

ASSIGNMENT 5

Group G9 Animesh Barua (18CS10003) Akshat Shukla (18CS10002)

4-bit Combinational ALU/Functional Generator (74181):-

Hardware Requirements:

LUT: 24

IO: 19

BUFG: 1

Critical Path Delay :

4.062ns

Board:- Nexys4 DDR

16-bit Bit-sliced ALU/Functional Generator Using the 74181 IC:-

Hardware Requirements:

LUT: 90

IO: 55

BUFG: 1

Critical Path Delay :

4.062 ns

Board:- Nexys4 DDR

Carry-Select Adder:-

Hardware Requirements:

LUT: 27

IO: 50

Critical Path Delay :

7.585ns

Board:- Nexys4 DDR

Carry-Save Adder:-

Hardware Requirements:

LUT: 174

IO: 160

Critical Path Delay :

11.330ns

Board:- Nexys4 DDR