

JNANA VITHAHA

MESSAGE FROM DIRECTOR



Dr. Harlprasad S A

I am happy that Faculty of Engineering and Technology, Jain (Deemed-to-beUniversity) is bringing out a Newsletter. The college newsletter will definitely help to show casethe activities that are happening in the campus. It also helps in building up team work which is very much needed today in the world of competition. It provides a platform for exposing the merits and academic achievements of the faculty as well as students. This enhances the documentation culture of the institute. This would definitely create an impact in the minds of readers,

by way of providing larger visibility and dimension to the campus all credits and thanks go to the dedicated staff and their team work.

HOD'S MESSAGE

Welcome to the Department of Mechanical Engineering at FET, Jain (Deemed-to-beUniversity). We started our journey in the year of 2009 with mechanical stream. Over the past decade, we have grown our expertise and competence with industry centred Mechanical Engineering curriculum and research.

Our vision is to impart quality education in the field of mechanical engineering that enables graduates who are innovative, entrepreneurial, ethical and successful to cater the growing industrial and societal demands.

The department offers B.Tech in Mechanical Engineering with an annual intake of 60 students, & M.Tech in Energy and Environmental Management with an intake of 9 students. Our department is engaged in the student-centered teaching with an emphasis on OBE (Outcome Based Education) framework. The course contents are periodically updated for introducing new scientific and technological developments. Undergraduate students are encouraged to undertake various research projects and encouraged to spend time in neighbouring industry.



Dr. Adarsha H



CONTENTS

Page - 1	Message from Director / HOD's Message
Page - 2	Academics
Page - 3	Events and Activities
Page - 4	Value Added Program
Page - 5 & 6	Industrial Visits
Page - 7	Publications
Page - 7	Student Achievements
Page - 8	Interactional Journal Publications
Page - 9	Publications
Page - 10	Faculty Development Program
Page - 11	Student Placements



ACADEMICS

Vision

To impart quality education in the field of mechanical engineering that enables graduates who are innovative, entrepreneurial, ethical and successful to cater the growing industrial and societal demands

Mission

M1: To educate, prepare and mentor students to excel as modern society professional through outcome based education and innovative teaching processes.

M2: To provide facility and conducive environment leading to diverse careers as well as research that solves societal and industrial problems with engineering and technology.

M3: To encourage the students to pursue higher education to acquire entrepreneurial skill through academic and scholarly activities.

M4: To inculcate strong ethical values and professionalism to serve society with responsibility.

Programme Educational Objectives

PEO1: Have successful careers in the mechanical and allied industries by demonstrating their skills in facing the challenges forced by industrial and research sectors.

PEO2: Work in teams discharging social responsibilities as engineers following ethical practices.

PEO3: Engage in entrepreneurial and professional society activities to meet the needs of the society.

PEO4: Continue to expand their technical competence by developing their knowledge, skills and engaging themselves in learning activities throughout their life.

B.Tech Program (Mechanical Engineering)

The 4-years, B.Tech program structure such as foundation, core discipline, perspective, skill, Elective-core discipline, Elective open choice and practice school. Students are required to take a certain number of credit units from each of the categories.

M.Tech Program (Energy and Environmental Management)

Over the first two semesters, M.Tech students are required to do substantial amount of coursework to complement their masters level education. The third semester is devoted mostly to internships and projects although there are some courses to be taken during that period. The fourth semester is fully devoted to completion of the project. The curriculum has been designed to provide all students with general background in Thermal Engineering. Electives taken during the second and third semester provides specialized knowledge in the area of individual interest.

Ph.D. Program

The focus of the Ph.D. program is a multi-disciplinarily and sustainability, linkage engineering, technology, management, science, social science and education pedagogy based societal challenges, specifically with an aim to deliver inclusive innovation. The uniqueness of the Faculty of Engineering and Technology, Jain (Deemed-to-be University) would be the opportunity to excel in research supported with eminent publications and patenting.

