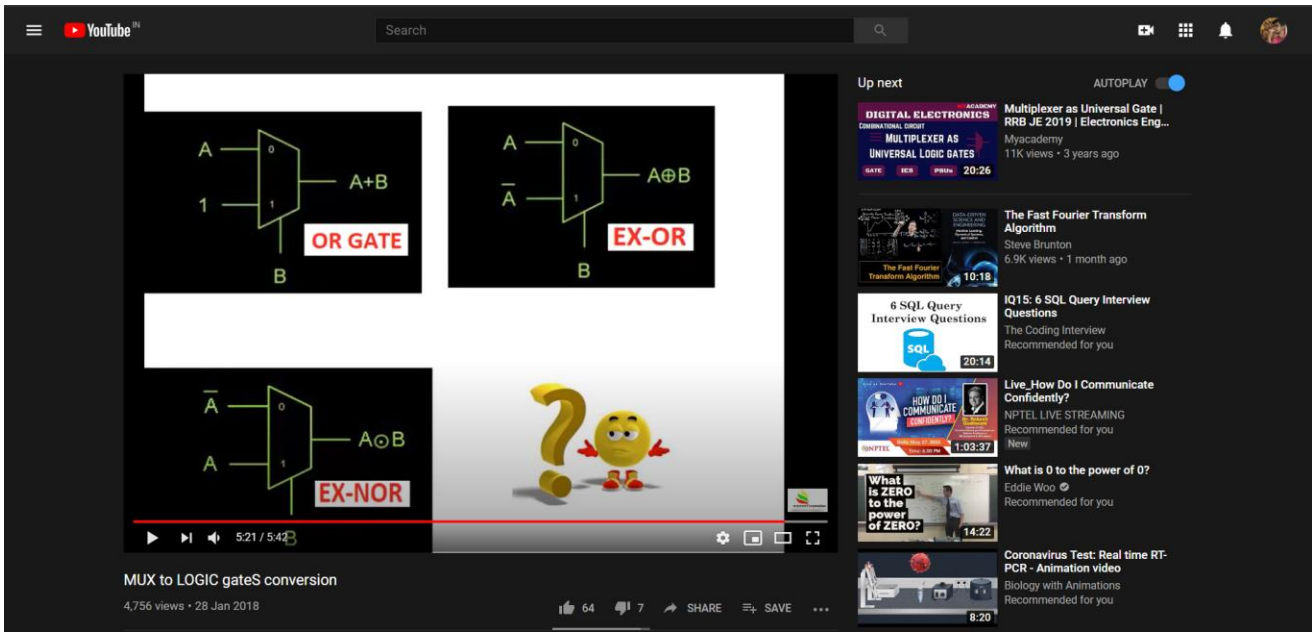
DAILY ASSESSMENT REPORT

Date:	**28 May 2020**	**Name:**	**Gagan M K**
Course:	**LOGIC DESIGN**	**USN:**	**4AL17EC032**
Topic:	• **Boolean equations for digital circuits.** • **Combinational circuits: Conversion of MUX and Decoders to logic gates.** • **design of 7 segment decoder with common anode display**	**Semester & Section:**	**6th sem & 'A' sec**
Github Repository:	**Alvas-education-foundation/Gagan-Git**		

FORENOON SESSION DETAILS
Image of session



Report – Report can be typed or hand written for up to two pages.

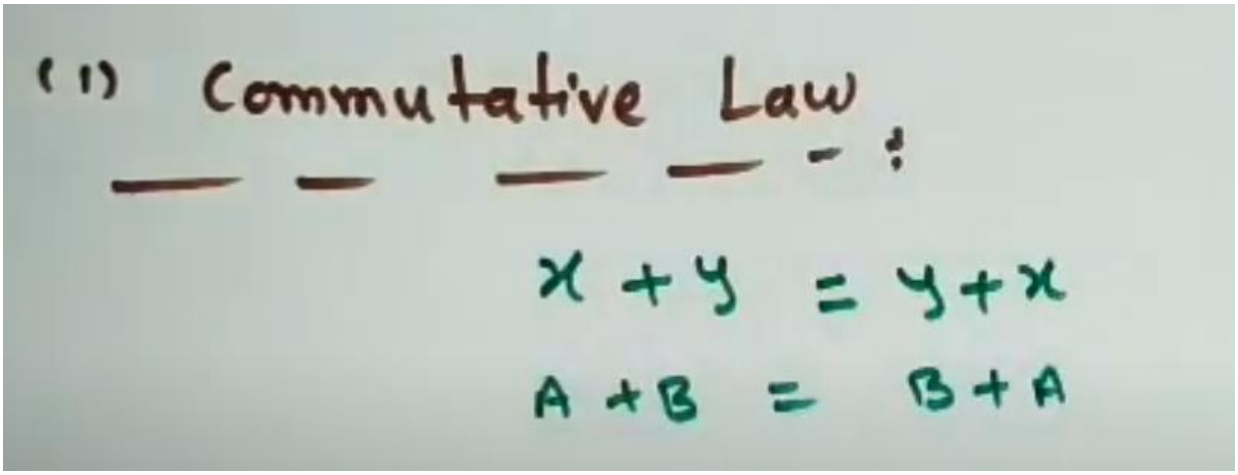
Boolean equations for digital circuits :

