Madhav Institute of Technology and Science, Gwalior
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)
Department of CSE & IT

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Title of the activity:	**Online National Workshop on "Internet of Things (IoT) and Data Analytics"**
Dates:	**23 – 24th October, 2020**
Brief description of the activity:	Over the past few years, there has been much hype surrounding the internet of things (IoT)—both consumers and businesses strive to follow technological developments in the area of connected devices. But does IoT really merit attention, or is it just overhyped? The IoT market is expected to reach a value of $6.1 billion by 2024 at a CAGR of 31.8% according to the Mordor Intelligence 2019 estimates. The global market is clearly in favor of IoT development and its potential to bring considerable benefits to the economy. One component of growth in the IoT market is the combination of IoT and big data—IoT data analytics. Simply put, IoT data analytics is the analysis of huge data volumes generated by connected devices. Organizations can derive a number of benefits from it: optimize operations, control processes automatically, engage more customers, and empower employees. The combination of IoT and data analytics has already proven to be beneficial in retail, healthcare, telematics, manufacturing, and smart cities. In view of all these applications and benefits of IoT and Data Analytics, we propose to organize an online national workshop on **"Internet of Things (IoT) and Data Analytics"**, which will focus on highlighting various concepts and techniques used in Internet of Things and Data Analytics, and how the Data Analytics will further enhance the applicability of IoT. The workshop will benefit faculty, research scholars as well as students because these days this field is one of the hot research topics and is also used in corporate sectors for business analysis and other applications. Since the workshop theme is the amalgamation of IoT and Data Analytics, it will bring various experts from both the fields together for knowledge sharing and will encourage interdisciplinary research too.
Objectives of the activity:	• To Understand basics of IoT platforms for sensing real and physical data. • To Explore practical hands-on exposure in the domain of IoT data acquisition. • To implement IoT data collection, communication and data analytics.
Outcomes of the activity:	The participants will be able to: • Understand various concepts regarding IoT and Data Analytics. • Apply the Data Analysis techniques to IoT data. • Analyse Data Analysis techniques to enhance the applicability of IoT. • Explain the importance of Data Analysis in the field of IoT.
Name and affiliation of experts:	1. **Dr. Rakesh Kumar Jha** Department of Electronics and Communication Engineering, Shri Mata Vaishno Devi University, Katra, Jammu and Kashmir, India 2. **Dr. Ramjeevan Singh Thakur** Department of Computer Applications, MANIT, Bhopal, MP 3. **Dr. Vivek Tiwari** Department of Computer Science and Engineering at DSPM International Institute of Information Technology – Naya Raipur (IIIT-NR), C.G. India
Number of participants:	**Total = 81 (External Participants = 09, Internal Participants =72)** Professor = 01 Associate Professor = 01 Assistant Professor = 19 Guest Faculty = 01 Research Scholar = 06 Lab Technician = 01 Technical Assistant = 01 Students = 51

Dr. Akhilesh Tiwari
Prof. & Head

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<u>Workshop Brochure</u>
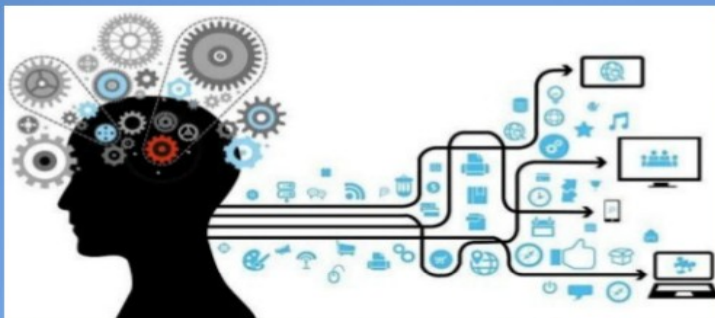
TWO DAYS ONLINE NATIONAL WORKSHOP
ON
INTERNET OF THINGS (IoT) & DATA ANALYTICS
UNDER TEQIP-III
23 - 24 OCTOBER, 2020

ORGANIZED BY

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING AND INFORMATION TECHNOLOGY