EVENTS AND ACTIVITIES

Inauguration of SAE-Jain University Collegiate Club

24th September 2019, one of the most remembered day in School of Engineering and Technology, Jain (Deemed-to-be University) for the spectacular inauguration of the SAE collegiate Club held at 10.30 AM, Seminar Hall. The faculty coordinator for this programme is **Dr. S. Dinesh Kumar, Professor, Mechanical Engineering**. The function was bolstered by the presence of the **Shri. Sharath Tengse, General Manager, Continental India, Bengaluru** and **Shri. Anoop B.S., MCSAE India, Bengaluru section**. **Dr. Hariprasad S.A, Director, JU - SET**, presided the event.



Shri. Sharath Tengse, General Manager, Continental India, Bengaluru



SAE India-Jain University Collegiate Club Office bearers



Shri. Anoop B.S., MCSAE India, Bengaluru section

Shri. Anoop B.S. gave lecture about various club activities of SAE India and the benefits of SAE India student membership. Shri. Sharath Tengse enlightened the audience with the future scope and challenges of hybrid vehicle which he felt to be the need of the hour. During the presidential address, Dr. Hariprasad S.A. enthralled with his fabulous speech about the objectives and responsibilities of the club.



Core student members are in discussion with Chief guest

Inauguration of 3D Printing Club – 3D TECH HUB

The Department of Mechanical Engineering of JAIN (Deemed-to-be University) had inaugurated its 3D Printing Club “3D Tech Hub” on the occasion of Dr. A. P.J. Abdul Kalam Ji’s birthday on 15th of October, 2019. The club was inaugurated by Shri. Srikanth TV, General Manager, Intech-DMLS, Bangalore and Shri. Sudarshan Reddy, Senior Engineer, Intech-DMLS, Bangalore. Dr. Hariprasad S A, Director - SET, presided the event and Dr. Chandrashekar Shastry, Dean P G Studies, felicitated the guests. Dr. Adarsh H, HoD-Mechanical along with the faculty advisors of the Club Dr. Dinesh Kumar S, Prof./Mech. Dept., Ramesh S, Asst. Prof./Mech. Dept. and Karthik N, Asst. Prof./Mech. Dept. enumerated the activities of the club.

The core team of this 3D TECH HUB consists of 7 student core members along with 3 faculty advisors. The mission of the 3D Printing Club is to educate, expose and explore the concepts, methods and execution of 3D Printing and make it available to the Jain University community.



Sharath Tengse, General Manager, Continental India, Bengaluru

Technorion workshop



Prof. S. Ramesh given token of appreciation to delegates

The department of Mechanical engineering of Jain (Deemed-to-be-University) in collaboration with **Techfest, IIT Bombay** organized a '**Technorion workshop**' on **26th September 2019**. The workshop focused on 'Introduction to Line following robotics', for 2nd and 3rd year students of the department. The workshop was presented by **Jyotsna**, an Embedded trainee along with **Sumera** and **Akhila**, Robotic engineers from **Novatech Robopvt. Ltd.** The head of the department **Dr. Adarsha H** welcomed the presenters and imparted

the importance of Robotics, hardware, software and programming capabilities that is required in various aspects of being a mechanical engineer.

The workshop emphasized the important role of mechanical students in design, structure, kinematics of the robots along with the learning of programming by which they could contribute to the rapidly growing AI Technology.



VALUE ADDED PROGRAMS CATIA V5

The department of mechanical engineering has conducted value added programme on CATIA V5 for the 7th semester mechanical students, during 25 September - 01 October, 2019 at CAD lab.

The objective of the program is to provide training and guidance to the students on the aspects of building a career in the field of Design and to assist them in exploring new opportunities. Mr. Rakesh, Swamy Design solution has delivered keynote address on CAD orthographic. During the program, hands-on training given to students to design precise 3D mechanical parts with an intuitive and flexible user interface. It provides a large set of tools for creating and editing shape designs. Problems are discussed on generative sheet metal design wire frame and surface molding and radial engine assembly, and aero plane applications.



Trainer Mr. Rakesh (right side) welcomed by Prof. Nagaraj Patil



Group photo of participants with faculties

INDUSTRIAL VISITS

Armatic Engineering Private Limited, Bengaluru



Industrial Visit has been arranged to an industry Armatic Engineering Private Limited on 27 October 2019 for 2nd year B.Tech Mechanical engineering students and 1st year M.Tech Energy and Environmental students. Prof. Dr Adarsh H and Prof. Ranganatha Swamy M K, were accompanied with students.