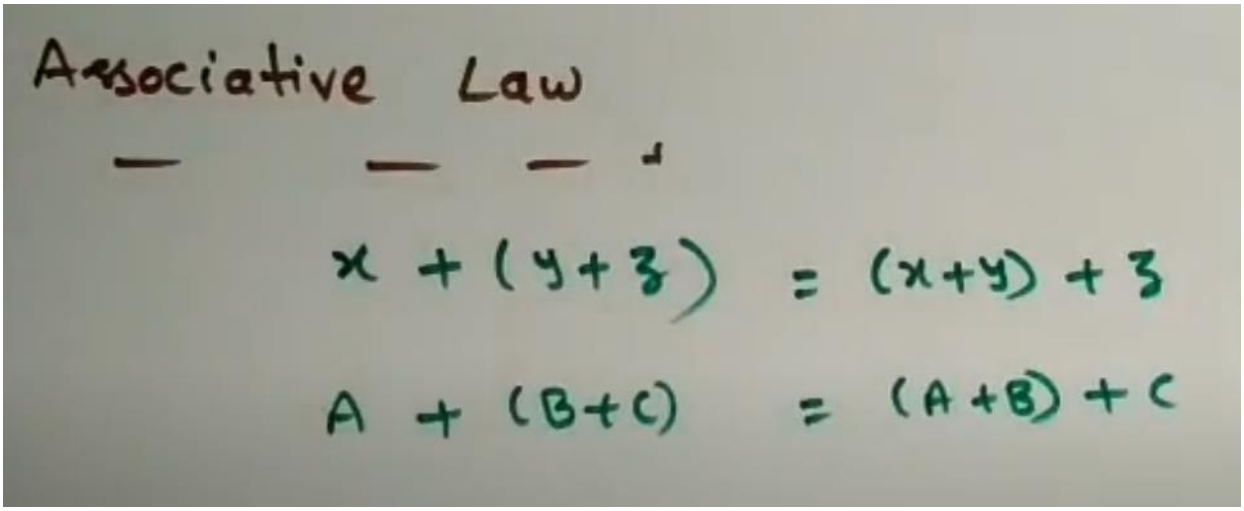
- **Digital Circuits - Boolean algebra. Boolean algebra is an algebra, which deals with binary numbers & binary variables. Hence, it is also called as Binary Algebra or logical Algebra.**
- **The variables used in this algebra are also called as Boolean variables.**

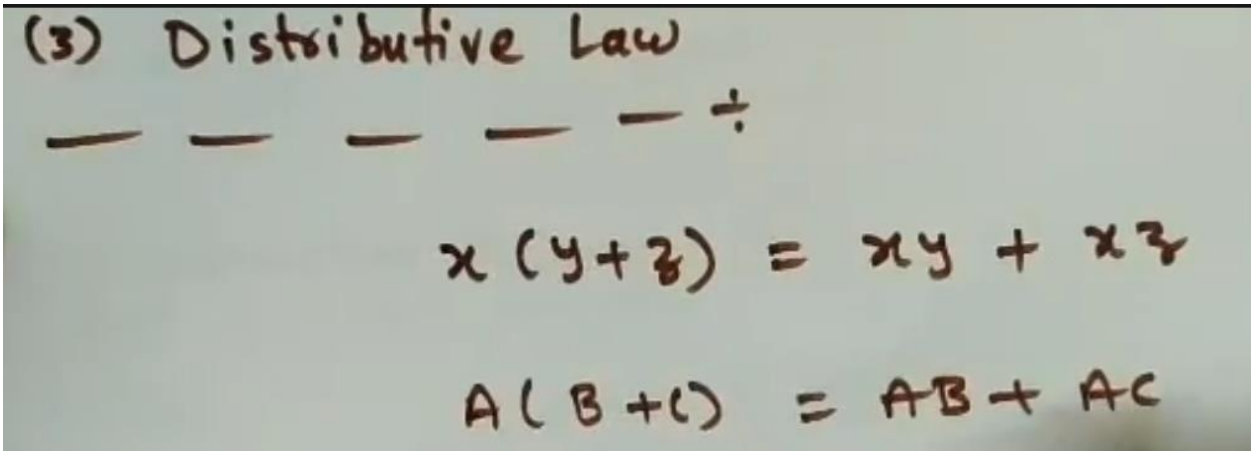
x + 0 = x	**x.1 = x**
x + 1 = 1	**x.0 = 0**
x + x = x	**x.x = x**
x + x' = 1	**x.x' = 0**

