

FPGAspeaks

Level-1
Yampalaku Pallavi

September 2023

Contents

| | | |
|----------|--|----------|
| 1 | Introduction | 1 |
| 2 | Tools/Requirements | 1 |
| 3 | Basic Logic Gates | 1 |
| 4 | What have I done at this level? | 1 |
| 5 | Links | 1 |

1 Introduction

In level 1, information about basic logic gates like OR, NOR, AND, NAND, XOR, XNOR, and NOT gates is included.

2 Tools/Requirements

Xilinx Vivado

3 Basic Logic Gates

OR Gate: The output of the or gate is high when one of the inputs is high.

NOT Gate: The output of not gate is a complement of the input.

AND Gate: The output of the and gate is high when all the inputs are high.

XOR Gate: The output of the xor gate is high when the number of high inputs is odd.

NAND Gate: The output of nand gate is high when one of the inputs is low.

NOR Gate: The output of the nor gate is high when all the inputs are low.

XNOR Gate: The output of xnor gate is high when the number of high inputs is even.

4 What have I done at this level?

Coding of basic logic gates is done using Xilinx Vivado.

5 Links

Link to my github