Electromania

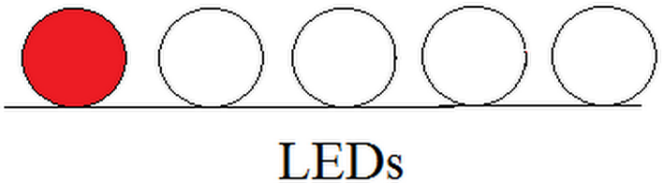
Team Event, Freshers
Points: 30

INTRODUCTION:

One of the earliest encounters we had with the world of video games is in the form of hand-held video games. Having one was every child's dream and it was the first item in our birthday list. Well, now is the time to relish your childhood dream by building our own game.

PROBLEM STATEMENT:

The aim of the competition is to design the game "**Simon Says**" using LED's to represent the sequence. In this game, a sequence of LED glows randomly and the player has to memorize the sequence. The LED is turned off and now the player has to enter the sequence, which was shown. The game continues in case of a correct sequence guessed and ends otherwise.



LEDs

Switches

COMPULSARY FEATURES:

LED array: Minimum of five LEDs to display the sequence.

Sequence Input: Five switches corresponding to each LED.

Minimum sequence length: Your circuit must work for sequence length of at least one LED i.e. you should display any one LED randomly out of the 5 LEDs and then player needs to press the corresponding switch to win the game

ADDITIONAL FEATURES:

Apart from the compulsory features, various additional features can be added to the circuit like:

- **Sequence length** to be memorized can be increased up to 5.
- **Scoring mechanism** to count the number of correct sequence entered. These are just some of the additional features. Apart from these,any other innovative additional features can be implemented.

RULES AND REGULATIONS

Eligibility & Team structure

- Students belonging to Y13 batch of any program (B.Tech , M.Tech etc.) are eligible.
- Team strength should be minimum 3 and maximum 4.
- There are no restrictions on number of teams from a pool. Though all members of a single team should belong to the same pool.

General Rules

- Only basic ICs (555,4xxx and 7xxx) are allowed. Use of an encoder is allowed. Use of any other special IC should be intimated to us.
- The circuit should be built on a breadboard and can't be soldered/simulated. Do note that the judging criteria favour a proper layout of the components and also a robust circuit.

- Judges decision shall be final and binding on all.
- Judging shall be subjective.

All of the above rules may be subject to change as they deem fit. Change in rules, if any will be highlighted on the following links:

Electronics Club Website: http://students.iitk.ac.in/eclub/

Takneek Website: http://students.iitk.ac.in/takneek/2013/

JUDGING CRITERIA

Judging shall be done on basis of:

- **User friendliness** of the gadget.
- **Robustness and innovation** in design of the gadget. (use of logic for the problem statement)
- **Breadboarding** and **layout** of ICs.
- **Extra features** implemented.
- **Presentation** (either a power point presentation or a neat block diagram can be used)
- Judges would be faculty of Department of Electrical Engineering, IIT Kanpur and/or senior members of the Electronics Club.

POINTS DISTRIBUTION

Parameter	Weightage (%)
Compulsory Tasks Achieved	20 (5+5+10)
Logic used	20
User Friendliness of the Game	15
Additional Features Implemented	25
Breadboarding	10
Presentation	10

Science & Technology Council

TAKNEEK
Innovation At Its Best
29th Aug to 1 st Sep

CONTACTS:

Shivendu Bhushan
351 / Hall 2
shivendu@iitk.ac.in
8960419775

Sonu Agarwal
368 / Hall 3
sonuagr@iitk.ac.in
9005888958

Swapnil Upadhyay
F-102 / Hall 5
swapnilu@iitk.ac.in
7417279731, 7379599283