INSPIRING EXCELLENCE

INTEGRAL UNIVERSITY
LUCKNOW-INDIA

NEWSLETTER

2021–2022
VOLUME II

Department of Computer Science and Engineering

1

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

VISION

TO PRODUCE HIGHLY SKILLED PERSONNEL WHO ARE EMPOWERED ENOUGH TO TRANSFORM THE SOCIETY BY THEIR EDUCATION, RESEARCH AND INNOVATIONS.

MISSION

- TO OFFER DIVERSE ACADEMIC PROGRAMS AT UNDERGRADUATE, POSTGRADUATE, AND DOCTORATE LEVELS THAT ARE IN LINE WITH THE CURRENT TRENDS IN COMPUTER SCIENCE AND ENGINEERING.
- TO PROVIDE THE STATE OF THE ART INFRASTRUCTURE FOR TEACHING, LEARNING AND RESEARCH.
- TO FACILITATE COLLABORATIONS WITH OTHER UNIVERSITIES, INDUSTRY AND RESEARCH LABS.

MESSAGE

HEAD OF THE DEPARTMENT, COMPUTER SCIENCE AND ENGINEERING

Mrs. Kavita Agrawal

The Department of Computer Science & Engineering was established in September 1998.

The Department currently offers 05 UG, 02 PG and 01 PhD programs. The Computer labs in the department are well equipped with state-of-the art hardware and software. All laboratories, staff Rooms and offices are fully networked and connected to the Internet.

The teaching staffs are actively involved in Research and Development activities in the emerging areas of Computer Science & Engineering. Faculty members of the Department of Computer Science & Engineering are highly qualified, educated from reputed institutes, dedicated and dynamic. Currently research is being carried out in the areas of Software Engineering and Cloud Computing, Computer Networks and security, Digital Image Processing, Soft Computing, Big data and AI.

Empowering minds, innovating futures – where excellence in education meets the forefront of technological evolution.

Over the years, the dept. have made significant strides in both academic and research endeavors, contributing to the ever-evolving field of Computer Science. Our commitment to excellence is reflected in the well-equipped computer labs that boast state-of-the-art hardware and software, facilitating a conducive learning environment for all. Adapting to the swiftly evolving technological landscape, every laboratory, staff room, and office within the department is comprehensively networked and internet-connected ensuring seamless access to information and resources for both faculty and students alike. The department is currently focusing its research efforts on emerging areas such as Software Engineering and Cloud Computing, Computer Networks and Security, Digital Image Processing, Soft Computing, Big Data, and Artificial Intelligence. We take pride in emphasizing our best practices, including the establishment of student clubs and a commitment to incorporating Sustainable Development Goals (SDGs) into our course designs. These initiatives have significantly contributed in adding values to our educational programs.

MESSAGE
CHIEF EDITOR

Amidst the scholarly tapestries of academia, the pursuit of knowledge stands not as a mere choice, but as a sacred duty. As the Guardian of Words for the Department of Computer Science and Engineering Newsletter at Integral University, I extend a celestial invitation, encapsulating the very soul of our academic cosmos.

Within the enchanted pages of our newsletter, a kaleidoscope of wonders awaits - from avant-garde technological marvels to cultural galas fostering unity and diversity. Our sporting quests embody valor and camaraderie, while workshops, symposiums, and celestial narrations from industry sages and academic luminaries bestow priceless wisdom.

Beyond a mere chronicle, our newsletter serves as a celestial vessel, guiding our collective voyage towards greatness. It mirrors our shared dream of wielding the illuminating power of knowledge to sculpt a future aglow with promise.

MS. ROSHAN JAHAN
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

POSTER MAKING COMPETITION

The Department of Computer Science & Engineering, Integral University, Lucknow (U.P., India) organized a poster making competition on the theme "Recent Technologies: IoT, Data sciences & Cloud Technology" on April 13th, 2022.

Around 35 participants from the Department of Computer Scienceparticipated in the event out of which the Panel of Judges chose the best three entries. The students showcased their innovative ideas in the Event and participated with full zeal and enthusiasm making the event a success.

