First National Boot Camp

(5th to 9th Feb, 2018)

for
5 days STTP

(for Students and Faculties)
On

Virtual Labs
An MHRD Govt of India Initiative
BOOT CAMP

at

Marwadi University, Rajkot (Gujarat)

In co-ordination with **IIT–BOMBAY**

&

Co–Sponsored by **GUJCOST**

Pre–Event (3rd & 4th February 2018)

With the onset of the first day of the VLABS BOOT CAMP inching closer, our team at Marwadi University began with the pre–event preps of hosting the Resource Person Team where Prof.Manish Nagoshe, Prof.Tanuja Khatavkar, Mr. Pushpdeep Mishra & Mr. Jai Mathur arrived on 3rd Feb 2018 followed by Prof. Anita Diwakar on 5th Feb 2018. The Pre–event preps also included hosting of attendees for the event. The total no. of attendees nearing to 100, included students, faculty and budding independent programmers; from off the campus and on the campus.

The primary task as hosts was to provide the best hospitality experience that an educational campus can offer for such an event. Volunteers and coordinators assisted attendees in allotting their accommodation provisions in the hostel premises. A comfortable stay allows the mind to remain fresh for a long an exciting day – that is what we tried living up to as a campus.

On the backend, the event venue was being set up for the big day with all the technical and allied necessities. The volunteers, coordinators, faculty and technical staff of Marwadi University supported the requirements of the resource team from IIT–Bombay. Brochures, learning material, network and power connectivity were some of the few routine requirements made possible by our team at Marwadi University.

Day 1 (5th Feb 2018)

Boot camps being a lot technical in nature believe in making the best of available time and they followed the norm here too by beginning the session during the early working hours of the day. Mr. Pushpdeep Mishra began with the introductory session and explained the importance of VLabs on the basis of statistical data. He elaborated further on the aspects of community efforts, labs developed, source code on GitLab and Virtual Lab Development workshops in Pune & Vadodara. Towards the end of the introduction of VLabs, Mr. Mishra explained procedures to installing various environments and creating projects. He also shed light on the future of VLabs and the methodology of creating Vlabs.

The session thereafter progressed into the technical Rounds (Round 0 – Round 5), beginning with Introduction to Git (Round 0). During this session HODs from technical/engineering departments of Marwadi University had a meetup which was later on followed up by the Inaugural Function with the presence of all the resource persons of the Boot Camp. The inaugural was graced by the presence of Dr. Y. P. Kosta, Provost and Mr. Naresh Jadeja, Registrar – both from Marwadi University.

Dr. Y. P. Kosta in his welcome address spoke about the manner in which technology was creating wonders of its own and how more individuals needed to keep growing to bigger heights of research in technology.

The next session which was held   post–lunch was delivered by Prof.Anita Divakar, who began with the basics of Integration of Virtual Labs. She conducted a question and answer interaction with the participants while defining the learning objectives for Virtual Labs. Her session also included preparation of a worksheet along with the participants and learning the hierarchy of cognitive levels. Ravi Butani was the first participant to complete the questionnaire and was acknowledged for the same.

Prof. Santosh Noronha joined the session virtually via video link and spoke about how integration of VLabs suits universities, community efforts and how IIT Bombay supports the platform. He also elaborated on tools for simplified design of virtual experiments and how VLabs is the solution for heavy simulation. VLabs for Cloud was also covered during the interaction. Mr. Pushpdeep Mishra thanked Prof. Noronha for spending his time via the virtual video link session, he was also thanked on behalf of Marwadi University and its management as hosts by Dr. Ashish Srivastava – Programme Coordinator.

An activity on learning objectives was conducted by Prof.Anita Divakar. She also pointed out to a very different perspective that "With VLabs we can conclude our experiments in a much efficient way". As we progressed further into the evening, the participants were introduced to the Facebook handle of VLabs IIT-B.

Prof. Manish Nagoshe conducted a session on HTML and simulation with Microsoft Expression Web 4. HTML tables & basic HTML introductions were a part of it before the session ended for dinner at 7:30PM. But as they say, tech geeks work late into the night – he assigned a task on HTML that the participants needed to complete by 10:30 PM and upload on GitLab on their own before they end for the day.

Day 2 (6th Feb 2018)

With an early start to the second day of the STTP Prof. Nagoshe took charge of the first session and revised the Day 1 coursework and solved issues related to assignments. He also discussed various simulator interaction in Git. This session was followed by one that was conducted Prof. Anita Divakar, where she went through the aspects of development of Virtual Lab handout, design tasks for VLabs, activity schedules, various learning approaches in VLab designs, various simulators and engagement with simulators she had built.

