



**Vivekanand Education Society's Institute of
Technology Department of Electronics
Engineering**

1. FACULTY CONTRIBUTIONS

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- 1.2 Workshops and seminars conducted/Attended**
- 1.3 Talk and demo on "Getting Started with SEQUEL SIMULATOR**
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- 1.5 Publications**

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**Vivekanand Education Society's Institute of
Technology Department of Electronics**

Engineering



**Academic Year 2017-18 (Odd Semester)
Department Report**

Various activities conducted in the Department of Computer Engineering in the Odd Semester of the academic year 2017-18 have been categorized as mentioned below:

1. FACULTY ACHIEVEMENTS

1.1 Participation in the Mars Orbiter Mission (MOM) Science Meet, ISRO Bangalore

On the occasion of three years completion of MOM in Martian orbit on September 25, 2017, Space Science Programme Office, ISRO Hqs. conducted a 'MOM Science Meet' on September 25, 2017. A team of three faculty Abhijit Shete, Parmeshwar Birajdar & Yogesh Pandit from Electronics Engineering Department, VESIT, have successfully presented their findings during this science meet. In this event, twenty nine MOM-AO research teams within the country have also presented their science outcomes.

The team would like to convey their heartfelt thanks to VES Management, Principal Dr. J. M. Nair, Vice Principal Dr. Vijayalakshmi M., Prof. Kavita Tewari, HOD-ETRX and department colleagues for their constant support and encouragement during the project work.



1.2 Workshops and seminars conducted/Attended

- A team of three faculty Mr. Abhijit Shete, Mr. Parmeshwar Birajdar & Mr. Yogesh Pandit have successfully presented their findings during the Mars Orbiter Mission (MOM) Science meet on September 24, 2017. In this event, twenty nine MOM-AO research teams within the country have also presented their science outcomes.
- Mrs. Dipti Karani delivered a talk and demo on "Getting Started with SEQUEL SIMULATOR" under Research forum on 4th August 2017.
- Mr. Abhay Kshirsagar delivered a talk "WBAN - An Application of WSN" under Research forum on 14th July 2017.
- Dr. T. Rajani Mangala delivered a talk on "Funding Agencies for R and D for Academic Institutes" under Research forum on 13th July 2017.
- Mr. Abhay Kshirsagar delivered session on "Application of Embedded System" during Short Term Training Program in SAK Engineering College dated 3rd July 2017.
- Mr. Parmeshwar Birajdar delivered lecture on the topic "Applications of biometrics and research challenges" during Faculty Development Program on 29th July 2017 at SAK Engineering College dated 3rd July 2017.
- Mrs. Dipti Karani has participated in the event "Remote Sensing and GIS in Rural Agricultural System" on 22nd and 23rd September 2017 at Don Bosco Institute of Technology.
- Nine faculty from Electronics department attended one week Short Term Training Program on "Role of Mathematics and statistics in engineering." From 3rd July 2017 to 8th July 2017.