The event was conducted under the supervision of Ms. Kavita Agarwal, Head Department of CSE, Integral University who motivated the students, along with the faculty coordinators of SWC Committee Dr. Sheeba Praveen (Convener), Ms. Nudrat Fatima (Member Secretary) and Mr. Ijtaba Saleem Khan(Member).

The judges for the event were Dr. Jameel Ahmad (Assistant Professor) and Dr. Halima Sadia (Assistant Professor) Department of Computer Science and Engineering.

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BUSINESS DESIGN CONTEST "CREO" (I-THINK, I-BELIEVE)

The Department of Computer Science & Engineering organized a thrilling business design contest "CREO" (I-Think, I-Believe) on 10th March 2022 in which students from various departments participated with great enthusiasm.

The event had a total of three rounds conducted on 8th,9th &10th March 2022.There was a prize pool of Rs.10,000.(1st place-Rs.5000,2nd place-Rs.3000,3rd place-Rs.2000).

A total of 23 teams participated in Round 1.

In Round 1 teams were judged and eliminated by the judges based on their entry submitted on the google forms. Out of 23 teams, 11 teams qualified for Round 2.

In Round 2 teams presented their business models in front of the judges who then picked out the finest ideas which had the potential to embark on a place in the real market. Out of 11 teams,7 teams qualified for Round 3.

In the final round teams had to present their business idea to the judges through a PowerPoint presentation and their business canvas on the stage.After all the teams presented their ideas, the judges provided them marks and the top 3 teams with the highest marks were declared as the winners of the event respectively.

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TREASURE OF CODE

A Technical online event on "Treasure of code" was organized by the departmental Technical committee of Computer Science & Engineering, Integral University on 20th February 2022.

The online code hunt competition is titled "Treasure of code". The Coding Contests or Competitions provide you the opportunity to analyze your skills and proficiency, and to compare yourself to other programmers across the world.

This event was aimed to all the students of computer science and engineering who were preparing and going to appear on the competitive examination and industry. Event is on the pattern of a quiz riddle to solve complex programming problems . Under the event, participants should discuss coordinator expert how to crack the MCQs of Treasure of code.

The event session was very interactive and questions were asked by the students and the speaker gave the answers with the help of examples. The total number of students who attended the Treasure of code was 38.

NATIONAL LEVEL HACKATHON, NMIT HACKS 2022

The latest edition of the National Level Hackathon, NMIT Hacks 2022, hosted by the Department of Computer Science and Engineering of Nitte Meenakshi Institute of Technology, Bangalore, took place from April 1st to April 3rd, 2022. It was an open event where tech enthusiasts had 36 hours to devise solutions to real-world problems. Powered by Devfolio, the event was conducted in a Hybrid Mode, offering both offline and online participation. Teams competed for prizes totaling INR 75,000 and additional bounties, with evaluation based on project functionality and innovative use of skills. The theme, Open-Innovation, allowed participants to tackle their own problem statements, providing an opportunity for technopreneurs to unleash their creativity and address real-time issues.

Dates: 29th – 30th April, 2022
Venue: NMIT, Bangalore, India

INTERNATIONAL SEMINAR ON "ANALYTIC AND DATA LEARNING CASE STUDIES & BEST PRACTICES"

The Department of Computer Science & Engineering, in collaboration with the Department of Computer Applications at Integral University, Lucknow, organized a one-day International Seminar on "Analytic and Data Learning Case Studies & Best Practices" on March 31, 2022, in the Central Auditorium. The seminar aimed to explore the main purpose of learning data analysis, which is to derive meaningful insights from data to make informed decisions. Participants learned how to visualize data using Tableau for statistical analysis, identify unique relationships between variables through hypothesis testing and modeling, and evaluate statistical analyses' outputs to inform product decisions. The seminar emphasized the broad scope of data analytics, which involves analyzing raw data to find trends and answer questions, incorporating various techniques with diverse goals.

