

# Computerized Librified Electronics Engineering Laboratories: An attractive scheme for skill development

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**Abstract** – With the growth of **Electronics** and **Computer Science** as major demanded fields in this era, the libraries are being digitalized frequently to join the steps of the running, growing and developing world of knowledge and education as well as Science and technology all for the enhancement of the convenience, due to which proper trained and skilled hands are under being required, increasing the scope in this field, in return expanding the demand of library and its technologies in other fields like Computer Science for software etc, **Electrical & Electronics** engineering tools, circuits, kits, equipments along with the documents, manuals etc to be operated in their respective laboratories in the same way as books, theses, journals etc are in general libraries, for the convenience and skill improvement of students in technical institutes and laboratories in much attractive and efficient way.

The aim of this paperised idea is to present a method using the strength of the unity of the three core fields of modern science namely **Electronics Engineering & Science, Computer Science & Engineering** and **Library Science & Technology**, to enhance the education levels and skills of the students as well as the concerned beneficiaries from root to tip of various technical educational institutes and their laboratories, in both theoretical and practical way, like engineering colleges, polytechnic colleges and even schools and other related institutes and organizations.

**Index Terms** – Digitized Library, Electronics Engg laboratory, Computer Science Engg Data Base Platforms, Researches.

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The department of Computer Science and Engineering as well as Electronics Science & Engineering have both being run in institutes under both practical and theoretical guidance which is necessary in theory and are beneficial in all aspects too, but for practicals, which are the base brick in building the house of future of the just born ones in the world of Science and Education, they are not being up to the mark as well follows that **“minimum their guidance, maximum will be their self searching skills & maximum they research more improved will be their concerned skills”**.

A student or a group of students of electronics engineering theoretically read and learned to perform a practical in an electronic circuit laboratory, will follow the instructions of the concerned laboratory instructor or faculty and seek apparatus and required tools from him only to perform the job. They may completely know or to made to the know the procedure to perform the task but the selection of tools and apparatus by them depends on the direct instructions of the instructor, atleast for the first time and most of the practicals are not repeated to the same group of students in colleges in lue of academics and syllabus. The consequence is that the students link their theoretical knowledge with their working procedures but not with the selection of tools equipments, as they are not much or not at all familiar with these complex circuitries working in real time, as they are taught and not let free to research on them on their own like the features, uses,

materials, types, ratings, codings, and lot more due to their vast academics and syllabus and obviously grades.

This degrades their practical skills and are upgraded by being familiar to them only if they do the same practical repeatedly which is very much a tough and unattractive, time taking and uninteresting work for all, and most important, the students. This is to be clarify that **“Like there are bright sheeps in every community, like are there outstanding students in every institute”**.

Now if the same electronics laboratory is digitalized having electronics list of the stored tools and apparatus with their use, location, ratings, features, types, specifications etc. on a DBMS platformed application, serving as a digital library with a number of computers in the laboratory, then the students will search every of their requirements on their own and in return will automatically improve their understanding and performing skills regarding tools & equipments selection, procedures and workout of practicals, their market and real time usages & working statistics, during which the students may seek guidance, but will surely enhance their concerned skills, level of understanding, way of learning, performance, presentation and finally their future scope in life as a whole as **“ The human child is adopted to learn to walk late as compared to the Childs of the other animals because the former is much more guided and supported than the later”**.

An electronics engineering laboratory and its store has a number of different types of tools, kits, apparatuses and kits and circuit boards with documents, manuals, charts and write-ups, having different properties, features, functions, ratings, precautions, specifications and usages in

the practical jobs as well as in various related industries. This methodology can be implemented in/by the Electronics laboratories accordingly in the mentioned easy, convenient, efficient, interactive and attractive way which follows.