Combinational circuits: Conversion of MUX and Decoders to logic gates:

- **A combination circuit is one that has a "combination" of series and parallel paths for the electricity to flow. Its properties are a combination of the two. In this example, the parallel section of the circuit is like a sub-circuit and actually is part of an over-all series circuit.**







- **In computing and electronic systems, binary-coded decimal (BCD) is a class of binary encodings of decimal numbers where each digit is represented by a fixed number of bits, usually four or eight. Sometimes, special bit patterns are used for a sign or other indications (e.g. error or overflow).**
- **Binary Coded Decimal (BCD or "8421" BCD) numbers are made up using just 4 data bits (a nibble or half a byte) similar to the Hexadecimal numbers we saw in the binary tutorial, but unlike hexadecimal numbers that range in full from 0 through to F, BCD numbers only range from 0 to 9, with the binary number patterns of 1010 through to 1111 (A to F) being invalid inputs for this type of display and so are not used as shown below.**

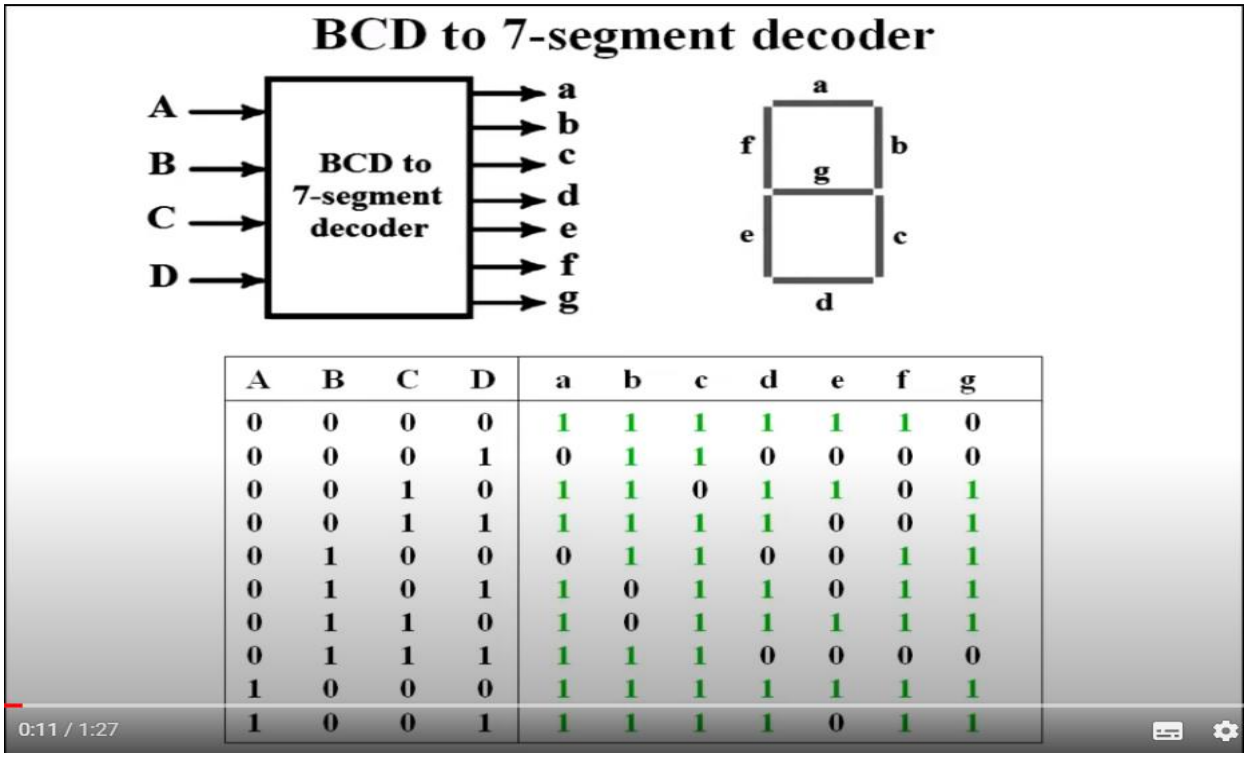
MUX TO LOGIC GATES

1. NAND, NOR -Universal gates
2. "Universal Logic"
3. **MUX** and Decoders are called "Universal Logic"

4.now we will see haw a 2:1 MUX can be used to create different logic gates.