Alumni Interaction and Webinar

Recognizing the importance of alumni engagement and students' interest in cutting-edge Artificial Intelligence & Data Science concepts, the DQAC of the Department of Computer Science & Engineering, in collaboration with Innovitt Global, arranged an online Alumni Interaction & Webinar titled "Artificial Intelligence & Machine Learning with Data Science" on Saturday, September 11, 2021, from 4 PM to 6 PM. Dr. Jameel Ahmad, Assistant Professor, delivered a welcome address on behalf of the Head of the Department, Dr. Akheela Khanum, before alumni Mr. Mohd. Arif, CEO of Innovitt Global, discussed future career prospects and interacted with students. Following this, Er. M. G. Beg, Senior Corporate Training and Software Engineer at Innovitt Global, shared insights into the latest trends in Artificial Intelligence, Machine Learning & Data Science. The event attracted approximately 100 student participants from various CSE streams, including B.Tech (CSE), B.Tech (CTIS), B.Tech (CCAI), and B.Tech (DSAI). The session concluded with a vote of thanks from Dr. Jameel Ahmad, representing the Head of the Department, and was deemed successful due to the active involvement of the students.

FIRE & LIFE SAFETY TRAINING

❝

Departmental Assets Optimization & Management Committee of Computer Science and Engineering organised one hour "Fire & Life Safety Training" on 11th April 2022 at seminar hall, CSE Department, Integral University, Lucknow. This training was designed to raise awareness of fire hazards in the workplace and at home. Our resource person Mr. R. K. Srivastava, Technical expert, Star fire prevention, talked about how to act safely in the event of an emergency fire situation, including selecting and using the correct fire extinguisher.

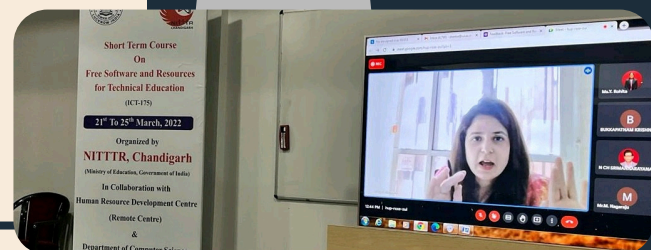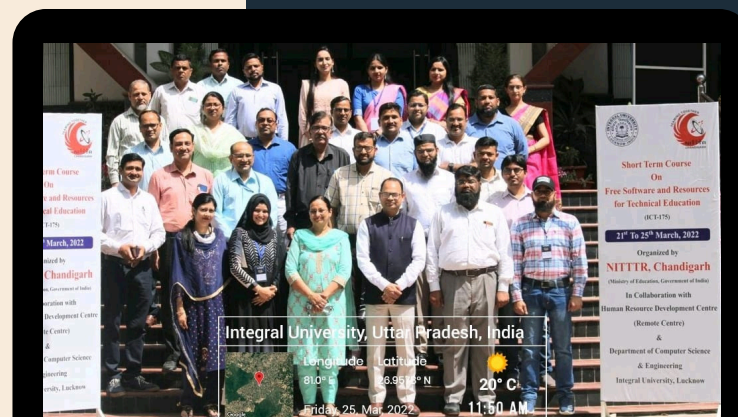He demonstrated the usage of various types of fire extinguishers and encouraged the participants to try it.

The training was attended by faculty , staff and students. Total attendance was 60.

Five Day STC "Free Software and Resources for Technical Education (ICT-175)"

The Human Resource Development Centre, Integral University is a remote center of the Ministry of Education, Government of India's National Institute of Technical Teachers Training & Research (NITTTR), Chandigarh. Being a Remote Centre, a five day Short term Course/FDP through Information and Communication Technology (ICT) on "Free Software and Resources for Technical Education (ICT-175)" was Jointly Organized with Human Resource Development Centre and Department of Computer Science & Engineering, Integral University, Lucknow from 21st to 25th March, 2022 at Hall No.3, Central Auditorium Building. This program was very unique and our remote centre was very much appreciated for active participation and interaction by NITTTR, Chandigarh.

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Value Added Course On CSV02 - Ethical Hacking (RUN-2)

The DQAC of the Department of Computer Science & Engineering Integral University, Lucknow organized an online Value-Added Course on 'Ethical Hacking (CSV02)' for the students of B.Tech. (CSE, CTIS, CC&AI, DS&AI) / MCA/ BCA. The Two-week Value-Added Course, with 30-hours of active engagement, was organized from 2nd April – 24th April 2022 in online mode using ili (Integral Learning Initiative: A Collaborative Blended Learning Platform).

