Two Days Workshop on Modern Digital Design

Report of Two Days Workshop on Modern Digital Design held on 3rd and 4th Dec 2012 at LJIT, Ahmedabad with the Technical help from IIT, Bombay

The two days workshop on "Modern Digital Design" was organized by Gujarat Technological University, Ahmedabad in association with e-Prayog Virtual Labs (Electronics) - Indian Institute of Technology, Bombay at L. J. Institute of Engineering and Technology – Ahmedabad on 3rd and 4th Dec 2012. The workshop was attended by around 50 participants from various institutes of Gujarat. The technical part of the workshop was coordinated by Ms. Madhumita Date and her team from IIT Bombay.

The inauguration function of workshop was carried out in the presence of Mr. Maiti (Director, LJIT), Ms. Madhumita Date (Project Manager, e-Prayog, IITB), Dr. K. R. Parmar (Head EC Dept, LDCE – A'bad and Coordinator of this workshop), Dr. R. A. Thakker (Head EC Dept., GEC – Bhavnagar) and participants.
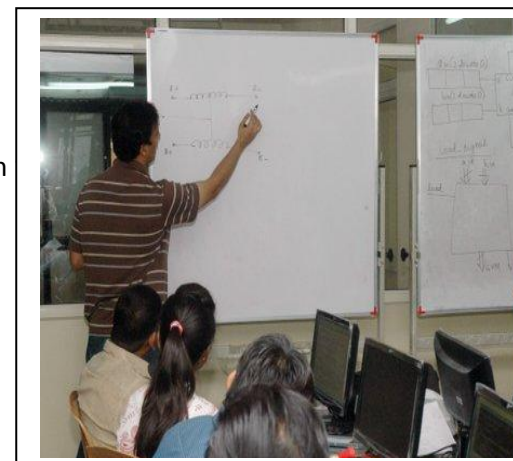
In the beginning of this workshop, Ms. Madhumita introduced participants about e-Prayog. She familiarized participants about the how to remotely login and use latest resources available at IIT Bombay to carry out experiments in various subjects such as Microcontrollers, Digital Signal Processing, Image Processing, etc.
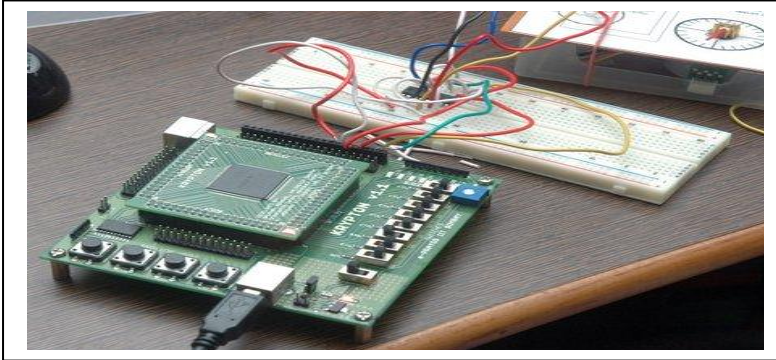

Ms. Madhumita Date introduced her entire team to the participants. The brief introduction of hardware description language (HDL) and programming tool (Quartus – II) was given. Participants were also introduced with "Krypton" board designed and developed at IIT Bombay. VHDL programs for simple digital circuits such as 4-to-1 multiplexer, binary counter, BCD counter were written and compiled by participants as per the instructions of technical team from IITB. Binary files of compiled code were downloaded on "Krypton" board and each circuit was tested.

On the second day of the workshop, participants were assigned interesting projects such as stepper motor, LCD, speaker, etc. Necessary provided to the participants to interface stepper motor, LCD, speaker, etc. Participants wrote VHDL codes to realize digital circuits on achieve given objective. In few projects, participants were given pre-written due to lack of time and with an intention that participants should more familiar with the use of Krypton board. Ms. Madhumita Date videos of some projects developed by the students of IIT Bombay using programmable logic devices.

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Experts form IITB had given hands-on experience to work on small-scale, but very interesting applications of programmable logic devices. Participants are also invited to contribute with new ideas in terms of applications of PLDs.