Design of 7 segment decoder with common anode display:

- **The use of packed BCD allows two BCD digits to be stored within a single byte (8-bits) of data, allowing a single data byte to hold a BCD number in the range of 00 to 99. An example of the 4-bit BCD input (0100) representing the number "4" is given below**

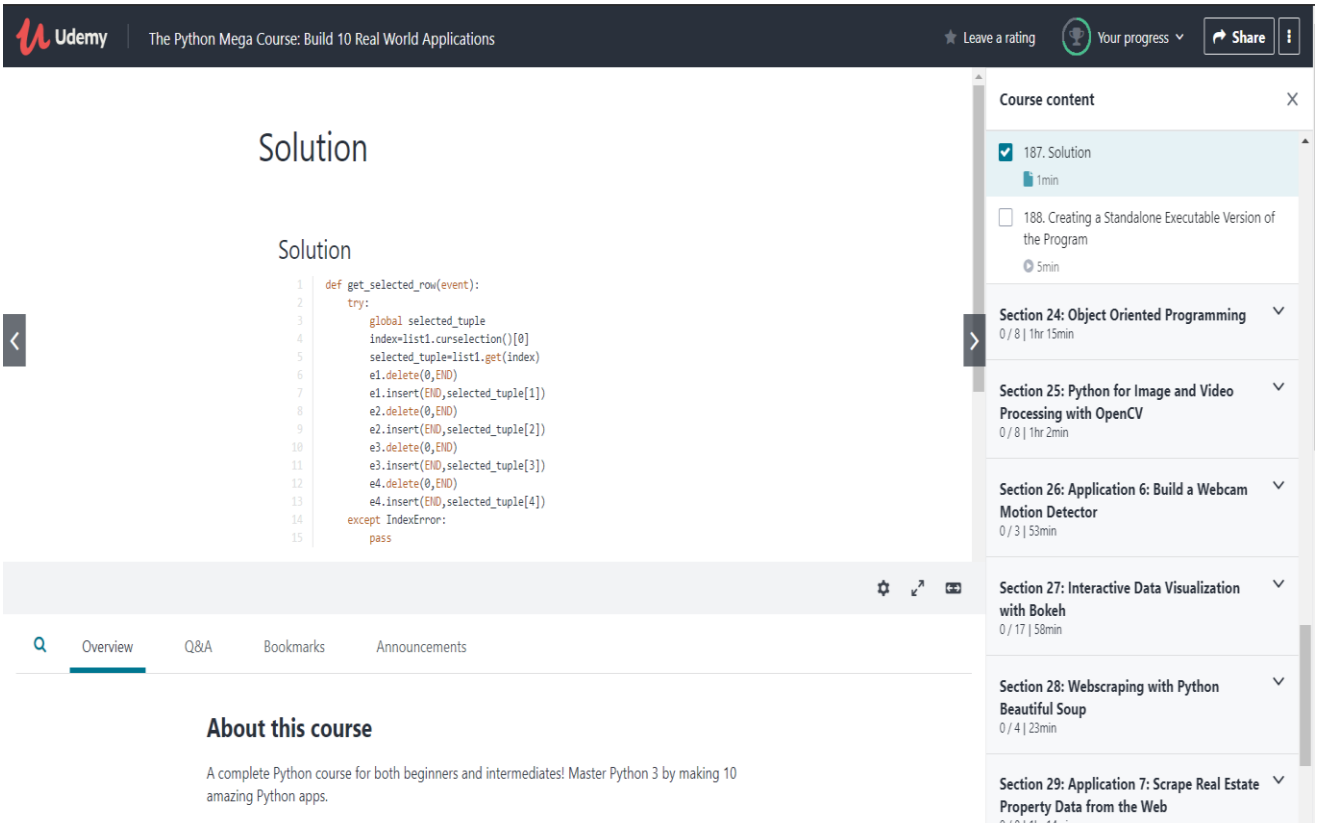


A	B	C	D	a	b	c	d	e	f	g
0	0	0	0	1	1	1	1	1	1	0
0	0	0	1	0	1	1	0	0	0	0
0	0	1	0	1	1	0	1	1	0	1
0	0	1	1	1	1	1	1	0	0	1
0	1	0	0	0	1	1	0	0	1	1
0	1	0	1	1	0	1	1	0	1	1
0	1	1	0	1	0	1	1	1	1	1
0	1	1	1	1	1	1	0	0	0	0
1	0	0	0	1	1	1	1	1	1	1
1	0	0	1	1	1	1	1	0	1	1