This Value-Added course enabled students to understand the concepts of Ethical Hacking and its phases of hacking along with the objective of providing in-depth knowledge on web application vulnerabilities and exploitation techniques. It familiarized them with the wide variety of attacks in networking and enabled them to prepare a well-defined vulnerability reporting procedure.

One Month Departmental internship Program on "Python: Tools and project development"

The Department of Computer Science & Engineering at Integral University, Lucknow, orchestrated a comprehensive Departmental Internship Program titled "Python: Tools and Project Development" from April 9th to May 10th, 2022. Blending offline classes at the CSE Seminar hall, the program aimed to provide practical experience and impart valuable knowledge to participants. Led by Mr. Faizan Khan, a Software Engineer at Tata Consultancy Services (TCS) and an esteemed alumnus of the B.Tech CSE 2018 batch, the internship offered a step-by-step approach to mastering Python. Through the development of 10 unique Python Desktop Applications, including a Talking Dictionary, Smart Scientific Calculator, and KBC Quiz Game, students gained hands-on experience in designing and implementing real-world projects.

Two Weeks Professional Development Program (PDP) On Technology, Pedagogy and Research

The outcome was tangible as around 85 participants from both the Department of Computer Science & Engineering and the Department of Computer Applications successfully completed the course. Their enthusiastic participation contributed to the event's success, reflecting their dedication to learning and honing their skills. As a testament to their achievement, certificates were provided to all participants, while the Head of the Department extended a token of appreciation to Mr. Faizan Khan for his valuable contributions as the program's speaker. This internship not only enhanced participants' practical skills but also boosted their confidence, adding significant value to their resumes and paving the way for future career opportunities in the dynamic field of computer science.

The Department of Computer Science and Engineering hosted a two-week Professional Development Programme (PDP) on Technology, Pedagogy, and Research from November 25 to December 8, 2021. The PDP aimed to foster collaboration between academia and industry, facilitating the transfer of innovations from research labs to industrial applications. It also aimed to enhance the expertise of technology transfer professionals in public research organizations. Additionally, the programme focused on improving pedagogical practices in educational institutions and equipping participants with skills for producing high-quality research papers, proposals, patent filings, and publications. With over 100 participants from various universities across the country, the PDP featured a combination of online and offline live sessions, PowerPoint presentations, hands-on training, and assignments to ensure comprehensive learning and skill development.

NASA'S DART MISSION RESHAPES ASTEROID DIMORPHOUS

In November 2021, NASA launched the Double Asteroid Redirection Test (DART) mission, a pioneering endeavour aimed at demonstrating planetary defence capabilities against potential asteroid impacts. The mission targeted the binary asteroid system Didymus on September 26, 2022, consisting of a larger primary asteroid and a smaller moonlet known as Didymoon. DART's primary objective was to deliberately collide with Dimorphous, altering its orbit in a measurable way. The impact altered Dimorphous orbit around Didymos by 32 minutes, shortening the 11 hour and 55-minute orbit to 11 hours and 23 minutes. By redirecting the moonlet's trajectory, DART aimed to demonstrate the feasibility of deflecting asteroids that could pose a threat to Earth. This groundbreaking mission showcased humanity's proactive approach to planetary defence, potentially mitigating the risk of future asteroid impacts. The DART spacecraft, equipped with sophisticated navigation and guidance systems, autonomously approached Didymoon and impacted its surface at high speed. Scientists closely monitored the impact and subsequent changes in the moonlet's orbit, providing invaluable data for future asteroid deflection strategies.

-Mohtasham Faraz
2nd Year

METAVERSE

In a big move, social media giant Facebook rebranded itself as Meta. Following this it launched the metaverse, a digital world where people can interact with friends, family, and others. Its features include Horizon Worlds, VR based social worlds, Horizon Work rooms which simulates in-person work experience, andHorizon venues which lets users experience live events in VR. Despite the hype it created it quickly came under criticism being labelled as a dystopian nightmare while others raised safety and security concerns about the metaverse. Presently it seems to be dead as the company redirects its attention to AI.