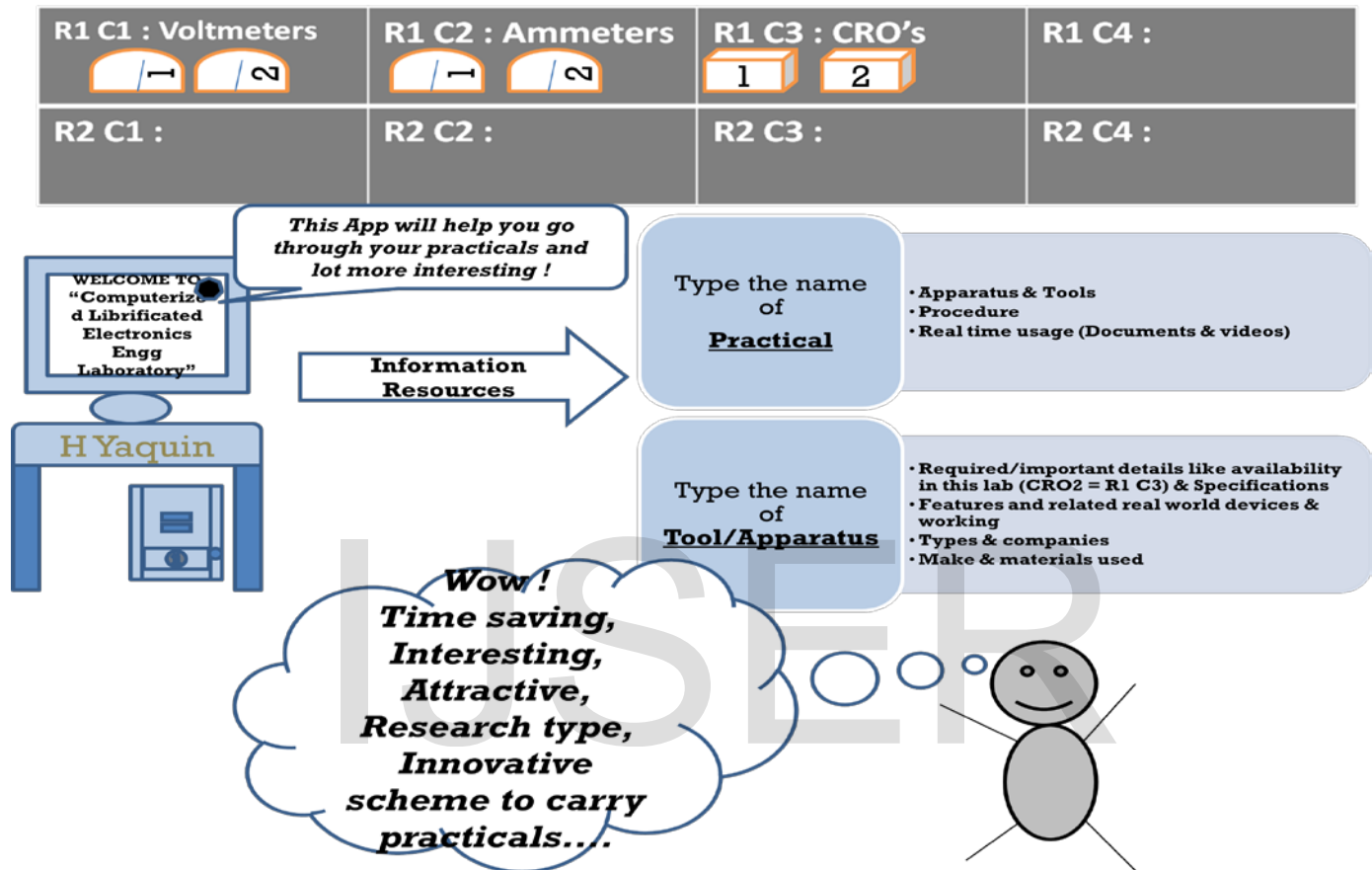


Fig: The pictorial view of the working scheme of the "Computerized Libriflicated Electronics Engg Laboratory".

The actual engineering laboratory is present as it is having all the tools and equipments on shelves, almirah and racks and their documents and manuals and all important related requirements along with the working tables to perform the practical jobs. A number of simple DBMS programming supported PC setups along with colour printer set is made available in this laboratory. The various applications like MySQL, Microsoft SQL etc. and more can be utilized in the same way as in digital and computerized libraries for the storage retrieval and transactions of information resources about the various practicals, their tools, requirements, usages, functions, properties and specifications etc. of the concerned laboratory.

The learners while searching for their respective tools equipments, requirements to start a practical, will surely go through the various information resources mentioned above like tools and equipments, their real time videos of usage and properties of components & their make etc. and lot more interesting facts and knowledge and even more, and this much more interactive attractive and time saving interesting efficient way of doing & learning practicals in laboratories is called research which the students are themselves doing, may be in a limited circle, but this will surely upgrade the education level and skills of the students in their concerning field of Science and engineering.

In this way the DBMS programming applications of **Computer Science and Engineering** has made normal **laboratory of Electronics Engineering** into a **“Computerized and Librified Laboratory”** on the fundamentals of Library Science.

This paperized idea and its working methodology can be utilized and vastly implemented in various other fields of Science and technology and even more as per the requirements of the fulfillment of the optimum enhancement of the skills and levels of understanding of learners from theory to practicals thus from institutes to industries with interactive, attractive and most important efficient way.

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### References

- Fundamental information updation from various websites like Google, ask.com, electronics-tutorials.com, library.ucf.edu, etc
- Books like DBMS, Fundamental of computer programming, Electronic circuit, electronic component and materials, Library classification and cataloguing, handbook of electronic engineering, etc.

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