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE

(A GOVT. AIDED UGC AUTONOMOUS & NAAC ACCREDITED INSTITUTE, ESTABLISHED IN 1957) GWALIOR, M.P. 474005

🌐 www.mitsgwalior.in

REGISTRATION LINK https://forms.gle/aXfNrXv9YM2wc49X9

PATRON
Dr. R.K. Pandit
Director
MITS Gwalior

WORKSHOP TEAM

CONVENER
Dr. Akhilesh Tiwari
Prof. & Head CSE & IT

COORDINATORS
Mr. Mir Shahnawaz Ahmad (Assist. Prof., CSE&IT)
Mr. Arun Kumar (Assist. Prof., CSE & IT)
Ms. Aishwarya (Assist. Prof., CSE & IT)
Ms. Sneha Garg (Assist. Prof., CSE & IT)

PREAMBLE

The field of engineering and technology is facing unparallel changes and consolidations. As educators, we must be continuously aware of these developments so that we cannot only define a fixed path but also we have to take full advancement in engineering and technology. Keeping view of the current thrust, relevance and importance of the development in engineering and technology, the faculty members of technical institute have to keep a place with its exchanging trends for social and industrial benefits. Researchers and Scientists have applied modelling and computational techniques as a tool to represent the various problems in real word situations. It is because of the wide applicability of Internet of Things (IoT) in different domains of Engineering and Technology and applications of Data Analytics techniques, this Workshop is being organized with the following objectives.

- Motivate and equip the participants with the basics as well as the recent advancements in IoT and Data Analytics, and its applications for solving wide variety of problems in various fields of engineering and technology.
- To expose the faculty members and students with the newer dimensions of the area with their practical approaches to tackle the real life problems in engineering and technology and other related disciplines.
- To take up various challenges of the present day to day societal problems for their acceptable logical solutions.

This Workshop will be helpful for faculty members and researchers to utilise methods, tools, and computational techniques for real life problems solving.

REGISTRATION FEE
There will be no registration fee for the participants from AICTE recognized Institutions

WORKSHOP CONTENTS

The workshop will focus on following topics:
- Introduction to Internet of Things.
- Discussion on Industrial IoT and its requirements.
- Practical approach to IoT.
- IoT: A case study using hardware Analysis.
- How Data Analytics can help IoT to enhance its applicability?
- Exploratory data analysis towards data pre-processing.
- Predictive analytics.
- Various tools used for the implementation of techniques used in data analytics.

ELIGIBILITY
Faculty members, Research scholars and UG/PG students in relevant discipline of degree level technical Institution/ Universities approved by AICTE are eligible to attend the workshop.

RESOURCE PERSONS
- **Dr. Ramjeevan Singh Thakur**, MANIT, Bhopal.
- **Dr. Rakesh Kumar Jha**, SMVDU Katra, J&K.
- **Dr. Vivek Tiwari**, International Institute of Information Technology – Naya Raipur (IIIT-NR)

PLEASE NOTE

The number of participants is limited. The interested candidate needs to apply online using registration link (on or before **20th October, 2020**). Shortlisting of participants will be on **First Come First Serve** basis. The shortlisted candidates will be informed via E-mail. E-certificates will be given to all the participants on successful completion of workshop.

FOR ANY QUERIES PLEASE CONTACT:
Mr. Mir Shahnawaz Ahmad (Assist. Prof., CSE&IT)
📞 +91-7006080550
✉ mirshahnawaz888@mitsgwalior.in

ABOUT MITS

Madhav Institute of Technology and Science (MITS), Gwalior was established by His Highness Late Sir Jiwaji Rao Scindia, Maharaja of Erstwhile State of Gwalior, with an aim to create world class quality engineers and technocrats capable of providing leadership in all spheres of life and society. Founded as Madhav Engineering College in 1957 with three UG programmes, this temple of learning is now about 60 years old. Since its inception, the institute has constantly strive for excellence and quality in technical education. Today, the institute offers nine UG programmes along with research programmes leading to Masters and Ph.D. degree in various specializations of engineering and technology. All the departments of the institute have well equipped laboratories and experienced faculties. The institute is a minor QIP centre of AICTE for Ph.D. programme in five disciplines. The institute is also funded by World Bank under TEQIP phase III to strengthen the quality of technical education.

