



**Neotech Technical Campus**

# **Neotech Institute of Technology**

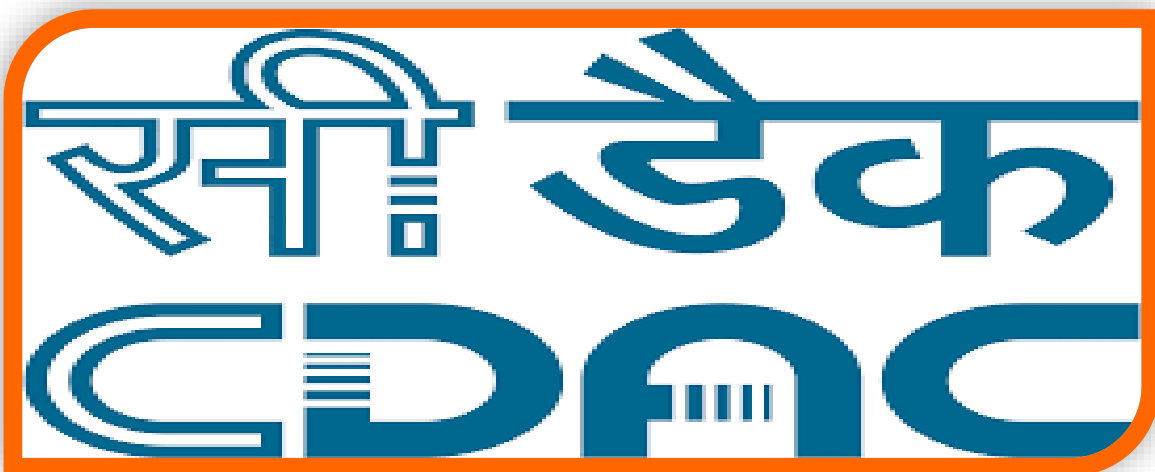
**Report on Industrial Visit in**

## **C-DAC**

**(Centre for Development of Advance Computing)**

**at Pune**

**On 10<sup>th</sup> April, 2017**



**Neotech Institute of Technology, Computer Engineering Department** have arranged **industrial visit for C-DAC** (*Centre for Development of Advance Computing*) at **Pune** which is very important for the **4<sup>th</sup> and 6<sup>th</sup> semester students**.

### **About C- DAC:**

C-DAC has today emerged as a premier R&D organization in IT&E (Information Technologies and Electronics) in the country working on strengthening national technological capabilities in the context of global developments in the field and responding to change in the market need in selected foundation areas. In that process, C-DAC represents a unique facet working in close junction with MeitY to realize nation's policy and pragmatic interventions and initiatives in Information Technology. As an institution for high-end Research and Development (R&D), C-DAC has been at the forefront of the Information Technology (IT) revolution, develop and deploy IT products and solutions for different sectors of the economy, as per the mandate of its parent, the Ministry of Electronics and Information Technology, Ministry of Communications and Information Technology, Government of India and other stakeholders including funding agencies, collaborators, users and the market-place.

### **Agenda of the visit:**

It was almost 11:00 a.m. when we reached the C-DAC company in Pune. Almost **90 students participated in the company visit**. The students were divided in three to four groups according to the instruction given by the C-DAC.

CDAC is abbreviation for Center for Development of Advance Computing. Then the first group of the students had the visit. The infrastructure of the company was good enough. Then a staff member of CDAC Centre guided us for further visit. Students got the great level of information about the company.

Staff member firstly explained us what that company is about. **Super computers are the most powerful computers of the ages**. CDAC was one of the oldest company of supercomputers. As super computer does the task of more than 300 computers at a time. The Super computers have many real world applications like **Large Data Management, Weather Forecasting, Computing large and difficult problems**. The CDAC made its first super computer named PARAM 2000 in year 1991. Then it was known for the importance of super computer and how useful they are in computer world. The latest super computer developed by the CDAC Company is PARAM YUVA II in year 2017.

It has the speed of 500 tflops. It is the fastest super computer of the age. Even **ISRO was once the user of these company appliances**. Then the students were made to see the actual model of PARAM YUVA II that was made by the company. The real supercomputer was stored in a closed chamber which was covered with glass doors. **That chamber was made cooled by the five air conditioner each with 30 tons**. That chamber is maintained with high cooled atmosphere.

After gaining knowledge about the Super Computer, the students observed the actual super computer from the glass door and then departed. This visit was very interesting and informative for students and faculties.



## **C-DAC PARAM Yuva – II India's Fastest Supercomputer**

**C-DAC has come out with PARAM Yuva - II which is rated as India's fastest ever supercomputer.** The secretary of Department of Electronics and Information Technology (DeitY), J Satyanarayana has launched the 500 TeraFlop model of the old PARAM Yuva at Pune. This launch also brings C-DAC the fame of the first R&D institution of the country who has reached the milestone of 500 TF.

**The working of the super computer is based on the hybrid computer technology by making use of hardware accelerators and coprocessors.** The interconnection of this fastest computer is comprised of Infiniband FDR System Area Network and PARAMNet-III which is sure to offer a remarkable efficiency. The storage capacity of the system is about 200 Terabytes which enables users to store a lot of data. Even parallel computing is made possible by the inclusion of required software.

This move from C-DAC has given way for **a general purpose tool for research based computational programs.** Any of the large complex programs can be very well managed by using feature rich tools within the system. One of the notable points is that the electricity consumed by this machine has not gone beyond a limited level taking into account the efficiency offered by it.

The machine has marked 360.8 Teraflop/s at Linpack benchmark which is really impressive. According to the estimates of the year, 2012, PARAM Yuva - II has the power to stand as the topper while considering the status based on India and on 62nd position on the whole world.