The technical head had showcased a brand-new product "DIGMANN 3" which was a micro excavator for agricultural applications. The students witnessed the electro-mechanical upender and the electro-hydraulic upender with the transfer trolley and questioned about the working principle, its practical application and various process involved in manufacturing it. In the machine shop division, many lathe machines and its other variants were used for small processing. The students also witnessed the various equipments that were used for coil handling, transfer cars, slab, plate and sheet tongs, miscellaneous lifting, grabs, tundish beam, launder lifting device, ladles and charging buckets, upenders, tilters, stack turnover devices.



Group photo of students with faculties



Students interaction with industry expert

Industrial visit to**Central Manufacturing Technology Institute (CMTI), Bengaluru**

Industrial Visit has been arranged to an industry Central Manufacturing Technology Institute (CMTI), Bengaluru on 14 November 2019 for 3rd year B.Tech Mechanical engineering students. Prof.RanganathaSwamy M K and Prof.Abhijeeth Nagaraj were accompanied with students.

CMTI is an R & D organization focusing its efforts mainly on harnessing know-how in the manufacturing technology sector to practical purposes and assisting technological growth in the country. The Central Machine Tool Institute at Bengaluru established in 1960 by the Government of India.

**DMLS Machine****5 Axis DMD 105D machine****Group photo of students with faculties**

Students understood the function of advanced equipments like Co-ordinate measuring machine, Gear tester, Form tester, Electrical Discharge Machining, 3D Printing Process, DMLS Machine, 5 Axis DMD 105D machine, Universal Machining Center, etc.

STUDENT ACHIEVEMENTS

- **Mr. Yogesh P**, 3rd semester mechanical engineering student has published a paper “Growing Momentum in the Various Field of Robotics- A Review” in International Journal of Innovative Science and Research Technology, Vol-4 / Issue-8, 2019.
- **Mr. Sandeep B**, 7th mechanical engineering student participated in the “2nd International Conference on Emerging Research in Civil, Aeronautical and Mechanical Engineering”, held at Nitte Meenakshi Institute of Technology, Bengaluru, during 25-26 July 2019.
- A team **Yogesh P, Abhinav Kumar, Ijas Ahmed, Vishnumurthy Bhat, Sai Krishna and Manoj DM** from 3rd semester mechanical engineering has participated “DST and Texas Instruments India Innovation Challenge Design Contest 2019” Powered by AICTE and anchored by NSRCEL@IIMB. This team is qualified for the Quarter finals.
- A team **Prateek Ghorawat, Rajesh Kumar Gupta, Fasi Uz Zaman, Nikhil Hadpad, Ankit KR Mehta and G Chaitanya Reddy** from 5th semester mechanical engineering has participated “DST and Texas Instruments India Innovation Challenge Design Contest 2019” Powered by AICTE and anchored by NSRCEL@IIMB. This team is qualified for the Quarter finals.

FACULTY PUBLICATIONS

The department of Mechanical Engineering faculties are actively involved in cutting edge research encompassing the areas of Materials and Manufacturing, Design, and Thermal Engineering. During July-December 2019, the department faculties have published their research outcomes in the reputed international journals like **ASME** Journal of Solar Energy Engineering, **ASME** Journal of Heat Transfer, Elsevier Composites Part B, **Springer** Journal of the Brazilian Society of Mechanical Sciences and Engineering, **Springer** Arabian Journal for Science and Engineering, **Taylor & Francis** Petroleum Science, etc.

Publications during July – December 2019

Category	Indexed by	Total
International Journal	SCI/WoS& Scopus	12
International Journal	Scopus	05
International Journal	Google Scholar	01
International Conference	-	06
Book/Chapter	-	03
Total		27