ABOUT THE DEPARTMENT

The department of CSE & IT has an excellent & rich history and an outstanding record of contributions to the profession and community. The department is well recognized for excellence in facilities and teaching. The Department offers UG, PG and Ph.D. Programmes in Computer Science & Engineering and Information Technology. The Department has a comprehensive curriculum on topics related to all aspects of Computer Hardware and Software with an emphasis on practical learning. The course structure is up-to-date and includes courses on emerging topics to equip our students with the latest developments in Computer Science and Engineering. The Department has state-of-the-art infrastructure and computing equipment supported by high speed Ethernet and wireless networks. Our faculty members aim at delivering top class education blending their rich research experience with classroom teaching.

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Department of Computer Science & Engineering and Information Technology

ONLINE NATIONAL WORKSHOP
ON

Internet of Things (IoT) & Data Analytics

UNDER TEQIP-III
23 – 24 OCTOBER, 2020

WORKSHOP SCHEDULE

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23rd Oct., 2020 (Friday)	**Session – 1 (02:00 PM to 03:30PM):** **Dr. Rakesh Kumar Jha** *Department of Electronics and Communication Engineering, Shri Mata Vaishno Devi University, Katra, Jammu and Kashmir.* **(Session Topic: Internet of things (IoT): A Case Study using Hardware Analysis)**	**Session – 2 (03:45 PM to 05:15 PM):** **Dr. Rakesh Kumar Jha** *Department of Electronics and Communication Engineering, Shri Mata Vaishno Devi University, Katra, Jammu and Kashmir.* **(Session Topic: Internet of things (IoT): A Practical Approach)**
24th Oct., 2020 (Saturday)	**Session – 3 (10:00 AM to 11:30 AM):** **Dr. Vivek Tiwari** *Department of Computer Science and Engineering, International Institute of Information Technology – Naya Raipur (IIIT-NR).* **(Session Topic: Predictive Analytics)**	**Session – 4 (12:00 PM to 01:30 PM):** **Dr. Ramjeevan Singh Thakur** *Department of Computer Applications, MANIT, Bhopal.* **(Session Topic: Exploratory Data Analysis towards Data Pre-Processing)**

