**DAILY ASSESSMENT FORMAT**

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| **Date:** | **28/5/2020** | | **Name:** | **Abhishek Vasudev Mahendrakar** | | |
| **Course:** | **TCS ION** | | **USN:** | **4AL17EC003** | | |
| **Topic:** | 1. **Boolean equations for digital circuits** 2. **Combinational circuits: Conversion of MUX and Decoders to logic gates.** 3. **design of 7 segment decoder with common anode display** | | **Semester & Section:** | **6th-‘A’** | | |
| **GitHub Repository:** | **ECEAbhishekVMahendrakar** | | **E-mail:** | **abhi2244mahendrakar@gmail.com** | | |
| **FORENOON SESSION DETAILS** | | | | | |
| **Image of session**  page1image8601600 | | | | | |
| **Report – Report can be typed or hand written for up to two pages.**  **Boolean equations for digital circuits:**  • The variables used in this algebra are also called as Boolean variables.  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.  x + 0 = x x + 1 = 1 x + x = x x + x’ = 1  x.1 = x x.0 = 0  x.x = x 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.  page2image8586672  page3image8699120page3image8699328  •  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.  page4image8758624  **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  page4image8758832 | | | | | |
| **Date:** | **28/5/2020** | **Name:** | | | **Abhishek Vasudev Mahendrakar** |
| **Course:** | **UDEMY-The Python Mega Course: Build 10 real world applications** | **USN:** | | | **4AL17EC003** |
| **Topic:** | **Application 5: Build a Desktop Database Application** | **Semester & Section:** | | | **6th-‘A’** |
| **AFTERNOON SESSION DETAILS** | | | | | |
| **Image of session**  page5image8904000 | | | | | |
| **Report – Report can be typed or hand written for up to two pages.**  **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.   page6image26003760   * The above picture is the window created using python. * This Application was about creating Virtual book store by creating the window as shown above 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. | | | | | |