At the end of the workshop Dr. K. R. Parmar gave vote of thanks on behalf of GTU. Each participating Institute was given one Krypton board and CD with necessary material. Around 28 Krypton boards were distributed to the participants and remaining around 65 boards given to GTU, so that interested institute will collect krypton boards from GTU VC office. Participation certificates were also distributed at the end of workshop.

Feedback from the Participants:

➢ We are thankful to GTU and entire team from IITB for very informative and motivating workshop on CPLD. We should say that entire team from IITB took lots of interest in giving us hand-on experience on CPLD boards. GTU also made a very good arrangement. I am sure that all participating faculty would have benefited with this workshop.

-Dr.Rajesh Thakker (GEC,Bhavnagar)

➢ First of all it was a very well designed practical workshop by GTU in the affiliation with IIT, Bombay. Workshop with hands on experience with krypton kit was too good as well the experts were very kind & knowledgeable.

-Ravi Gandhi (AITS,Rajkot)

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➢ The workshop was very well managed and informative. The krypton boards are sufficient enough for our course work lab sessions. Students can build a good project with the use of these boards. In futures we would like to participate in such workshops for embedded system, Microcontrollers, Robotics and VLSI.

- Vipul Mistry(SNPIT & RC, UMRAKH)

➢ It was great experience for me in two days workshop. I have learned a lot there. Great team work from IIT, Bombay people. The workshop was well organized by GTU. We got practical knowledge of VLSI technology and design. It is great start by GTU to arrange workshop on VLSI design. I hope GTU will organize this type of VLSI workshop in future also.

-Amit Agrawal (DA-IICT)

➢ Workshop was very good with good hands-on practice. It will be really helpful to us for next semester to teach VLSI Technology subject in 6th semester. Krypton boards developed by IIT Bombay are really helpful to students for practical purpose. This was good initiative by GTU.

-PankajKumar Prajapati (LDCE,Ahmedabad)

➢ These were golden opportunity for me and I hope for everyone faculty member of GTU. I hearty thanks to GTU. For arranging such kind of activity, from today i will surely attend such types of all workshops.

- Purohit Nikhil (GEC,Tuwa)

➢ The workshop was very nicely arranged. The things taught during the workshop are really helpful to us and our students. The knowledge given about the e-prayog is good one. We will work out on it. Thank you for such a nice support and guidance.

- Pooja Thakar (SAL Institute,Ahmedabad)

➢ I really want to commit that it was too worth. It was very much systematically organized, well executed and more informative for the participants. It's a very good initiative of MHRD to involve IITs in the practical learning process. IIT Bombay has done very good job. I also want to thank GTU for organizing such workshops. I appreciate that and also want to give my input in making such workshop successful.

-Jayesh Diwan(Indus College, Ahmedabad)

➢ Entire workshop gave a deep insight to how an approach can be developed to digital design and how students can be taught on board programming. One board was given to each college so that we can practice other program. In the workshop we had done several programs like full adder, counter, finite state machine which were implemented on krypton. Workshop was full of knowledge, technical feast for us. Entire team of Madhumita Date M'am was very co-operative, open to all kind of queries, discussions. They provided a very good technical support to everyone when required and helped to completed all assignments given during the workshop. We all look forward many more such workshops like this in coming years.

-Deepti S.Khurge(LJIT, Ahmedabad)

➢ This was a very good Workshop. It is a very useful for next semester subject. We had done various kind of interface on the krypton board. Krypton board is very user friendly. E-prayog facility is mind blowing. I have already told to my students about e-prayog. They are very happy to know that such efforts are done to make them good engineers. We are thankful to IIT, Bombay and GTU for such a wonderful workshop.

-Sahejad S. Shaikh(FETR,Isroli)

➢ This workshop was for faculty members of GTU who have taught and will be teaching "VLSI Technology and Design". This workshop was very excellent for improve knowledge of faculty and for the welfare of the students in this field. I would like to thanks GTU arranging this type of workshop.

-S. P. B. Patel Engineering College, (Saffrony) Linch

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Participants are requested to provide feedback at https://docs.google.com/a/gtu.edu.in/spreadsheet/viewform?formkey=dGNzX2RmM1JpRFNnN0V3cDRmQ3JnRWc6MQ#gid=0 and to collect Krypton boards form GTU with the Authority Letter from their College.