INTERNATIONAL JOURNAL PUBLICATIONS

- A. Pattanaik, M. Mukherjee, S.B. Mishra, Influence of curing condition on thermo-mechanical properties of fly ash reinforced epoxy composite, *Composites Part B, Elsevier*, 176 (2019) 107301, August 2019 (Impact factor: 6.864, Indexed by : SCI/ WoS & Scopus)
- Beemkumar N, Yuvarajan D, Arulprkasajothi M, Ganesan S, Elangovan K, Senthilkumar G. Experimental investigation and numerical modeling of room temperature control in the building by the implementation of PCM in the roof, *ASME Journal of Solar Energy Engineering*, Available at: <https://doi.org/10.1115/1.4044564>, September 2019, (Impact factor: 1.367, Indexed by : SCI/ WoS & Scopus)
- Mahalingam Arulprkasajothi, Nagappan Beemkumar, Jayaram Parthipan & Nagalingeswararaju Battu, Investigating the Physio-chemical Properties of Densified Biomass Pellet Fuels from Fruit and Vegetable Market Waste, *Arabian Journal for Science and Engineering, Springer*, Available at: <https://doi.org/10.1007/s13369-019-04294-8>, December 2019, (Impact factor: 1.518, Indexed by : SCI/ WoS & Scopus)
- V. Saikrishnan, A. Karthikeyan, N. Beemkumar, S. Ganesan & D. Yuvarajan, The thermal performance analyses of the solar energy-powered thermal energy storage system with $MgCl_2 \cdot 6H_2O$ as PCM, *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, Springer, Available at: <https://doi.org/10.1007/s40430-019-2106-z>, December 2019, (Impact factor: 1.743, Indexed by : SCI/ WoS & Scopus)
- Nivin Joy, K. N. Balan, Beemkumar Nagappan & Sajin Justin Abraham baby, "Emission analysis of diesel and butanol blends in research diesel engine", *Petroleum Science and Technology*, Taylor & Francis, Available at: <https://doi.org/10.1080/10916466.2019.1702680>, December 2019 (Impact factor: 1.070, Indexed by : SCI/ WoS & Scopus)
- S P Venkatesan, P N Kadiresh, Nagappan Beemkumar & Jeya Jeevahan, Combustion, performances, and emissions characteristics of diesel engine fuelled with diesel aqueous zinc oxide nanofluid blends, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, Taylor & Francis, Available at: <https://doi.org/10.1080/15567036.2019.1666933>, September 2019 (Impact factor: 0.894, Indexed by: SCI/ WoS & Scopus)
- Yuvarajan Devarajan, Dineshbabu Munuswamy, Beemkumar Nagappan, Ganesan Subbiah, Experimental assessment of performance and exhaust emission characteristics of ϵ diesel engine fuelled with Punnai biodiesel/butanol fuel blends, *Petroleum Science*, Springer, Available at: <https://doi.org/10.1007/s12182-019-00361-9>, Aug 2019. (Impact factor: 1.846, Indexed by : SCI/ WoS & Scopus)
- K. Syed Jafar, M. Arulprakasajothi, N. Beemkumar, K. Elangovan, Effect of conical strip inserts in parabolic trough solar collector under turbulent flow, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*. Taylor & Francis, Available at: <https://doi.org/10.1080/15567036.2019.1650850>, Aug 2019. (Impact factor: 0.894, Indexed by: SCI/ WoS & Scopus)
- M. Arulprakasajothi, N. Dilip Raja, N. Beemkumar & K. Elangovan, Experimental study on Al_2O_3 / H_2O nanofluid with conical sectional insert in concentric tube heat exchanger, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, Taylor & Francis, Available at: <https://doi.org/10.1080/15567036.2019.1649753>, Aug 2019. (Impact factor: 0.894, Indexed by: SCI/ WoS & Scopus)
- Anderson Arul Gnana Dhas, Beemkumar Nagappan, Yoganand K., Arvind T., Saji Varghes & Christopherselvam D. Effect of nano-fluid on reducing the smoke emissions from diesel engine, *Petroleum Science and Technology*, Taylor & Francis, Available at: <https://doi.org/10.1080/10916466.2019.1633349>, 27 June 2019 (Impact factor: 1.070, Indexed by: SCI/ WoS & Scopus)
- M K Ranganatha Swamy, U S Mallikarjun and V Udayakumar Synthesis and Characterization of Shape Memory Polymers, *IOP Conf. Series: Materials Science and Engineering*, Available at: <https://doi.org/10.1088/1757-899X/577/1/012095>, December 2019 (Indexed by: Scopus)
- G V Pradeep, K Ram Narasimha, Experimental Investigations on the Thermal Performance of a Single Closed Loop Pulsating Heat Pipe Using TiO_2 Nanofluid, *Journal of Heat Transfer, ASME*, Vol. 141 / 091806/1-6, Sep 2019. (Impact factor: 1.602, Indexed by: SCI/ WoS & Scopus)
- Sunil Bhat, H. Adarsha, V Ravinarayan, V.P Koushik, Analytical model for estimation of energy release rate at mode I crack tip in bi-material of identical steels joined by an over-matched weld interlayer, *Procedia Structural Integrity* 17 (2019) 21–28, August 2019, (Indexed by: Scopus)