-Mohammad Shoaib
2nd Year

5G network

Fifth generation(5G) was the latest iteration of cellular technology in 2021. 5G was lunched to increase the speed and bandwidth of wireless networks while also reducing latency when compared to previous wireless standards.

The first commercially launched 5G network was in South Korea. The services were started in April 2019.

This was the new era of connectivity promises seamless streaming, real-time communication, and transformative innovation across industries.
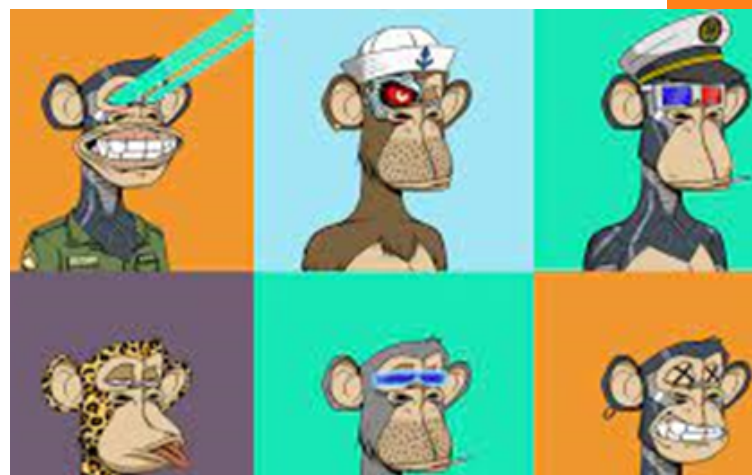
-Salman Ali
1st Year

NFT's: What the fung are they?

NFT's are on the boom and have garnered so much limelight after Beeple's artwork was sold for $69 million and Jack Dorsey, twitter's founder and CEO's first tweet for a whopping $2.9 million.

But what really are NFTs is the question the masses are asking.

NFT stands for Non-Fungible Tokens and is backed by the new "Blockchain" technology. NFT's promise of digital ownership and revolutionizing how we perceive and interact with art, collectibles, and even memes really is captivating everyone's attention.

But as new technology emerges so does its skepticism and NFT is no exception to that. People are really skeptic about whether the NFT's are future of the digital world or just a bubble which will burst soon, only time will tell.
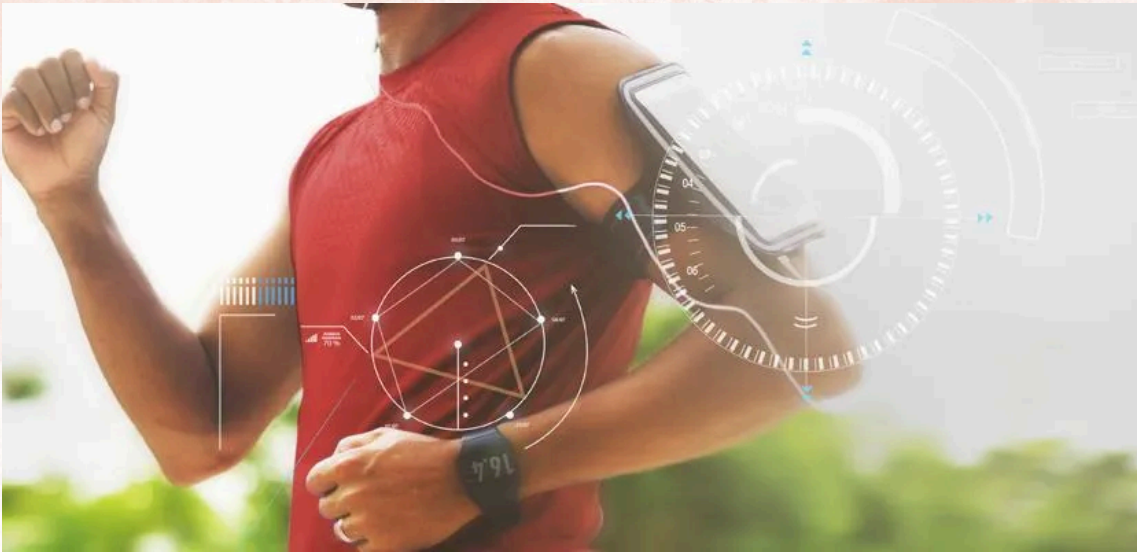
-Samad Kausar
3rd Year

SEED MONEY GRANT FOR RESEARCH TO MS. ROSHAN JAHAN, ASSISTANT PROFESSOR, DEPT. OF COMPUTER SCIENCE AND ENGINEERING.