Date:	28 May 2020	Name:	Gagan M K
Course:	The Python Mega Course	USN:	4AL17EC032
Topic:	Application 5: Build a Desktop Database Application	Semester & Section:	6th sem & 'A' sec

AFTERNOON SESSION DETAILS

Image of session:



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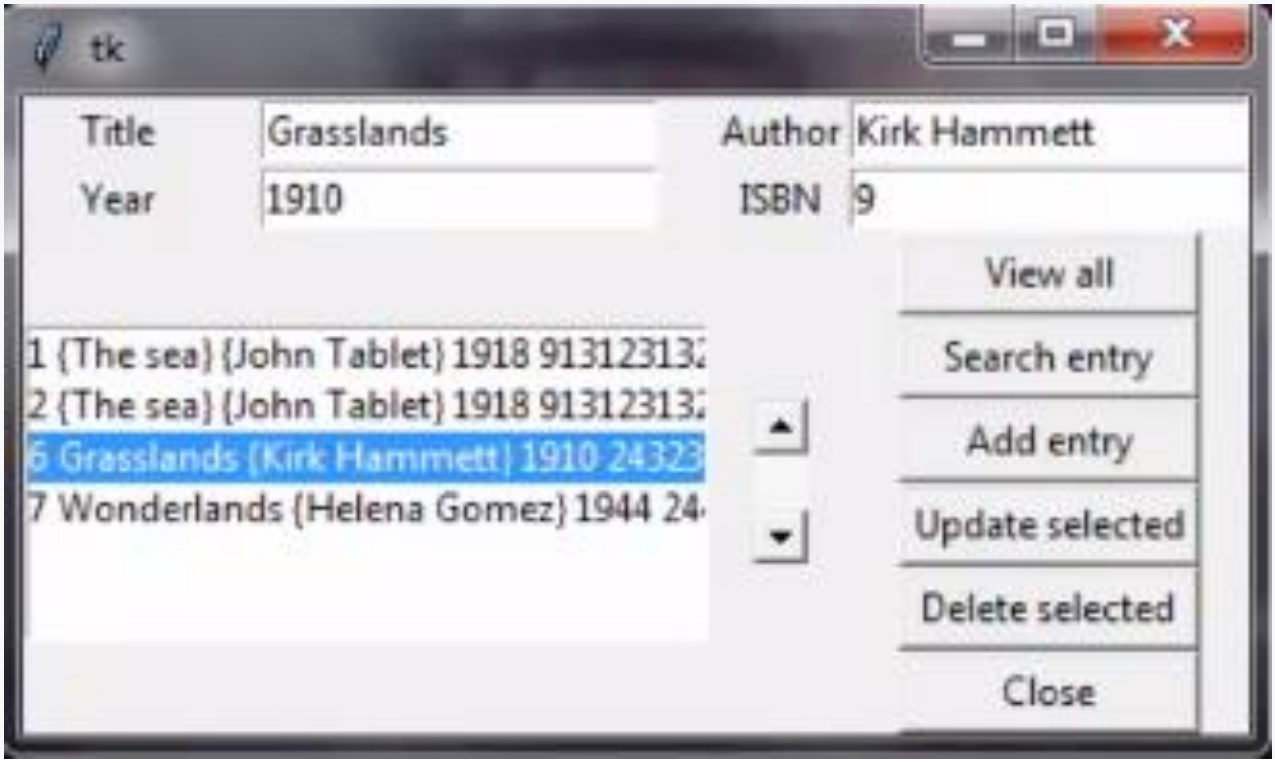
Build a Desktop Database Application:

CREATE DATABASE

- **A Database is defined as a structured set of data. So, in SQL the very first step to store the data in a well structured manner is to create a database. The CREATE DATABASE statement is used to create a new database in SQL.**



- **The above picture is the window created using python.**
- **This Application was about creating Virtual book store by creating the window as shown ab ove in the picture**
- **The program was divided into two parts Called frontend.py and backend.py and it creates a database in which all the books are stored in database.**