- M. Khedkar, Sunil Bhat and H. Adarsha, A review of magneto-rheological fluid damper technology and its applications, International review of mechanical engineering, Praise Worthy Prize 13, 256-264, Jul-19 (Indexed by: Scopus)
- S. Dinesh Kumar, Study on mechanical & thermal properties of PCL blended raphemebiocomposites Journal - Polimeros, Brazilian Polymer Association 29(2),1-9, Jul-19 (Indexed by: Scopus)
- NagrajPatil, Gopalakrishna K, Sangmesh, Effect of Cryogenic treatment on Tool Wear, Chip Thickness of Uncoated Carbide Insert during Machining with AISI304 Stainless Steel, International Journal of Innovative Technology and Exploring Engineering, published by: Blue Eyes Intelligence Engineering & Sciences Publication", Volume-8, Issue-9, July 2019,(Indexed by: Scopus)
- Y.M. Khedkar, Sunil Bhat and H. Adarsha Review of magnetorheological fluid damper technology and its applications, International review of mechanical engineering, Praiseworthy prize Vol 13, 2019, 256-264, Jul-19, (Indexed by: Scopus)

BOOKS / CHAPTER PUBLICATIONS

- Sunil Bhat, H. Adarsha and Vijay G. Ukadgaonker, "Effect of the Type of Load at Infinity over Circular Discontinuity in Elastic Regime: A Theoretical Review", Current Research in Science and Technology, Print ISBN: 978-93-89246-64-3, eBook ISBN: 978-93-89246-65-0, Vol. 1, 64-87, DC I: 10.9734/bpi/crst/v1, September 2019.
- Srikrishna B. Rao published a book on "Production Planning and Control" by NANDU Printers and Publishers PVT. Ltd., 4th Edition, August 2019.
- Mr. Deepak J, Dr. Adarsha H, Dr. Sunil Bhat, Mr. Abhijeet Nagaraj, "Innovative Surface Modification Techniques to Combat Corrosion", Emerging Trends in Mechanical, Computing and electrical Science, Book Chapter, Anvi Books & Publishers Delhi, Chapter 6, pp. 196 - 216, December 2019.

SEMINARS & WORKSHOPS

- Prof. Dr. Beemkumar N presented a research paper with the title "Experimental investigation of solar powered ejector refrigeration system integrated with different concentrators" in "The 11 International Exergy, Energy and Environment Symposium (IEEES-11)" held at SRM Institute of Science and Technology, Chennai, during 14 - 18, July 2019.
- Prof. Dr. Beemkumar N presented a research paper with the title "Influence of antioxidant additives on performance and emission characteristics of beef tallow biodiesel fuelled C.I engine" in "The 11 International Exergy, Energy and Environment Symposium (IEEES-11)" held at SRM Institute of Science and Technology, Chennai, during 14 - 18, July 2019.
- Prof. Kaushik V Prasad presented a research paper with the title "SEM Characterization of 3D printed ABS tensile specimens developed by Fused Deposition Modelling" in "2nd International Conference on Emerging Research in Civil, Aeronautical and Mechanical Engineering" held at Nitte Meenakshi Institute of Technology (NMIT), Bengaluru, during 25-26, July 2019.
- Prof. J. Deepak presented a research paper with the title "Studies on development of alumina and ceria coated Mg Az91 composite for enhanced properties" in "International Conference on Advanced Trends in Mechanical and Aerospace Engineering (DSU-ATMA-2019)" held at Dayananda Sagar University, Bengaluru, during 7-9, November 2019.