Please Note:
- The link to join each online session will be provided to all the participants via registered E-mail by workshop organizing team members in due course of time.
- Kindly put your microphone and video to mute when joining any workshop session to avoid any disturbance.
- You can ask questions and queries during the workshop sessions in chat window.
- E-certificates will be given to all the participants on the basis of attendance in each session and score in online test (that will be conducted at the end of Workshop).
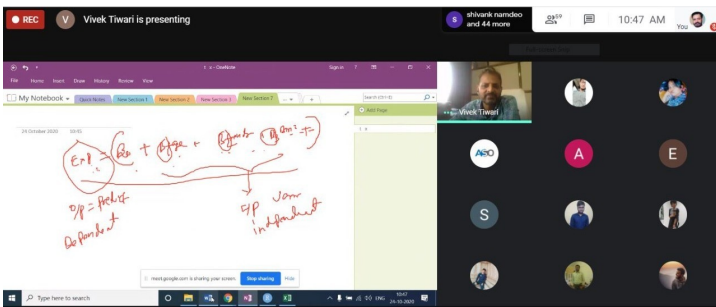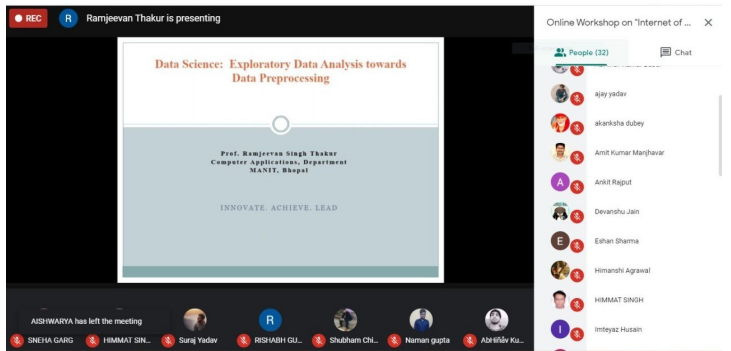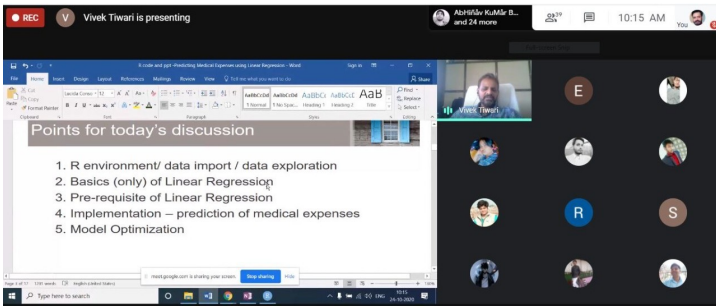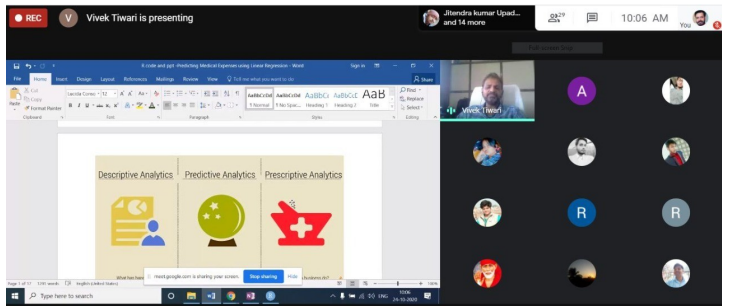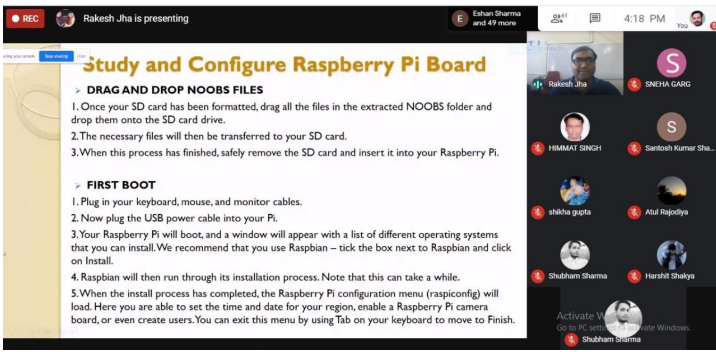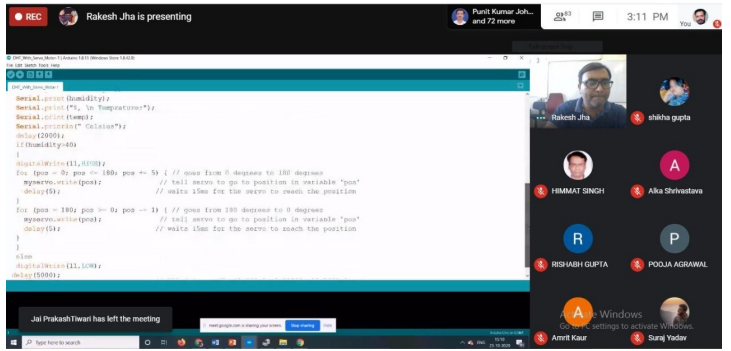
Some pics of the event:

