

## DAILY ASSESSMENT FORMAT

Date:	28 may 2020	Name:	nishanth
Course:		USN:	4al17ec063
Topic:	1.Boolean equations for digital circuits. Combinational circuits: Conversion of MUX and Decoders to logic gates 2.design of 7 segment decoder with common anode display	Semester & Section:	6 <sup>th</sup> & b
Github Repository:	nishanthvr		

### FORENOON SESSION DETAILS

Image of session

### BCD to 7-segment decoder

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

BCD to 7 segment decoder



day 1

Nishant V.R

UHANTECO62

## Boolean Equation for digital circuits combinational circuits

logic gates

0 or 1

Binary operators - or (+) and and (.)

Unary operator - NOT

$$A + A = A$$

$$A \cdot A = A$$

$$1 + 1 = 1$$

$$x + 0 = x$$

$$x + 0 = x$$

$$x + 1 = x$$

$$x + 1 = 1$$

$$x \cdot x = x$$

$$x + x = x$$

$$x \cdot \bar{x} = 0$$

$$x + \bar{x} = 1$$

### Law of Boolean Algebra

#### 1. Commutative law

$$x + y = y + x$$

$$x \cdot y = y \cdot x$$

$$A + B = B + A$$

$$A \cdot B = B \cdot A$$

#### 2. Associative law

$$x + (y + z) = (x + y) + z$$

$$x + (y + z) = (x + y) + z$$

#### 3. Distributive law

$$x(y + z) = xy + xz$$

$$x(yz) = (xy)z$$

$$x + yz = (x + y)(x + z)$$

$$= xx + xz + xy + yz$$

$$= x(1 + z + y) + yz = x + yz$$



## Properties of Boolean Algebra

(1) Absorption theorem

$$x + xy = x$$

$$x(xy) = x$$

$$x + 1 = 1$$

$$x + x\bar{x} = 1$$

(2)  $x + \bar{x}y = x + y$

$$(x + \bar{x}) + xy = 1 + xy$$

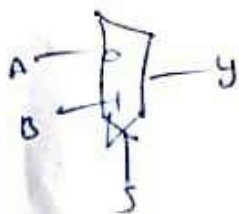
$$1 + xy = 1$$

$$\boxed{1 + xy = 1}$$

Mux to logic gate

NAND NOR - universal gate

Mux and decoder can called 'universal gate'



$2^n - 1$  n - selection line  
 $2^n$  - inputs

S	P
0	A
1	B

$$Y = A\bar{S} + BS$$

Inverter design



$$Y = A\bar{S} + BS$$

$$Y = 1 \cdot \bar{A} + 0 \cdot A$$

$$Y = \bar{A}$$

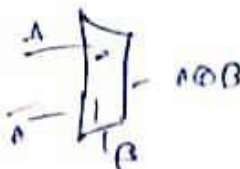
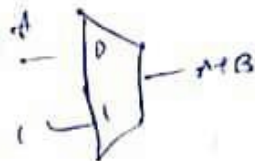
AND gate



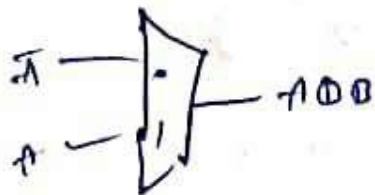
$$Y = 0 \cdot \bar{B} + A \cdot B$$

$$Y = AB$$

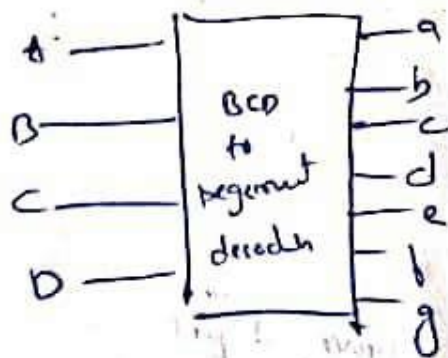
OR gate



Ex-NOR gate



BCD to 7 segment decoder



$$\begin{array}{c} \overline{a} \quad b \\ \overline{c} \quad d \\ \overline{e} \quad f \\ \overline{g} \end{array}$$



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**Date:** 28 may 2020  
**Course:** python  
**Topic:** Application 5: Build a Desktop Database Application

**Name:** nishanth  
**USN:** 4al 17ec063  
**Semester & Section:** 6<sup>th</sup> & b

## AFTERNOON SESSION DETAILS

### Image of session

Udemy | The Python Mega Course: Build 10 Real World Applications

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Course content

Section 23: Application 5: Build a Desktop Database Application  
9 / 9 | 1hr 32min

- ✓ 180. Desktop Database App - How The Output Will Look Like  
2min
- ✓ app5\_tkinter\_sqlite.zip  
6min
- ✓ 182. Frontend Interface  
13min
- ✓ 183. Backend  
24min
- ✓ 184. Connecting the Frontend to the Backend, Part 1  
18min
- ✓ 185. Connecting the Frontend to the Backend, Part 2  
22min

Overview Q&A Bookmarks Announcements

## About this course

A complete Python course for both beginners and intermediates! Master Python 3 by making 10 amazing Python apps.

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

the program has a bug. When the listbox is empty and the user clicks the listbox, an *IndexError* is generated in the terminal:

```
1. def get_selected_row(event):
2.     try:
3.         global selected_tuple
4.         index=list1.curselection()[0]
5.         selected_tuple=list1.get(index)
6.         e1.delete(0,END)
7.         e1.insert(END,selected_tuple[1])
8.         e2.delete(0,END)
9.         e2.insert(END,selected_tuple[2])
10.        e3.delete(0,END)
11.        e3.insert(END,selected_tuple[3])
12.        e4.delete(0,END)
13.        e4.insert(END,selected_tuple[4])
14.    except IndexError:
15.        pass
```