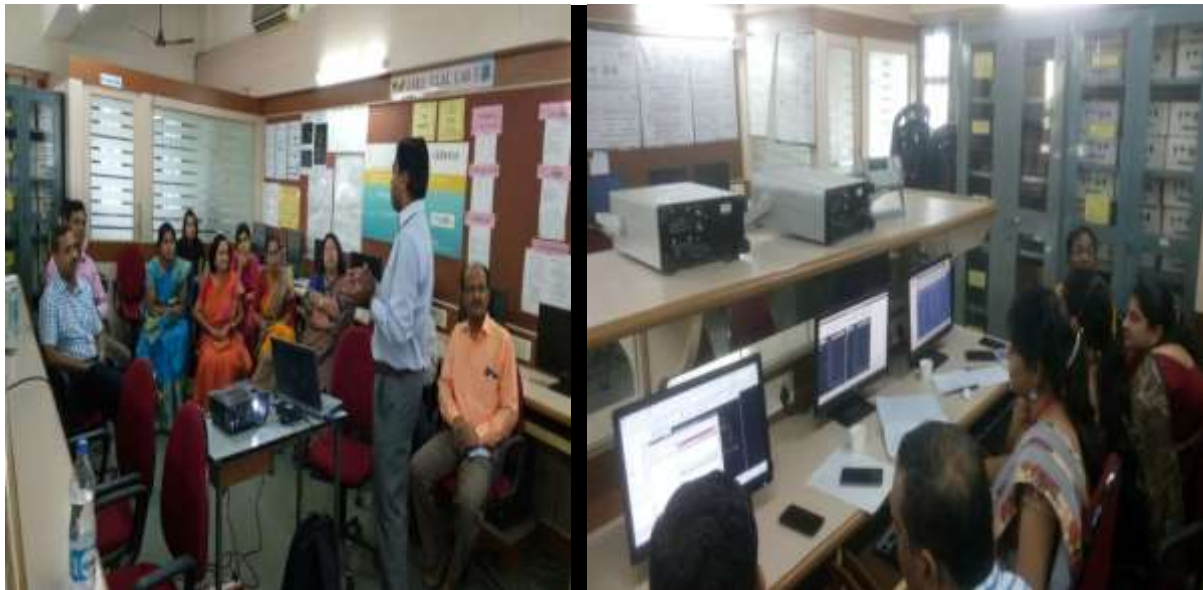
- Four faculty attended one week Short Term Training Program on “Wavelets and Machine Learning” From 3rd July 2017 to 8th July 2017.
- Mrs. Dipti Karani completed One week Faculty development program on “Enhancement Analytical Skills in Basic Electronics” at Vidyalankar Institute of Technology from 27th June to 2nd July 2017.
- Mr. Abhijit Shete and Mr. Abhishek Chaudhari guided students in summer internship program in May-June 2017.
- Mr. Parmeshwar Birajdar presented “Touchless fingerprint recognition system” at national centre of internal security (NCETIS) at IIT Bombay on 7/10/2017.

1.3 Talk and demo on “Getting Started with SEQUEL SIMULATOR”

It was organized on 4th August 2017 by Mrs. Dipti Karani. Simulating a circuit behavior before actually building it provides great insight into the behavior of actual circuit and saves time and money. It is a verification tool which provides a GUI for Schematic entry and plotting. It is useful for teaching Engineering courses like BEEE, ECD, Digital Electronics, and Analog Electronics.

1.4 Hands-on training on CADENCE software

Two day hands-on training on CADENCE software was organized on 7th and 8th September 2017. The training was conducted by Mr. Sharath Kanth, Sr. Application Engineer–Cadence Entuple Technologies, Hyderabad. It includes installation of Cadence tools ,schematic capture, analog simulations, Layout extraction, Physical Verification and Post-Layout Simulation and ASIC design Tools following with RTL design, functional simulations, synthesis, Physical design, Physical Verification and Post-Layout Simulation.



1.5 Publications

- Mrs. Kavita Tewari & Mrs. Rupali Patil published paper on "Analysis of Image enhancement techniques." in IJRITCC, March 2017
- Mrs. Naveeta Kant published paper on "GSM & Electro-pneumatic based Security system for prison Inmate Escape Prevention", in IJAREEIE , August 2017
- Dr. (Mrs.) Rajani Mangala, Karthik and Tanmay published paper titled "Traffic Signal Preemption for Emergency Vehicles" in IAEME.
- Mr. Parmeshwar Birajdar presented paper on "Touch-Less Finger photo Feature Extraction, Analysis and Matching using Monogenic Wavelets" in International conference on Signal and Information Processing
- Mrs. Asawari Dudwadkar published a paper on "Crack and Obstacle Surveillance Using Wireless Technology." in IJIRSET, April 2017
- Mrs. Jaymala Adsul, Dr. P. P. Vaidya & Dr. J. M. Nair published a paper on "A new method of reconfigurable ADC using calibrated programmable slopes" at the International Conference on Communication and Electronics Systems (ICCES) at Coimbatore, India, 21-22 Oct. 2016.
- Mr. Yogesh Pandit et al. "IOT Based System for Medical Agricultural Practices" in IJAREEIE, June 2016.
- *Mrs. Sarika Kuhikar published paper on "Automated horticultural system." in IJCESR, April 2017*
- Mrs. Gauri Sahoo published paper on "Power factor correction using SCR and Microcontroller." in IJIRSET, April 2017
- Mrs. Amrita Jhaveri published a paper on 'GPS Based Speed Limit and Toll Collection', International Journal of Advanced Research In Electrical, Electronics and Instrumentation Engineering
- Mrs. Rakhi Jadhav published paper on " Microcontroller based data glove to aid speech impaired." in IJIRCCE, March 2017
- Mrs. Dipti Karani presented a paper on "Biometric Security based Vehicular Safety System" in IJIR , 2017
- Mr. Abhishek Chaudhari published a paper titled "Research On Intelligent Transportation Systems Worldwide" in IJAERD, Nov 2016
- Mrs. Anushree Prabhu published a paper titled " Sensor & vision Fusion for Virtual Reality" in IJAREEIE , April 2016