Seed Money Project titled 'Intelligent Health Monitoring System' , has been sanctioned to the Department of Computer Science and engineering in 2021 with the amount of 70,000.

Name of PI	Department	Project Title	Amount
Ms. Roshan Jahan	Computer Science	Intelligent Health Monitoring System	70000

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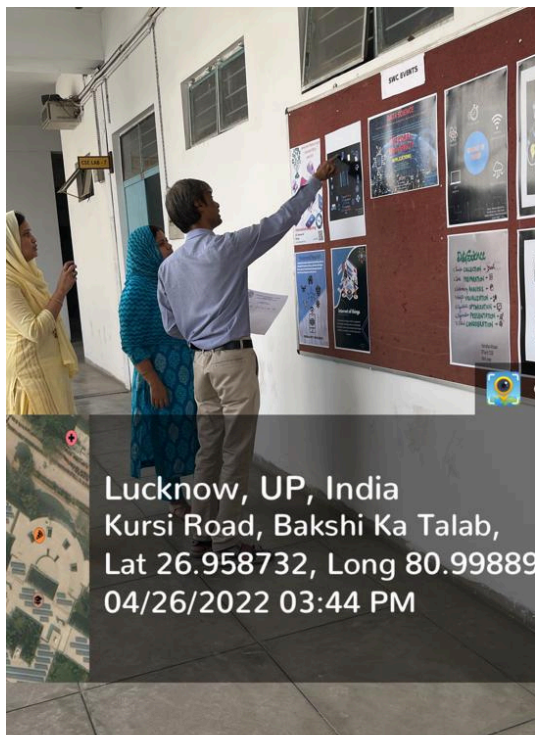Department of Computer Science
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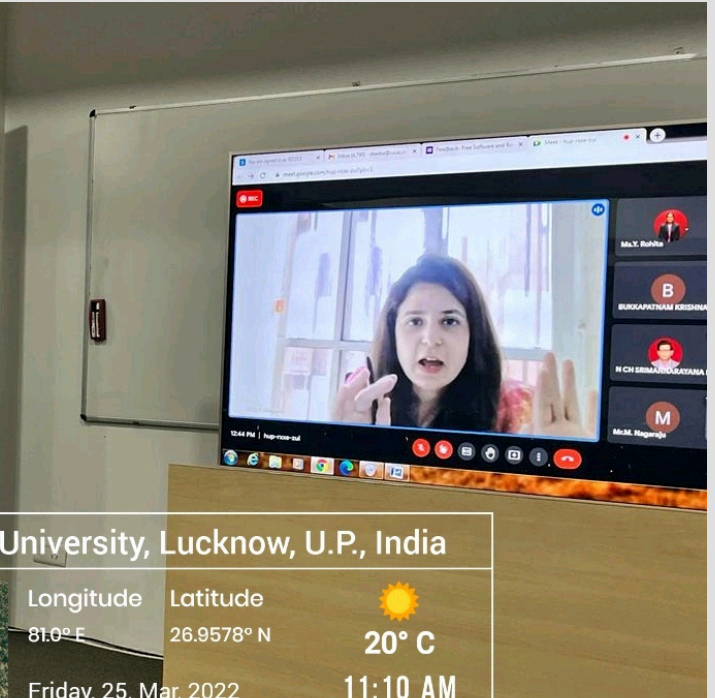Kursi Road, Bakshi Ka Talab,
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#Integral University #Dr. AKBAR SHAUN
Monday, 11 April 2022

Picture Gallery

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, LUCKNOW

EDITOR-IN-CHIEF:
Ms. Roshan Jahan
Assistant Professor
roshan@iul.ac.in

EDITOR:
Ms. Anum Kamal
Research Scholar
anumkama@student.iul.ac.in

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