

Chapter 3 Summary

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In this chapter, the author introduced how to broke large and complex blocks of circuit by using the concept of hierarchical design.

The method of "divide and conquer" has provided example to us. The three benefits of hierarchy are well explained. In this chapter, the addition and subtraction of array based function blocks are introduced as well.

The decoder (demultiplexer) distributes the outputs and can be used to implement a combination circuit.

As the inverse side of decoder, the encoder is introduced. It has 2^n input lines and n output lines. The encoder limits the activity of input to one at a time.

The next important note is the full adder. It returns the sum of 3 input bits. The symbol S and symbol C are represent the sum and carry in this concept.

In the last few sections, the adder and subtractor of binary numbers are emphasised.

The difference of signed and unsigned binary number are explained.