1.6 Skill Enhancement Lecture (Sel)

Topic	Organized by	Date	Delivered by	Year
Artificial Intelligence	Dr. T. Rajani Mangala	22 nd August 2017	Mr. Siddesh Wagale	Final
Silicon crystal structure and Miller Indices	Mr. Abhay Kshirsagar	22 nd July 2017	Mr. Prafull Tele	Final
Ideas for Mini Project	Mrs. Neelam Chaudhari and Mrs. Rupali Patil	24 th July 2017	Mr. V. M. Joshi	Third
Embedded Systems and IoT	Mrs. Anushree Prabhu	24 th October 2017	Mrs. Anita Diwakar	Third

2. STUDENT ACTIVITIES

- More than 50 students from third and final year completed Internship/ Industrial training in various companies such as BARC, HPCL, Godrej, Indian railways, etc during summer vacation.
- Students were part of organizing teams of various events held in VESIT during Praxis-2017 on the 22nd and 23rd September 2017.
- More than 100 students from Department of electronics participated in various technical event Praxis 2017.
- **18 students are pursuing higher studies at Reputed International Universities.**

2.1 Spoken Tutorial

It is an initiative of national mission on education through ICT, MHRD, Govt. of India, to promote IT literacy through open source software

In corporation with this we have chosen four software as follows:

- 91 Students got certified in “C”.
- 48 Students got certified in “CPP”.
- 60 Students got certified in “Java”.
- 38 Students got certified in “python”

2.2 Project Skill Development Workshop

The Workshop was organized between 10th and 15th July 2017.

The department has organized a workshop to enhance project skill of third year students. Thirty Three students enthusiastically participated in this workshop.

This workshop started on 10thJuly it included discussions of third year students, HOD and senior faculty members regarding the need and benefits of the workshop. The subsequent session was conducted by Mrs. Dipti Karani. She explained a general block diagram of the structure of a project. She explained signal conditioning methods for making signals compatible with microprocessors. The same was demonstrated via solving examples. The students were introduced to a new circuit simulation software “SEQUEL” and were given hands on experience by simulating and explaining one circuit.

On 11thJuly presentation was given by Mr.Chandrashekar Javale where he explained to identify components according to their shapes and types. He

also explained EAGLE simulation software. He discussed various types of schematic design and single layer PCB layout design in EAGLE followed by the hands on experience for one circuit based on 555 timer.

This session was continued on 12th July by completing the layout design procedure and extracting negative from the layout .Then session was taken over by Mr. Abhishek Chaudhari marked by the introduction to the microcontroller family ATMEL. He explained the features of the microcontroller in detail and carried out program testing using AVR studio software and hands on experience was provided for the same along with installation procedure.

On 13th July Mr. Abhishek Chaudhari conducted session for testing microcontroller circuit using PROTEUS software and explained the sample circuit using PROTEUS software. The Proteus Design Suite is Electronic Design Automation (EDA) tool including schematic capture, simulation and PCB Layout modules.

On 14th July Mrs. Sarika Kuhikar introduced the students to the Power Electronics. She discussed MATLAB SIMULATION SIMPOWER system based on single phase inverter circuit using Sinusoidal Pulse Width Modulation control technique. The session was followed by discussion of power based project idea and induction machine such as speed control of machine i.e. V/F control method and protection of Induction machine i.e. over current and over voltage and excess temperature as an application of power electronics.

On 15th July APOORVA KELKAR, ROHIT KASHYAP and ATHARVA RANGNEKAR concluded the workshop by presenting different types of PCB along with their applications based on components such as SMD followed by the explanation of

etching process using toner transfer method and demonstrated the same procedure in group.



2.3 Analog Electronics & PCB Designing Workshop

Tinkerer's Lab conducted the Analog Electronics & PCB Designing Workshop from 3rd August 2017 to 10th August 2017. Students from ETRX and INSTRUMENTATION department participated in the 5 Day workshop.