Feedback from participants

Timestamp	Email Address	Name of the participant	Institute	Designation	Workshop structure and organization rating (0 – very poor, 5 – Excellent)	Workshop Content & Selection of Topics rating (0 - very poor, 5 – Excellent)	Have you found the workshop useful?	Will you recommend this workshop to your colleagues?	Shall you be using the knowledge gained during this workshop in your teaching/ personal professional advancement?	Your overall assessment of the workshop?	Final remarks and suggestions for improvement
10/24/2020 12:27:38	nishidixit2017@gmail.com	Nishi Dixit	Madhav institute of technology and sciences	Student	5	3	Yes	Yes	Yes	Useful	
10/24/2020 12:27:43	TARUNMITSMANIT08@MITSGWALIOR.IN	TARUN SHRIVASTAVA	MADHAV VINSTITUTE OF TECHNOLOGY & SCIENCE GWALIOR MP	Assistant Professor	4	4	Yes	Yes	Yes	Useful	NO
10/24/2020 12:27:43	shubhamsharma6618@gmail.com	Shubham Sharma	MITS, Gwalior	Research Scholar	5	5	Yes	Yes	Yes	Useful	
10/24/2020 12:27:47	akankshadubey2558@gmail.com	Akanksha dubey	MITS(GWALIOR)	Student	4	4	Yes	Yes	Yes	Useful	
10/24/2020 12:27:52	mitseshan@gmail.com	Eshan Sharma	Madhav Institute of Technology and Science, Gwalior	Studnet	4	4	Yes	Yes	Yes	Useful	
10/24/2020 12:27:56	naman30oct@gmail.com	Naman gupta	Madhav institute of technology and science Gwalior	student	4	5	Yes	Yes	Yes	Useful	
10/24/2020 12:28:22	imamitsingh958@gmail.com	Amit singh rajawat	MITS Gwalior	Student	4	4	Yes	Yes	Yes	Useful	Provide pdf of ppt and recorded languages
10/24/2020 12:28:24	rashmirahul2002@gmail.com	RASHMI KUMARI	MADHAV INSTITUTE OF TECHNOLOGY AND SCIENCE	STUDENT	4	4	Yes	Yes	Yes	Useful	
10/24/2020 12:28:28	sshwetapatel@mitsgwalior.in	Shweta Patel	MITS, Gwalior	Assistant Professor	4	4	Yes	Yes	Yes	Useful	
10/24/2020 12:28:57	gaurparul2007@mitsgwalior.in	Parul Saxena	MITS, Gwalior	Assistant Professor	5	5	Yes	Yes	Yes	Useful	Good
10/24/2020 12:29:44	crishav12345687@gmail.com	RISHABH GUPTA	MITS,GWALIOR	STUDENT	5	5	Yes	Yes	Yes	Useful	The session 4 of the data analytics should be little bit more practical
10/24/2020 12:30:05	alkacse2009@gmail.com	ALKA SHRIVASTAVA	AMITY UNIVERSITY GWALIOR	Research Scholar	4	4	Yes	Yes	Yes	Useful	very knowledgeable session
10/24/2020 12:30:40	Pooja.agrawal2308@gmail.com	Pooja Agrawal	MITS Gwalior	Assistant Professor	5	4	Yes	Yes	Yes	Useful	Very well managed workshop! Kudos to coordinators and the experts who made this so much successful
10/24/2020 12:31:51	ravindrabirla20@gmail.com	Ravindra Birla	MITs	student	4	5	Yes	Yes	Yes	Useful	it was awesome
10/24/2020 12:33:02	mohit.jain.121188@mitsgwalior.in	Mohit Jain	MITS GWALIOR	Assistant Professor	5	5	Yes	Yes	Yes	Useful	Perfect
10/24/2020 12:33:29	jaindevanshu236@gmail.com	Devanshu Jain	MITS GWALIOR	Student	5	5	Yes	Yes	Yes	Useful	
10/24/2020 12:34:13	lavupadhyay@gmail.com	Lav Upadhyay	MITS Gwalior	Assistant Professor	3	3	Yes	Yes	Yes	Useful	
10/24/2020 12:34:41	yashjainy1304200@gmail.com	Yash Jain	Madhav institute of technology and science	Student	4	5	Yes	Yes	Yes	Useful	
10/24/2020 12:35:44	santoshsahu@mitsgwalior.in	santosh Sahu	MITS Gwalior	Assistant Professor	4	5	Yes	Yes	Yes	Useful	
10/24/2020 12:36:06	laxmijonwar251092@gmail.com	Laxmi raje	T. I. T (main)	Professor	5	4	Yes	Yes	Yes	Useful	Your session was very good I do not think there is any mistak
10/24/2020 12:36:37	jhaankit204@gmail.com	Ankit Jha	Madhav institute of technology and science Gwalior	Student	5	4	Yes	Yes	Yes	Useful	Very useful workshop
