Day 3 Assignments:

CLASS WORK

NOTE: DAILY Team evaluation will be done for certification.
Context: Assignments based on Serial communication, PWM, Internal_PullUp Resistor and IR Sensor

Q12 Capture and display the data of IR Sensor on Serial terminal continuously. Develop functions which can be used in future. The IR Sensor software functions() will be used in LineFollower Robot programming.

Q13 Connect a 7-segment display with two switches. Initialize the display with zero. First switch is for increment. Second switch is for decrement. If initial count is zero and you press the increment button then it should display 1, another press will give 2, if you keep on pressing it should go up to 9. Nine cannot be incremented further and so it should remain 9. This situation will be termed as "overflow". Similarly if you keep on decrementing the number it should not "underflow" below zero. The "DP" (decimal point 'dot' LED) should be used to indicate "overflow" and "underflow" conditions!

HOME WORK

Q14 Hardware: Connect: Switch + Micro-controller -Board + LED
WAP (Write A Program): Switch press toggles the LED
Example: If the LED is ON, a switch press will make it OFF. If the LED is OFF, a switch press will make it ON (Toggle means to invert the state)

AFTER WE STUDY THE TOPIC PWM
Q15 Develop a brightness control for seven segment display. Using the serial terminal to ask the user:
How bright the display would s(he) like? Give few options.
0 OFF
1 Dimmer
2 Dim
3 Bright
4 Brighter
5 Brightest
Use DP to indicate input error. User proper messages on serial terminal to interact with the user (even while giving error messages).
Use the function from previous home work to display on seven segment: **void displayNumber(int n)**

HAPPY CODING !!!!!!!!!