- On Day 1, Students were taught the working of BJTs and Relays and how to use a Digital Multi-meter.
- On the 2nd Day, students were introduced to the various IC's that could be used for voltage regulation. The working and applications of OP-AMPs were also discussed.

- Students were given a hands-on experience on circuit designing in Eagle Software.
- The etching process of printing the PCB's was completed and holes were drilled on the PCB.
- The participants placing their components on the PCB and soldered them on their own with the help of volunteers.

2.4 Embedded Systems & IoT Workshop

Tinkerer's Lab conducted the Embedded Systems & IoT Workshop from 15th September 2017 to 21st August 2017. Students from ETRX, EXTC and CMPN department participated in this 5 day workshop.

- Students were introduced to Arduino UNO development board and were given a hands-on session on interfacing switches, LED's as well as IR sensors with Arduino IDE.
- Students were taught how Arduino board communicates with the computer and how Serial monitor can be used to debug any program.
- The interfacing of servo motors with Arduino using the Servo library in Arduino IDE was explained to the Students.
- Day 4 started the Internet of Things segment of the workshop. The day started with introduction of Node MCU which was going to be used throughout the IoT segment. Students were then introduced to Arduino IDE and how it can be used to program NODE MCU.
- The 2nd day of IoT workshop started with introduction to the concept of server side scripting as well as PHP.

2.5 Scholarship

2.5.1 Suman Tulsiani Scholarship is awarded by Suman Ramesh Tulsiani Charitable Trust. This scholarship is decided centrally for VES colleges and forwarded to Tulsiani Trust. The criteria for this scholarship is that, the student should have a score of at least 7.00 grade and family income of less than three lakh per annum. This year it is awarded to following students of ETRX Department:

- Chowdhari Shoaib (S.E.)
- Akshay Bhise (S.E.)
- Gokul Narayanan (B.E.)
- Arvind Kushwaha (S.E.)
- Pawan Sukhwani (B.E.)
- Sayyadanwar Kazi (B.E.)
- Prathamesh Kulkarni (S.E.)
- Kiran Balakrishnan (T.E.)
- Sankalp Khandkar (B.E.)

2.5.2 Vivekanand Jyoti Scholarship

It is awarded every year to one student from each department. An Amount of Rupees Thirty thousand each is given every year. The criteria is a grade point of at least 7.00 and family Income of less than one lakh per annum. It was received by following student of ETRX Department:

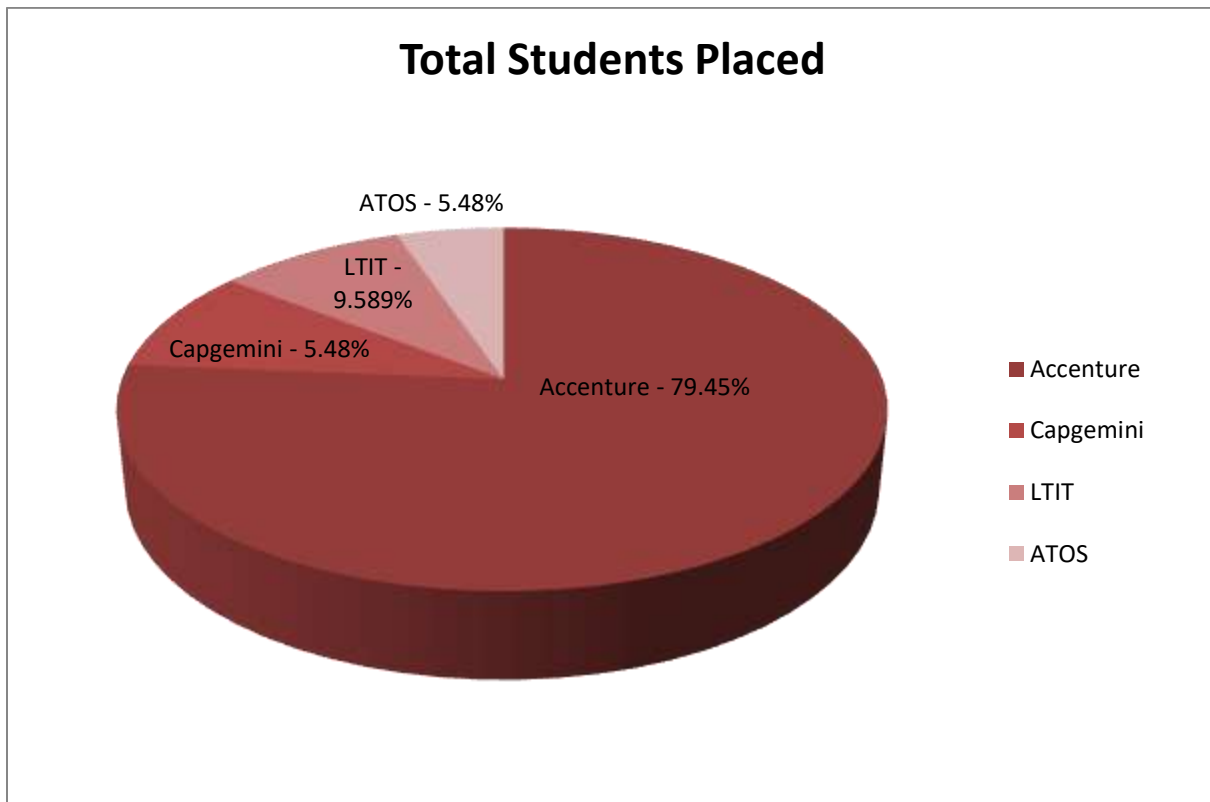
- Harish Firatu (S.E.)