10/24/2020 12:37:45	amitkumar@mitsgwalior.in	AMIT KUMAR MANJHVAR	MITS GWALIOR	Assistant Professor	4	4	Yes	Yes	Yes	Useful	
10/24/2020 12:39:08	ahmad00rocks@gmail.com	ZEESHAN AHMAD	Madhav Institute Of technology & Science	UG student	5	5	Yes	Yes	Yes	Useful	1st day and 2nd days 1st session were amazing
10/24/2020 12:39:24	jitendraupadhyay4444@gmail.com	jitendra kumar upadhyay	MITS Gwalior	student	5	5	Yes	Yes	Yes	Useful	there its 70% of data science and 30% of IOT i expect 50/50
10/24/2020 12:40:23	imteyazhusain@mitsgwalior.in	Imteyaz Husain	Madhav Institute of Technology and Science, Gwalior	Technical Assistant	5	4	Yes	Yes	Yes	Useful	thank you so much
10/24/2020 12:44:08	solanki.mukesh84@gmail.com	Dr. Mukesh Kumar Solanki	Maulana Azad National Institute of Technology (MANIT), Bhopal	Assistant Professor	5	5	Yes	Yes	Yes	Useful	All the sessions are very good.
10/24/2020 12:44:58	juliesingh69@mitsgwalior.in	JULIE KUMARI	MITS GWALIOR	Assistant Professor	5	4	Yes	Yes	Yes	Useful	
10/24/2020 12:46:45	singhsmritijnu00@gmail.com	Smriti Singh	Madhav Institute of Technology and Science	Student	4	5	Yes	Yes	Yes	Useful	
10/24/2020 12:47:03	shubhamchitransh0007@gmail.com	SHUBHAM CHITRANSH	MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR	RESEARCH SCHOLAR	4	5	Yes	Yes	Yes	Useful	NICE SESSION
10/24/2020 12:48:38	rajodiyaatul@gmail.com	Atul Rajodiya	Madhav Institute of Technology & Science, Gwalior.	Student	5	5	Yes	Yes	Yes	Useful	No ur choice
10/24/2020 12:50:52	ps594519@gmail.com	PUNEET SHARMA	MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P.)	STUDENT	5	5	Yes	Yes	Yes	Useful	
10/24/2020 12:51:19	ps2722680@gmail.com	Princy Saxena	Madhav Institute of technology and Science, Gwalior	Student	5	5	Yes	Yes	Yes	Useful	
10/24/2020 12:52:58	divya.gupta194715@gmail.com	Divya gupta	Madhav Institute Of Technology & Science	Student	3	3	Yes	No	Yes	Useful	No
10/24/2020 13:01:50	ahirwar.himmat@mitsgwalior.in	Himmat Singh	Madhav Institute of Technology and Science Gwalior, India	Assistant Professor	4	5	Yes	Yes	Yes	Useful	all session are vey nice and competed within time
10/24/2020 13:03:20	harshitshakya49@gmail.com	Harshit Kumar Shakya	Madhav institute of technology and science gwalior	Student	5	5	Yes	Yes	Yes	Useful	
10/24/2020 13:07:04	Pratapshivamjadon01@gmail.com	SHIVAM JADON	M.I.T.S.	Student	5	5	Yes	Yes	Yes	Useful	
10/24/2020 13:07:19	deepakbatham572@gmail.com	Deepak Batham	Mits, Gwalior	Student	5	5	Yes	Yes	Yes	Useful	Awesome
10/24/2020 13:07:58	tanyamahato9899@gmail.com	Tanya Mahato	Madhav Institute of Technology and Science	Student	4	4	Yes	Yes	Yes	Useful	
10/24/2020 13:13:43	jaimala.jha@mitsgwalior.in	Jaimala Jha	MITS	Assistant Professor	4	4	Yes	Yes	Yes	Useful	very informative workshop
10/24/2020 13:14:36	ka.agarwals@mitsgwalior.in	Khushboo Agarwal	Madhav Institute of Technology & Science, Gwalior	Assistant Professor	4	4	Yes	Yes	Yes	Useful	nice work shop
10/24/2020 13:18:20	iabhinavbabul@gmail.com	Abhinav Kumar Babul	Department OF Electrical Engineering MITS GWALIOR	PG SCHOLAR	5	5	Yes	Yes	Yes	Useful	
10/24/2020 13:37:15	devendrakhadipure@gmail.com	DEVENDRA KHADIPURE	MADHAV INSTITUTE OF TECNOLOGY AND SCIENCE GWALIOR (M.P)	STUDENT	5	5	Yes	Yes	Yes	Useful	
10/24/2020 13:43:31	surajyadav.13aug@gmail.com	Suraj Yadav	MITS, Gwalior	Student	5	5	Yes	Yes	Yes	Useful	