Prof. Tanuja Khatavkar, conducted the next session where she laid emphasis on motivation to build VLabs and its interface explanations. She introduced what a student can do with VLabs by analysing, creating and evaluating. She also pointed out to the fact that her college – PVG's College of Engineering & Technology, Pune; had developed 7 VLabs, in which 2 were developed by students itself that were also associated with IIT – Bombay with the assistance of Prof. Santosh Noronha. The assignment work (round 1) which began thereafter was followed by lunch and re-continued post-lunch.

Prof. Nagoshe conducted the next session of HTML & Stylesheet for better table creation and explained all the important tags and controls of HTML. JavaScript, HTML flow control, data types and its conversion was discussed. His session continued until late evening until Mr. Mishra took over for an interaction with participants for development of VLab and its importance. He also explained what Round 2 is specifically with guidelines which a non-programmer can understand. Round 2 dealt with the type of documentation in VLab. Before the session ended for dinner, he explained novice checking for mind maps prepared by participants and also assigned a task to be completed by 10:30PM that needed to be uploaded on Git.

Day 3 (7th Feb 2018)

Day 3 of any event is considered to the longest of all, but that thought didn't cross the mind of the participants of this program. They turned up for the initial session that was conducted by Prof. Naman Vashisth (Electrical) who handled the topic of Study & Design of Oscillator Using Op-Amps which amplify signals. The topic covered circuit design, mathematical simulation of circuit and instructional strategy. He also gave certain suggestions.

Prof. Nagoshe spoke about Simulators and Learning Objectives before handing over to Prof. Ravi Butani for a participant's review session which was thereafter concluded by Prof. Shreedevi Kulkarni with suggestions and a few tasks, Prof. Butani also later on went on to conduct an experiment on multi-vibrator 555 circuit. Prof. Raj Hakani (E.C.) held another such experiment session with a review and task assessment on amplifiers. A simulation interaction was also conducted. The next experiment session was conducted by Prof. Tejpal Goda on implementations of op-amp and some tasks. Schmitt trigger circuit using op-amp – was part of an interaction by Prof. Jignesh Koladiye and performed some tasks too.

Similar experiments and interactions were also conducted by Prof. Amit Kumar, Prof. Jabal Kumar Thanki, Prof. Bhumika Shah, Prof. Nagesh Vaidya, Dr. Archana Sharma, Prof. Deeepak Upadhya, Prof. Shraddha Joshi, Prof Tranum Bloch and Prof. Sanket Milke who covered various tasks and experiments. Before the day ended, Prof. Nagoshe conducted another session on HTML and an assignment round. Some participants were appricated for their being proactive and completing their assignments on time.

Day 4 (8th Feb 2018)

The fourth day began with participants practically executing the projects in the presence of the faculty members which was followed by the welcoming of Prof. Nitin Bhate by Dr. R. B. Jadeja. Dr. Jadeja also was all praises for the work done by the VLabs team over the last few days. Prof. Nitin Bhate spoke about VLab – need, pitfalls, modifications, etc. Prior to lunch Prof. Nagoshe conducted a session and also post-lunch on the topic of simulators, sketches, animation, etc. Students actively participated in the tutotrial given by Prof. Nagoshe.

The next session was conducted via Google Hangout by Prof. Abhilasha Mishra (MIT Aurangabad). She took the opportunity to congratulate the participants and organizers for the Boot Camp and brought to the attention of the participants that 3 diploma students had developed VLabs. As the session ended Prof. Nitin Bhate left for his onward journey to Baroda. The next evening session was conducted by Prof. Nagoshe where he covered the topics of animation and simulation which ended just before dinner. Dinner on the 4th day meant that – the last a 5th day was inching closer keeping the participants on their toes to ensure that the VLabs are ready before the end of the STTP.

Day 5 (9th Feb 2018)

As the STTP progressed into its last day, the focus today was more on accomplishing the final task of completing VLabs setup process. It was crucial to reach this point of completion as, the effort of organizing the STTP and the effort of getting trained over the last few days needed to bear fruit. The learning process of the last few days was going to prove its mantel on this final day which began with interactions with participants.

Prof. Tanuja briefly organized a session on simulators, how to use and design a simulator. Showing up mind maps and story board for better simulator was also part of this session. The VLabs Boot Camp saw interest among some electronic media like AbTak Channel and Hello Saurashtra Channel who dropped by to grab news footage from the event as the event was one of the first VLabs boot camps in India. The final completion and uploading process went on the until the end of the day.

As the program entered towards the end, the teams which had completed their VLabs were recognized for their efforts – Team of the Boot Camp, Team Hard, Best VLab Developer and Best VLab Developed. Prof. Nagoshe and Prof. Tanuja took the opportunity to thank the participants for making their active presence felt at the program. Mr. Pushpdeep Mishra on behalf of the VLabs team also recognized the efforts of the entire Marwadi University team of coordinators and student volunteers who have worked tirelessly over the last few days and in some cases months.