

Assignment SKEU2012 Electronics Semester: 2016/17 - 02

NAME: 1 \_\_\_\_\_  
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\* Submit your group names on 26th April 2017

\* Demonstration and marking will be on 17th May 2017 (Four weeks duration).

**TITLE:**

LED Running lights

**INSTRUCTION:**

1. To design and develop at least **4 LEDs** circuit that will display LED running with several features.
2. Example of features are as follow (not limited to)
  - a. **1 x Blinking pattern [Standard]**
  - b. Multiple Blinking pattern
  - c. Speed
  - d. Changes of brightness
  - e. Digital input
  - f. Analog input
  - g. Serial
  - h. wireless
  - i. others
3. You can decide what electronics components to be used to achieve this task such as
  - a. 555 timer.
  - b. Any microcontroller such as Arduino Uno, PIC, ARM, etc.
  - c. Or any other electronics components.

(Tips: search example via online with keywords led blinking, 555 timer, Arduino, microcontroller, etc.)

**ASSESSMENT GUIDELINE:**

Your group has to submit a report prior to the demonstration. Your report should **not be more than 2 pages** and consists of Introduction, Theory, Circuit, Results and Conclusion.

Finally, your group has to present and demonstrate the system in 8 minutes (4 minutes presentation + 4 minutes Q&A). The presentation is tentatively scheduled on **17th May 2017**. Table 1 shows the marks allocation for Report, Presentation and Demonstration.

Table 1: Marks allocation

Items	Total Marks
Report and Presentation	<b>50</b>
Demo	<b>50</b>
• With circuit and working	
○ > 2 features (up to 50)	
○ 2 x features (40)	
○ 1x feature (30)	
• With circuit but not working	
○ Complex (20)	
○ Simple (10)	
• No circuit (0)	