2.5.3 Geeta Israni Foundation Scholarship benefits meritorious students who scored grade point of 8.0 and above and whose family income does not exceed Rs.1.50 lakhs per annum. It was received by following students:

- Sankalp Dinanath Tripathi (T.E.)
- Madhav Agarwal (T.E.)

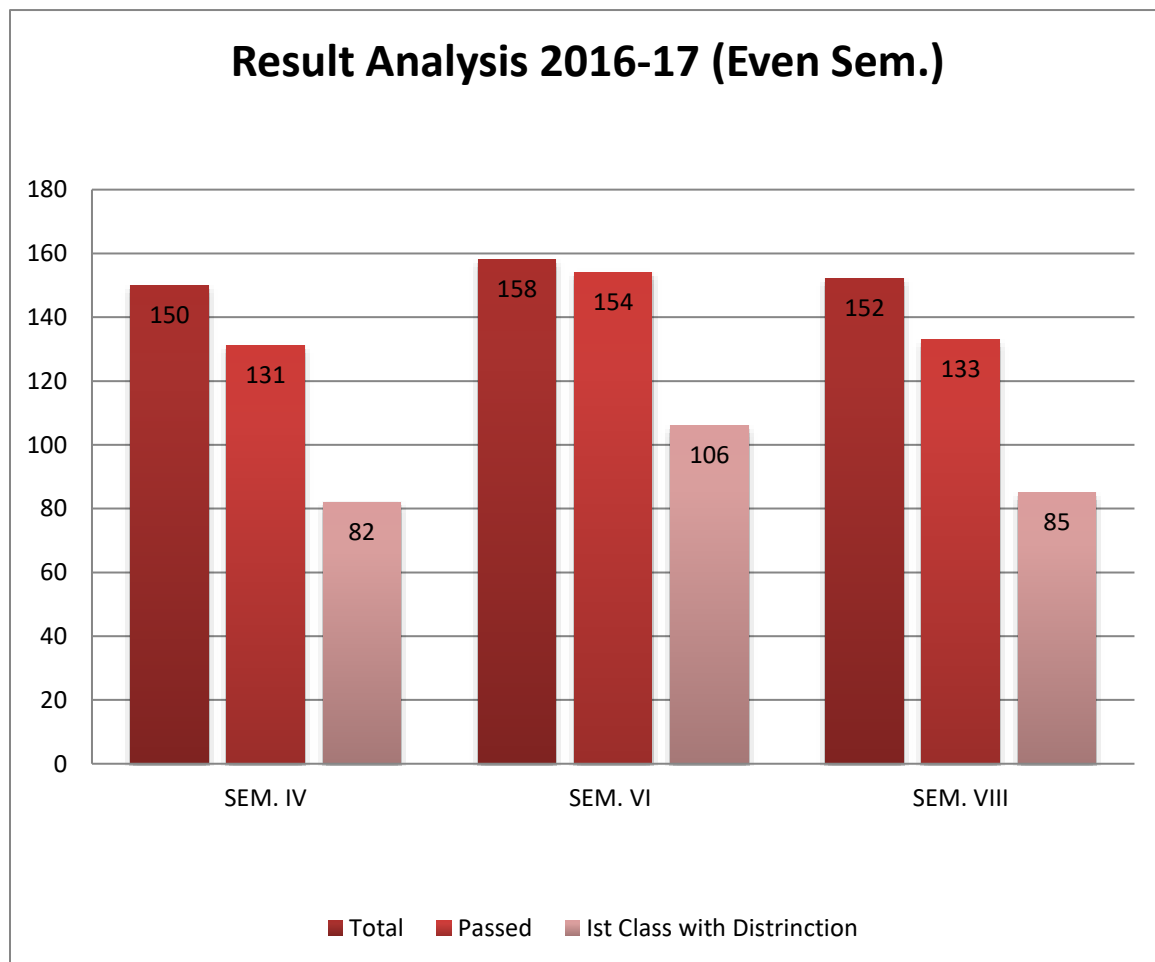
2.6 Placements

The department has a good placement record during this academic year. So far a total of 73 Students have been placed into various reputed companies.



2.7 Result Analysis 2016-17 (Even Sem.)

Results of University Examination conducted in May 2017.



2.8 Higher Studies

Following students were started their higher studies in various universities:

Sr No.	Name of the Student	Course	Name of the University	Class
1	Jay Anjankar	MSE Robotics	University of Pennsylvania	D16A
2	AparajitaBagchi	Electrical and Computer Engineering, MS	North Carolina State University	D16A
3	SanikaDongre	Master's in Embedded Systems Engineering	University of Colorado Boulder	D16A
5	Riya Jajoo	MS in Computer Engineering	North Carolina State University	D16A
6	Karan Ramdas	Master's in Information Technology	Rutgers, The state university of new	D16A
8	Lakshmi Nair	Electrical and Computer Engineering, MS	Georgia Institute of Technology	D16A
9	TamannaRupani	Electrical and Computer Engineering, MS	University of Illinois at Chicago	D16A
10	AtmadeepSen	Electrical and Computer Engineering, MS	North Carolina State University	D16A
11	PrachiWakade	MMS	S.I.E.S College of Management Studies	D16A
12	Vignesh Shankar	MS in Electrical & Computer	North Carolina State University.	D17A
