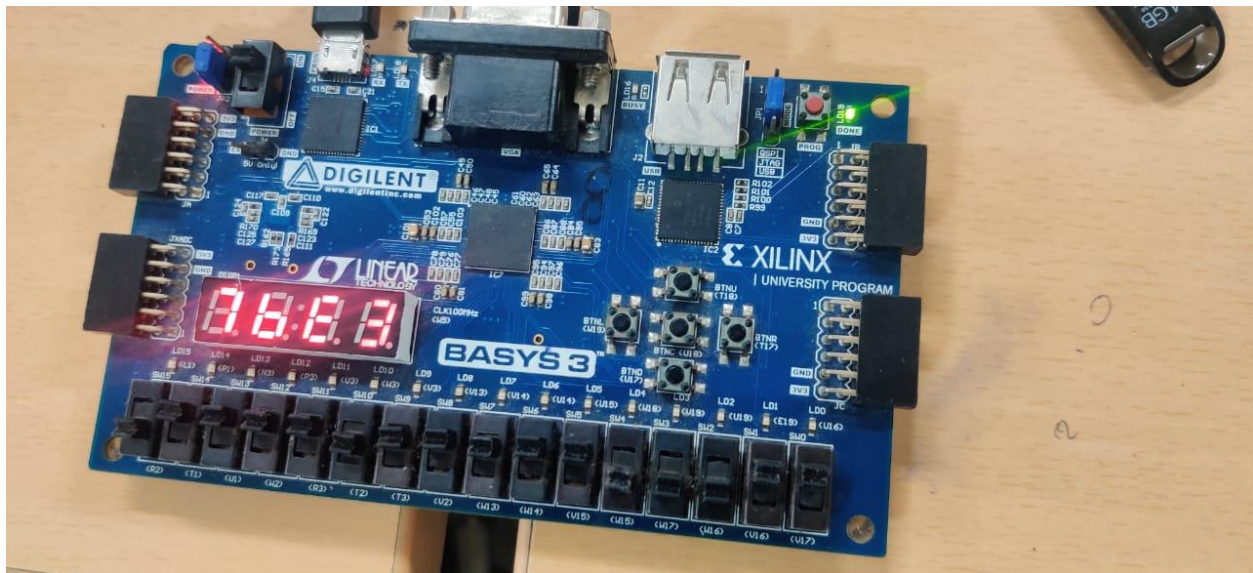
In this circuit leftmost led has the highest brightness while the rightmost has the lowest brightness.

Photo of FPGAS

For Input = 4321



For Input = 76E3



1. Memory

Site Type	Used	Fixed	Available	Util%
Block Ram Title	0	0	50	0.00
RAMB36/FIFO*	0	0	50	0.00
RAMB18	0	0	100	0.00

2. DSP

Site Type	Used	Fixed	Available	Util%
DSPs	0	0	90	0.00

3. Primitives

Ref Name	Used	Functional Category
LUT2	87	LUT
LUT1	53	LUT
FDRE	51	Flop & Latch
CARRY4	32	Carrylogic
IBUF	17	IO
OBUF	11	IO
LUT4	7	LUT
LUT6	4	LUT
LUT3	4	LUT
BUFG	1	Clock