- Prof. Abhijeeth Nagaraj presented a research paper with the title “Improvement in Thermal Performance of Parabolic Trough Solar Collector Using Epoxy Based Graphite Coating” in “2nd International Mechanical Engineering Congress (IMEC) – 2019”, held at NIT Trichy, During 29 Nov – 2 Dec 2019.
- Prof. Abhijeeth Nagaraj, Mr. Karthik N presented a research paper with the title “Thermal performance of a Divided-flow type Shell and Tube Compact Heat Exchanger” in “International Conference On Thermo-Fluids and Energy Systems 2019”, held at B.N.M. Institute of Technology, Bengaluru, During 27-28, December 2019.
Skill/Faculty Development Programme / Workshop

SKILL DEVELOPMENT PROGRAMME

- Prof. Kaushik V Prasad attended a Skill Development Program for PhD Scholars, conducted by Centre for Research in Social Sciences & Education (CERSSE), Jain (Deemed-to-be University), During 21-22 June 2019.
- Prof. Ramesh S attended a Faculty Development Program on “Advances in Mechatronics” conducted by BMS Institute of Technology & Management, Bengaluru, During 16-20 July 2019.
- Prof. Sandeep V attended the Ten days’ workshop on “Research Methodology” conducted by Centre for PG studies, VTU, during 26 July - 4 August 2019.

FACULTY ACHIEVEMENTS



Prof. Dr. Adarsha H, Head, Department of Mechanical Engineering has been awarded the Prestigious “Guru Samarpana 2019” by Presidency University, Bengaluru on 29-11-2019 and also he has been awarded as “Best Young Researcher” by ESN awards at Chennai on 28-09-2019. In addition, he has been represented as Session Chair in 35th National Conference on Trends and Developments in Automotive Industry held at IIE Hosur Local Centre, Adhiyamaan Engineering College, Hosur, during 3-4 September 2019. He served as National Advisory Committee Member in International Conference on Advanced Trends in Mechanical and Aerospace Engineering (ATMA) – 2019, conducted by Dayananda Sagar University, Bengaluru, During 7-9 November 2019. The Centre of Excellence sponsored by Toyota India Private Limited was established in the Faculty of Engineering and Technology, Jain (Deemed-to-be University) through his remarkable commitment.

Prof. Dr. Dinesh Kumar has been awarded as “Best Contribution in the field of 3D Printing” by ESN awards at Chennai on 28-09-2019 and also he has been awarded as “International Best Researcher” by International American Council for Research & Development (IARD), India. The 3D TECH HUB was established in the Faculty of Engineering and Technology, Jain (Deemed-to-be University) through his tremendous commitment.





Prof. Dr. Beemkumar received an award “Certificate of Reviewing” from the Applied Energy, Elsevier for his recognition of the reviews contributed to the journals since July 2019. During July – December 2019, he has committed to provide a rigorous, ethical review process in all reputed journals such as ASME Solar Energy Engineering, Springer Thermal Analysis and Calorimetry, Elsevier journals Fuel, Energy, etc. In addition, during July-December 2019 he published nine research papers in the reputed SCI/WoS indexed journals with cumulative impact factor 11.296 (as per Journal Citation Reports).

Prof. Dr. Ashutosh Pattanaikhas published a paper in the Journal of Composites Part B, Elsevier (Impact Factor: 6.864) which has been the department's highest impact factor journal to date. conducted by BMS Institute of Technology & Management, Bengaluru, During 16-20 July 2019.

- Prof. Sandeep V attended the Ten days' workshop on “Research Methodology” conducted by Centre for PG studies, VTU, during 26 July - 4 August 2019.



STUDENT PLACEMENTS

Our department final year students are placed in the following leading companies during July – December 2019

Student Name	Industry	Salary per Annum (INR)
Jayadev B Menon	Tata Consultancy Services Limited	3.6 Lakhs
Maka Krishnan Ashish	Tata Consultancy Services Limited	3.6 Lakhs
Sanket Khurapi	Lido Infotech Private limited	10 Lakhs
Sandeep B	Millenium Aerospace	4 Lakhs
Saraha Patel	CGI Group	6 Lakhs
Akarsh Bhatt	Verzeo Infotech Private limited	6 Lakhs
Sharath R	Verzeo Infotech Private limited	6 Lakhs
Jayanth R	Youngman India Private Limited	2.8 Lakhs
Nitesh A	Youngman India Private Limited	2.8 Lakhs
Sailikith Reddy	Youngman India Private Limited	2.8 Lakhs
Puneeth V/P	Youngman India Private Limited	2.8 Lakhs