13	Aditya Prakash	Master's in Information Technology	Rutgers, The state university of new	D16B
14	AshitaJagasia	MS in Telecommunication System Management	Northeastern University	D16B
15	HemaliJaguste	Masters in Engineering and Management	Case Western Reserve University	D16B
16	SuhrudKelkar	Electrical and Electronics Engineering, MS	California State University, Sacramento	D16B
17	Monish Nene	MS in Embedded Systems Engineering	University of Colorado Boulder	D16B
18	ApurvaPatil	MEM	Case Western Reserve University	D16B

2.9 Industry Internship Data

Total 60 students completed their internship at different renowned companies. Following is the list of some students:

Sr. No.	Name	Company	Duration	Starting from date	Until date
1	Nehal Jahagirdar	BARC	25 days	13 June 2016	08-Jul-16
2	Abhijith Nair	Godrej & Boyce Mfg. Co. Ltd	1 month	13-Jun-16	9 July 2016
3	Sneha Rao	Reliance Infrastructure Pvt. Ltd.	1 Month	21-Dec-16	21-Jan-17
4	Aakash Bhangale	Tata power	1 month	Jun-16	July 2016
5	Rajneesh Mishra	Indian Railway	2 weeks	5/27/2016	6/12/2016
6	Bhuvanesh Goplani	ONGC , Uran Plant	1 month	6/15/2017	7/14/2017
7	Sanika Dongre	Manas Engineers	1 month	12/22/2016	1/21/2017
8	Sagar Eidnani	Drona Aviation	1 month	6/6/2016	7/11/2016
9	Hrishikesh Pujari	L&T Heavy Engineering	1 month	12/21/2016	1/21/2017
10	Mohit Vanage	Crompton Greaves	1 month	6/8/2016	7/7/2016
11	Rachna mohanty	National Payments Corporation Of India	1 month	6/15/2016	7/15/2016
12	Sahil tasgavkar	Tata thermal power plant	18 days	6/16/2017	7/6/2017